STATE OF COLORADO

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C1980007, West Elk Mine, TR-148, Adequacy Review

1 message

Simmons - DNR, Leigh <leigh.simmons@state.co.us> Wed, Nov 18, 2020 at 2:50 PM
To: "Welt, Kathy" <KWelt@archrsc.com>

The initial adequacy review letter is attached.

Leigh Simmons
Environmental Protection Specialist

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Adequacy letter, West Elk, TR-148, 1.pdf
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COLORADO
Division of Reclamation, Mining and Safety
Department of Natural Resources

Kathleen G. Welt
Mountain Coal Company, LLC
5174 Highway 133
Somerset, CO 81434
November 18, 2020

Re: **West Elk Mine (Permit No. C-1980-007)**
Technical Revision No. 148, (TR-148)
Initial Adequacy Review

Dear Ms. Welt,

The Colorado Division of Reclamation, Mining and Safety (Division) has completed the initial review of materials submitted by Mountain Coal Company, LLC (MCC) in support of the TR-148 application. The application presents a plan for the restoration of South Prong Creek at the confluence of the North Fork of South Prong Creek, following the subsidence of the creek bed and the subsequent temporary diversion of the stream (permitted with MR-450) and repair of the subsidence (MR-452).

The Division's comments and questions are below, with items that need to be addressed highlighted in bold type.

Rule 4.05.4 - Stream Channel Diversions (Relocation of Streams) and Stream Channel Reconstruction

Since a diversion of South Prong Creek is not proposed, but rather a reconstruction of the creek channel following a temporary diversion, Rule 4.05.4(1)-(3) does not apply.

Rule 4.05.4(4) specifies that:

> *When… stream channels* [are] *restored after temporary diversions, the drainage design shall emphasize channel and floodplain dimensions that approximate the premining configuration and that will blend with the undisturbed drainage above and below the area to be reclaimed. The average stream gradient shall be maintained with a stable longitudinal profile and the channel and floodplain shall be designed and constructed to the extent possible, using the best technology currently available to:*
>
> *(a) Establish or restore the channel to approximate its natural meandering pattern with a geomorphically acceptable gradient as approved by the Division;*
>
> *(b) Allow the drainage channel to remain in dynamic equilibrium with the drainage basin system without the use of artificial structural controls unless approved by the Division;*
>
> *(c) Establish or restore the stream to include a diversity of aquatic habitats (generally a series of riffles and pools) where appropriate, that approximates the premining characteristics; and*

(d) Restore, enhance where practicable, or maintain natural riparian vegetation on the banks of the stream in accordance with the requirements of 4.15.

The plan presented with TR-148 was created by Wright Water Engineers (WWE) and is designed to restore the stream corridor of South Prong Creek and the North Fork of South Prong Creek to their historical condition, prior to subsidence. The plan includes a detailed design, specifying channel dimensions, profile and alignment, as well as the materials and construction methods to be used. Finally, revegetation details are given.

Hydrologic data from a nearby stream gauge and a geomorphic analysis of the up-and down-stream reaches of the stream channel were used to inform the plan. WWE classified South Prong Creek as a Rosgen Type B4 stream, and specified features of the design to be consistent with such a stream type. The plan also specifies that the reconstructed channel must tie-in to the undisturbed channel up-stream and down-stream of the disturbed area.

The plan recognizes that field-fitting may be necessary and specifies explicitly that the consulting engineer and a copy of the plan must both be on-site during construction.

The plan specifies that two of the previously approved seed mixes are to be used to revegetate the disturbance: (1) the riparian seed mix from the top of the low-flow level to the overbank level, and (2) the mountain shrub seed mix above the overbank level. The riparian seed mix is to be supplemented with willow stakes at a rate of 250 stakes/acre. The reconstructed channel is to be stabilized using Nedia SC400B erosion control blanket which is a straw/coconut blanket with top and bottom biodegradable netting, suitable for use on 2:1 to 1:1 slopes and in channels with moderate to severe flow conditions, per the manufacturer.

1. On proposed revised page 2.05-64, it is specified that Colorado blue spruce will be used (in addition to the riparian seed mix and streambank willow) to revegetate the restored area. No details relating to blue spruce are given on sheet DT03 of the WWE plan.

   Please clarify how and where Colorado blue spruce is to be used in the revegetation of the disturbed area.

2. The Division concurs with WWE's assertion that field-fitting may be necessary.

   Please plan to submit a technical revision following completion of the work, with as-built details if significant changes are made to the plan presented with TR-148.

The proposed decision due date for TR-148 is December 29, 2020.

Yours sincerely,

Leigh Simmons
Environmental Protection Specialist

References:

Nedia Enterprises Inc., Erosion Control Products, https://www.nedia.com/Erosion_control.html

U.S. EPA, Watershed Academy Web, Fundamentals of Rosgen Stream Classification System, https://cfpub.epa.gov/watertrain/moduleFrame.cfm?parent_object_id=1189