

STATE OF
COLORADO

Carter - DNR, Jocelyn <jocelyn.carter@state.co.us>

M-1998-038 Two Rivers Pit AM1 Engineer Evaluation Request

Carter - DNR, Jocelyn <jocelyn.carter@state.co.us>

Tue, Feb 13, 2024 at 7:48 AM

To: Zach Trujillo - DNR <zach.trujillo@state.co.us>

Cc: Amy Eschberger - DNR <amy.eschberger@state.co.us>, "Ebert - DNR, Jared" <jared.ebert@state.co.us>

Good morning Zach,

Could you please review an engineering evaluation that was received as part of the attached amendment application for this construction materials site? The Evaluation was done by DK Horn and can be found on pages 85-94. The decision date is May 8th with an adequacy review due around mid-March. Let me know if you can work this into your schedule.

Thank you,
Jocelyn



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STATE OF
COLORADO

Carter - DNR, Jocelyn <jocelyn.carter@state.co.us>

Two Rivers Pit - Interoffice Review and Memo

Trujillo - DNR, Zach <zach.trujillo@state.co.us>

Wed, Mar 6, 2024 at 2:13 PM

To: Jocelyn Carter - DNR <jocelyn.carter@state.co.us>

Cc: "Eschberger - DNR, Amy" <amy.eschberger@state.co.us>, Jared Ebert - DNR <jared.ebert@state.co.us>

Jocelyn,

Attached is my interoffice memo regarding Two Rivers Pit (M-1998-038) AM-1. If you have any questions, feel free to contact me.

Sincerely,

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COLORADO
Division of Reclamation,
Mining and Safety
Department of Natural Resources

Zach Trujillo
Environmental Protection Specialist

P 303.866.3567 x 8164 | F 303.832.8106 | C 303.563.9185

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Zach.Trujillo@state.co.us | <https://drms.colorado.gov/>



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COLORADO
Division of Reclamation,
Mining and Safety
Department of Natural Resources

Date: March 6, 2024

To: Jocelyn Carter

CC: Jared Ebert
Amy Eschberger

From: Zach Trujillo

RE: Twin Rivers Pit, DRMS File No. M-1998-038
Exhibit S – Engineering Review

Jocelyn,

As requested I have reviewed the provided Exhibit S, Engineering Evaluation Report (Report), conducted by DK Horn Engineering and Design, Inc. (DKH) on behalf of Fremont Paving and Redi-Mix, Inc. (Fremont) regarding the proposed Amendment No. 1 (AM-1) application for the Two Rivers Pit (Mine). The purpose of this memo is to summarize DKH's Report along with their evaluations and recommendations in relation to the Rules and requirements of the Division. Questions and comments regarding the Report to ensure all Rules and requirements are satisfied will be summarized at the end of this memo.

Review

The Two Rivers Pit is located in Pueblo County approximately 5.5 miles east of Avondale, Colorado. The Two Rivers Pit is currently a 339-acre 112c Construction Materials Permit. AM-1 is proposing an increase in the total permitted acreage by 18.2 acres to a total of 357.2 acres. Mining depths are proposed to be approximately 45 feet along 10 total mine phases with a maximum disturbance of 100 acres at one time. Based on projected mineral extraction rate and proposed acreage increase, the life-of-mine will be extended approximately 50 years. Once mining has been completed, mining highwalls will be graded to a 3H:1V slope. Based on the application, there are a total of 14 structures within 200 feet of the site.

Per Rule 6.4.19, [w]here the affected lands are within two hundred (200) feet of any significant, valuable and permanent man-made structure, the applicant shall: (a) provided notarized agreement between the applicant and the person(s) having an interest in the structure, that the applicant is to provide compensation for any damage to the structure; or (b) where such an agreement cannot be reached, the applicant shall provide an appropriate engineering evaluation that demonstrates that such structure shall not be damaged by activities occurring at the mining operation.

Of the 14 structures, the Mine has provided six signed structure agreements from their associated owner's. The other 8 structures were discussed and evaluated within the Report. Each evaluated structure along with location and ownership are summarized on page 2 of the Report.

Two Rivers Review Memo

March 6, 2024



During the review, it was observed that no discussion was included regarding pit highwall slopes during active mining operations within the proposed Exhibit D – Mining Plan or the Report. While requirements regarding the active highwall profiles are not specifically outlined within the Rules and Regulations, if highwalls are created along the maximum extent of the proposed disturbed boundaries, structures within the 200 foot boundary could be impacted by slope instability. This is most notable along mining Phase 10 and State Highway 50 which was also not specifically evaluated in the Report. Since Highway 50 is within the 200 foot designation, State Highway 50 will need to be evaluated to ensure it will not be impacted by mining activities or a structure agreement needs to be provided within the AM-1 application to ensure compliance with Rule 6.4.19 and 6.5(1). If the highway is evaluated, this should include potential impacts from slope instability along highwalls during active mining operations.

As part of the Report, a total of three exhibits were provided. Each exhibit is a map showing the general vicinity of the site, structure ownership and projected quantities. However, it appears that during the printing process of the Report, the visibility and clarity of each exhibit has diminished and are partially illegible. Additionally, when reviewing Exhibit 3 of the Report, a profile was included which appears to be associated with the provided map. However, it is unclear as to the location of the profile as there doesn't appear to be an associated transect provided along the aerial map portion of Exhibit 3. It also appears the y-axis of the provided profile was accidentally cutoff from view.

Division's Comments and/or Questions

The following is a summary of the Division's comments/questions discussed and observed during the review of the Report:

- Per rule 6.4.19, please have DKH provide an engineering evaluation of the State Highway 50 or a provided notarized agreement between the applicant and the person(s) having an interest in the structure. If an engineering evaluation is provided, this should include potential impacts, or lack thereof, from slope instability from the active mining operations as well as post-mining reclamation.
- Please have DKH provide updated or a new version of Exhibit 1, Exhibit 2 and Exhibit 3 in the Report to ensure legibility.
- Please DKH provide the location of the profile displayed on Exhibit 3 of the Report along the associated aerial map in the form of a transect line along with an adjustment to the profile y-axis where it can be viewed.

This concludes my review of the provided Exhibit S, Engineering Evaluation Report, conducted by DK Horn Engineering and Design, Inc. on behalf of Fremont Paving and Redi-Mix, Inc. regarding the proposed Amendment No. 1 application for the Two Rivers Pit. If you have any questions, feel free to contact me.

Sincerely,



Zach Trujillo
Environmental Protection Specialist
(303) 866-3567 ext. 8164
Zach.Trujillo@state.co.us