

November 8, 2019

Mr. Elliott Russell Colorado Division of Reclamation, Mining and Safety 1313 Sherman Street, Room 215 Denver, Colorado 80203

Subject: Documentation of Completed Corrective Actions at the Gillette Sand & Gravel Inc. Site File No.: M-1992-009

Dear Mr. Russell:

On behalf of Mr. Chris Pyles, owner and operator of the Gillette Sand and Gravel Mine, Inc. (the Site), Realtime Aquifer Services (RAS, Inc.) has prepared this letter report to document corrective actions that have been completed. The corrective actions are in response to deficiencies cited in the Colorado Division of Reclamation, Mining and Safety's (the Division's) October 9, 2019, Cease and Desist Order (the Order), and other documentation associated with an October 3, 2019, release from the mine.

In accordance with the Order, all mining, prospecting, milling, exploration and other mining operations have been suspended. With the permission of the Division, Mr. Pyles has completed corrective actions to remedy the effects of the one-time release and to limit the likelihood of recurrence. The corrective actions taken were in direct response to topics cited by the Division (summarized in italics below), followed by descriptions and photographic (or other) documentation. Note that the corrective actions described have been completed as November 8, 2019; additional work is underway but has not yet been completed.

1. Inspection Topic Summary: Wash water from the process ponds was released into Beaver Creek and sediment fines from the process ponds have been piled outside of the approved permit boundary.

Corrective Action Completed

Corrective action was implemented on October 4, 2019, the day following the one-time release. The west berm of the sediment retention pond was significantly enlarged and reinforced, particularly in the part of the pond that had overtopped. The pond freeboard has been increased to reduce the likelihood of future overtopping.

The following photographs show the raised embankment in the northwest corner of the northern process pond and other repairs and improvements which have been completed. Photographs of the completed repairs were taken and captioned by Mr. Chris Elliott of the Division on October 16, 2019.



Raised embankment in the northwest corner of the northern process pond, looking southeast.



Raised embankment along the western side of the northern process pond, looking north.



Aerial overview of the process ponds looking southwest.

2. Failure to protect areas outside of the affected land from slides or damages occurring during the mining operation and reclamation.

Corrective Action Completed

Sediment that had been released beyond the western permit boundary was graded back onto the Site and the off-permit area was regraded to approximately pre-release conditions.



Graded off-site disturbance area to the west of the permit boundary, looking southwest.

Page 4 of 6 November 8, 2019

In addition to the regrading shown above, Mr. Pyles has entered into an agreement with the neighboring landowner to expand his permit into the area immediately adjoining to the west. Mr. Pyles contracted a surveyor to map the permit area, including the area to be amended. The November 2, 2019, map shows the "proposed future leased area," in the northwest portion of the existing permit area. This additional area will facilitate construction of more robust sediment containment and control measures.

3. Inspection Topic: Groundwater has been exposed in the Northern Pit. The Division has no evidence that the operator has a valid well permit, substitute water supply plan, or approved water augmentation plan for the exposed groundwater at the site.

Corrective Action Completed

Mr. Pyles has backfilled the area in question with approximately two feet of fine sediment from the sediment retention pond. This will effectively isolate the shallow groundwater system from the surface.

4. Inspection Topic: The drainage from the Southern Pit reports to a culvert under the private access road and into the Wetlands Area.

Corrective Action Completed

Excavation and construction of a sediment retention pond has been completed. The two-stage, 5-foot deep retention pond is designed to control the release of sediment into the wetlands area using a concrete outlet structure with large straw bales located between stages and at the outfall of the second stage pond check dam to act as sediment filters. The pond perimeter and outlet are defined by concrete blocks as shown.





Summary

Mr. Pyles has been actively working to correct deficiencies cited by the Division, to mitigate the effects of the one-time release, and to put controls in place to limit the likelihood of future releases. In addition to the measures that have been completed, Mr. Pyles has additional plans to ensure that his operation maintains compliance with the Division and other regulatory entities. These plans are described in the November 1, 2019, *Gillette Mine - Documentation of Completed Corrective Actions* letter.

Page 6 of 6 November 8, 2019

In the interest of maintaining compliance and returning the mine to an operational status, we welcome your feedback and are ready to discuss any concerns and/or resolutions that may arise.

Should you have any questions or require additional information, please contact Mr. Shine at 303-808-6133 or at <u>bren.shine@q.com</u>.

Regards, Realtime Aquifer Services

Brendan Shine, P.E., Senior Geological Engineer

William H. Pedler President/Geological Engineer

Attachment November 2, 2019 Survey Map of the Gillette Mine



NOVEMBER 2, 2019

LEGEND:

- T TELEPHONE PEDESTAL
- AREA OF EXCAVATION TO BE RECLAIMED
- CURRENT MINING
- EFFFFFF RECLAIMED AREA
- WETLAND
 - MINED AREA
- FUTURE LEASED MINING AREA
- RECLAIMED AREA 2019

RECLAIMED ARE.	A (RA) TABLE			
AREA DESCRIPTION	ORIGINAL AREA		AREA AS OF 2019	
	SQUARE FEET	ACRES	SQUARE FEET	ACRES
2008 RECLAIMED AREA #1	9,808 S.F.	0.23 AC±	9,612 S.F.	0.22 AC±
2008 RECLAIMED AREA #2	13,858 S.F.	0.32 AC±	12,206 S.F.	0.28 AC±
2008 RECLAIMED AREA #3	22,521 S.F.	0.52 AC±	27,975 S.F.	0.41 AC±
2008 RECLAIMED AREA #4	10,423 S.F.	0.24 AC±	10,423 S.F.	0.23 AC±
2009 RECLAIMED AREA #5	11,049 S.F.	0.25 AC±	11.012 S.F.	0.25 AC±
2009 RECLAIMED AREA #6	10,429 S.F.	0.24 AC±	10,429 S.F.	0.24 AC±
2009 RECLAIMED AREA #7	28,731 S.F.	0.66 AC±	16,872 S.F.	0.38 AC±
2013 RECLAIMED AREA #8	18,890 S.F.	0.43 AC±	18,890 S.F.	0.43 AC±
2013 RECLAIMED AREA #9	46,737 S.F.	1.07 AC±	43,519 S.F.	1.00 AC±
2013 RECLAIMED AREA #10	23,652 S.F.	0.54 AC±	20,474 S.F.	0.47 AC±
2013 RECLAIMED AREA #11	15,220 S.F.	0.35 AC±	15,220 S.F.	0.35 AC±
2013 RECLAIMED AREA #12	24,395 S.F.	0.56 AC±	15,117 S.F.	0.35 AC±
2013 RECLAIMED AREA #13	19,743 S.F.	0.45 AC±	17,572 S.F.	0.40 AC±
2019 RECLAIMED AREA #14		GITO ACT	65,118 S.F.	
2019 RECLAIMED AREA #15				1.49 AC±
TOTAL RECLAIMED AREA		5.86 AC±	37,543 S.F.	0.86 AC± 7.36 AC±



P.O. Box 5101 Woodland Park, CO. 80866 (719) 687-0920



Northern pit area with groundwater exposure in the background, taken October 4, 2019 by Mr. Russell of the Colorado Division of Reclamation Mining and Safety, before corrective action.



This photograph, taken November 11, 2019, is of the same previously-mined, 0.75 acre area. The corrective action has been completed to cover and isolate the groundwater surface with a minimum of two feet of fine soil. The area was then graded. Topsoil was applied and the area has been seeded.



This photograph was also taken on November 11, 2019 and shows the same, reclaimed area as above, but from a slightly different perspective.



This is the same corrective action area, taken November 11, 2019, looking northwest.



Reclaimed hillside above the corrective action area, taken November 11, 2019, looking north-northwest.



Reclaimed corrective action area, taken November 11, 2019, looking north-northeast.



Looking south across the corrective action area.