

Phase III Bond Release
and
Termination of Jurisdiction

Proposed Decision
and
Findings of Compliance
for the

Southfield Mine

PERMIT NUMBER C-1981-014
SL-5



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This document is the proposed decision of the Colorado Division of Reclamation, Mining and Safety (the Division) for Phase III bond release and termination of jurisdiction (ToJ) at the Southfield Mine permit revocation/bond forfeiture site, Division permit number C-1981-014. The package contains five sections. These include:

1. Introduction
2. Background and History of the Southfield Mine
3. Summary of the Review Process
4. Observations and Findings
5. Proposed Decision for Phase III Bond Release and ToJ

Though the Southfield Mine is a permit revocation/bond forfeiture site, the Division followed the requirements for review, public notice and public participation for the bond release application. Detailed information about the bond release review process can be found in the Colorado Surface Coal Mining Reclamation Act (Act), the Regulations of the Colorado Mined Land Reclamation Board for Coal Mining (Regulations; Rules), and in the Division's Guideline Regarding Selected Coal Mine Bond Release issues, dated April 18, 1995. All Rules referenced within this document are contained within the Regulations. Detailed information about the mining and reclamation operations at the Southfield Mine can be found in the permit application C-1981-014 on file at the Division offices, located at 1313 Sherman Street, Room 215, in Denver, Colorado.

Section I – Introduction

The Southfield Mine was an underground mine located approximately 10 miles south of Florence, Colorado in Fremont County. The mine site has undergone reclamation prior to revocation conducted by Energy Fuels Coal, Inc. (EFCI). The remaining permit boundary encompasses approximately 1.45 acres and is comprised of three separate areas. All lands within the permit boundary are private. The mine can be reached by driving south from Florence via Colorado Route 67 to Fremont County Route 15, then continuing on Route 15 for 4 miles to the mine entrance. The mine site can be located on the USGS 7.5 quadrangle map entitled "Rockvale", and the legal description of the remaining areas is as follows:

Portions of Sections 19 and 30; Township 20S, Range 69W of the 6th P.M.;
Portion of Section 25; Township 20S, Range 70W of the 6th P.M.

The Southfield Mine was revoked by the Division on August 30, 2018 relating to infraction numbers CO2017001, CO2017002, and CO2017003. The Division has continued to monitor the reclamation on site since the date of revocation.

The Division no longer holds a forfeited bond as all the remaining \$10,000.00 bond amount associated with the revocation of the Southfield Mine was used for reclamation activities.

Section II - Background and History of the Southfield Mine

Extensive historic mining disturbances characterize the general area of the Southfield Mine. In 1860, the first coal mine was opened in the northern portion of the Canon City Coal Field. Production areas spread through the central area and into the southern portion of the coalfield in the early 1900's.

At the Southfield Mine, coal was mined by EFCI using room and pillar method with continuous miners. Coal was then transported from the working sections of the mine to the surface by a belt conveyor, and then dumped in a raw coal stockpile. Raw coal was sized, crushed and cleaned by gravity separation in a preparation plant at the mine site. A belt press was then used to dry the coal prior to transferring the coal to stockpiles where it was eventually trucked off site to a loadout facility. The coal loadout facility existed

approximately 1.5 miles northwest of Florence. This area had been used for coal loading and other activities prior to 1985 when it was purchased by EFCI.

Coal mine waste generated was disposed of in a permitted refuse pile located at the mine site. The refuse pile has been covered with a minimum of four feet of nontoxic noncombustible material, topsoiled and reseeded.

On December 21, 2000, the Southfield mine went into temporary cessation. In a letter dated May 30, 2001, EFCI provided further detail of its temporary cessation, pursuant to Rule 4.30.1(2). Following cessation of mining operations at the Southfield Mine, the site was reclaimed in accordance with the reclamation plan found in the permit document prior to revocation. All support facilities were removed from the site or buried on site in designated areas. The portals were sealed and the area was then graded so as to return it to approximate original contour (AOC). Ponds 1, 2 and 3 have been removed as part of the initial reclamation performed at the mine. Ponds 4 and 5, refuse pile ditches, and the Magpie Creek diversion were permitted as permanent structures. The disturbed areas were covered with topsoil, reseeded and mulched to establish a diverse self-perpetuating stand of vegetation. Both drill and broadcast seeding methods were used at the site to re-establish vegetation.

The majority of the mine has undergone Phase III Bond Release (SL-03 and SL-04). With the issuance of TR-47 (on 12/24/2016), the Southfield Mine's permit area was reduced to 1.45 acres to include only the areas remaining after SL-03 and SL-04. These areas include the road to well MW-NW and the associated spur off the road, the Substation #2 area and associated road, and the lower portion of the Magpie Diversion ditch. The following table is a summary of the previous bond releases achieved at the Southfield Mine:

Southfield Mine C-1981-014 Disturbed Acreage Bond Release History Prior to Revocation				
	Issuance Date	Phase I Released	Phase II Released	Phase III Released
SL-01	1/1/1998	14.5	-	-
SL-02	6/17/2003	68.6	-	-
SL-03	3/29/2016	18.6	101.7	101.7
SL-04	12/2/2016	3.15	3.15	3.15
Total		104.85	104.85	104.85

The Southfield Mine was revoked by the Division on August 30, 2018 relating to infraction numbers CO2017001, CO2017002, and CO2017003. The Division has continued to monitor the reclamation on site since the date of revocation at a minimum of biannual inspections. With the revocation of the Southfield Mine, the Division held a forfeited cash bond amount of \$10,000.00; however, all bond monies were used for reclamation activities at the Southfield Mine.

On October 5, 2023, Erica Crosby and Dina Falk of the Division - Inactive Mine Reclamation Program (IMRP) along with Zach Trujillo of the Division – Active Mines Program met with Dr. Corely (landowner) to discuss potential maintenance work at the Magpie Diversion location. Based on this meeting, it was determined maintenance would be conducted on a portion of the Magpie Diversion. Maintenance occurred from November 20 - 21, 2023 which included filter bedding and riprap placement along the Magpie Diversion with mulch and reseeding of associated disturbances from the maintenance activities. Of the forfeited cash bond amount held by the Division, the entire remaining \$10,000.00 was used in the maintenance activities. The Division holds no additional forfeited bond monies for the Southfield Mine.

Section III - Summary of the Review Process

Initiation of SL-05 Phase III Bond Release and ToJ

The Southfield Mine is a permit revocation/bond forfeiture site. Reclamation work was performed by EFCI prior to revocation along with maintenance activities performed by the Division – IMRP as discussed under Section II of this document. The Division initiated the SL-05 process for Phase III bond release and ToJ on May 19, 2021. The Division enacted the SL-05 and ToJ process following the procedures described in the Act and Regulations. The process also utilized the Division's Guideline Regarding Selected Coal Mine Bond Release Issues, dated April 18, 1995.

Public Notice

The Division published notice of bond release in the *Canon City Daily Record* once weekly for four consecutive weeks, beginning on May 21, 2021. The Division also submitted notifications of SL-05 to all landowners within the Southfield Mine permit boundary as required by Rule 3.03.2(1) on May 19, 2021. The Division received one formal objection regarding bond release and ToJ on June 18, 2021 by Dr. W. Corley of the Corley Company.

Bond Release Inspection

The Division scheduled and conducted a bond release inspection on July 8, 2021. All landowners within the permit boundary were notified by letter dated June 22, 2021. The site inspection was conducted in accordance with Section 3.03.2(2). Zach Trujillo and Jason Musick represented the Division. Dr. Corley of the Corley Company, representing a landowner, attended a portion of the inspection. Since the Southfield Mine is a revoked site, no operator was present.

During the inspection, the Division evaluated the reclamation at each of the three areas that comprise of the remaining 1.45 acres of the Southfield Mine permit boundary. The inspection began at the NW-MW area and associated roads which consists of approximately 0.3 acres. This was followed up by inspecting the Magpie Diversion. This portion of the permit boundary contributes to approximately 0.65 acres. Dr. Corley, the landowner, attended this part of the inspection. Finally, the inspection ended with the reclaimed Substation #2 pad and associated access road which is approximately 0.5 acres of the permit boundary.

During the Magpie Diversion portion of the inspection, Dr. Corley and the Division discussed his concerns regarding the Magpie Diversion. One of his concerns and comments during the inspection was in regards to the lack of rip rap in a small area of the side embankment of the diversion. This is summarized in the Division's inspection report date July 9, 2021. As stated under Section II of this document, the Division – IMRP performed maintenance on this portion of the diversion which included additional riprap placement.

Based on the inspection, it was determined that all disturbances associated with the SL-05 Phase III bond release and TOJ were adequately reclaimed and stable. Both the NW-MW area and substation area are graded and blended well into the adjacent undisturbed land. These areas are well vegetated with no erosional issues. The Division believes that the Magpie Diversion is currently stable with the additional maintenance activities performed by the Division - IMRP.

After the inspection, Dr. Corley provided the Division additional comments in response to the inspection report associated with SL-05. These comments are addressed with observations and findings under Section IV of this Document.

Criteria for Bond Release

Southfield Mine
Permit No. C-1981-014

June 7, 2024

Phase I

Rule 3.03.1(2)(a) states, "[u]p to sixty percent of the applicable bond amount shall be released when the permittee successfully completes backfilling, regrading, and drainage control in accordance with the approved reclamation plan."

The approved reclamation plan for the Southfield Mine is specified in Section 2.05.4 of the Permit Application Package (PAP) for the Southfield Mine. The key portion of this section of the PAP for the Phase I areas in SL-05 states that EFCI will "establish a post-mining configuration which complies with regulatory requirements for long term stability and blends with surrounding undisturbed and reclaimed areas."

Phase II

Rule 3.03.1(2)(b) states, "[u]p to eighty-five percent of the applicable bond amount shall be released upon the establishment of vegetation which supports the approved postmining land use and which meets the approved success standard for cover based on statistically valid data collected during a single year of the liability period ". In regard to Phase II bond release, Rule 3.03.1(3)(b) also states, "[n]o more than (60) percent of the bond shall be released so long as the lands to which the release would be applicable are contributing suspended solids to streamflow or runoff outside the permit area in excess of premining levels as determined by baseline data or in excess of levels determined on adjacent nonmined areas".

With regard to Phase II bond release, the approved reclamation plan calls for the following:

Vegetative Cover Success Standard

The vegetative cover standard in Section 2.05.4 of the PAP indicates that herbaceous cover will be considered successful when herbaceous cover on the reclaimed area is greater than or equal to 90 percent of the herbaceous cover from the reference areas. At the Southfield Mine, multiple reference areas are used and the cover value comes from a weighted average based on acreage.

Post-Mining Land Use

Section 2.05.4 of the Southfield Mine states that all existing and future disturbance within the Southfield mine and loadout areas will be reclaimed to post-mining land uses of rangeland and wildlife habitat consistent with pre-mining land use patterns. EFCI's revegetation plan is the final step in reclaiming the land to productive, self-sustaining uses as rangeland and wildlife habitat for domestic livestock and wildlife species. The Southfield Mine reclamation plan utilizes baseline data and provides for sustainable species that are valuable to both livestock and wildlife.

Sedimentology

As required by Rule 4.15.1(2)(b), vegetation cover shall be capable of stabilizing the soil surface to achieve erosion control equal to pre-mining levels. Sedimentology results from site specific revegetation data is reviewed by the Division. Results for sedimentology models are used to determine if lands to which the release would be applicable are contributing suspended solids to streamflow or runoff outside the permit area in excess of premining levels as determined by baseline data or in excess of levels determined on adjacent nonmined areas as required by Rule 3.03.1(2)(b).

Phase III

Rule 3.03.2(c) states, "the remaining portion of the bond amount shall be released when the permittee has successfully completed all surface coal mining reclamation operations in accordance with this approved reclamation plan, and the final inspection and procedures of 3.03.2 have been satisfied. This shall not be before the expiration of the period specified for revegetation responsibility in 3.02.3."

Productivity and Wood Plant Density

Determination of revegetation success criteria is discussed under Section 2.05.4 of the Southfield Mine PAP that meets the requirements of Rule 4.15.11. Southfield Mine utilizes the point-intercept sampling method to determine vegetative cover per Rule 4.15.11(1)(a). Vegetative productivity is considered successful when vegetative biomass on the reclaimed area is greater than or equal to 90 percent of the vegetative biomass from the reference areas. Successful species diversity is determined using the results of vegetative cover data. Species diversity is considered adequate when the four dominant species, based on plant cover, comprise no more than 80 percent of the total species composition per Rule 4.15.8(5). Woody plant density success values are specific to the

parcel and are evaluated using a weighted average summation of transplant clump density and seeded area wood plant density.

Requirements for demonstrations of sample adequacy and revegetation success for cover and productivity can be found in Rule 4.15.11(2).

Hydrology

Additionally, Rule 3.03.2(2) requires the Division's review of bond releases to include consideration of whether pollution of surface or subsurface water is occurring, the probability of occurrence of such pollution, and the estimated cost of abating such pollution.

Section IV – Observation and Findings

The following discussion of observations and findings focuses on the results of the reclamation success at the remaining areas of the Southfield Mine. The evaluation of the SL-05 Phase III bond release and ToJ included the bond release inspection, an office review of pertinent requirements and regulatory criteria, and review of past inspection reports. The bond release inspection was conducted on July 8, 2021. Several items were reviewed by the Division during the technical evaluation required for bond release before, during, and after the inspection. During the inspection, the entire Southfield Mine area was observed to allow for visual assessment of compliance with pertinent requirements. Geo-referenced permit boundaries and GPS were utilized to verify location of permanent features and to record field data relevant to specific site locations.

Phase I

The NW-MW area, Substation #2 pad and associated roads were previously approved for Phase I bond release under Bond Release applications SL-03 and SL-04. However, these portions of the Southfield Mine were inspected as part of the SL-05 inspection. Participants during the inspection walked the bond release area to allow for visual assessment of compliance with relevant requirements. For Phase I, observations were made during the bond release inspection with regard to AOC, performance of the reconstructed topography, and stability of the constructed permanent diversion. To determine compliance with the Southfield Mine's approved AOC in the SL-05 area, the Division navigated the entire permit area with the GPS assistance of ESRI Collector.

The NW-MW pad and associated roads were inspected. This area is relatively flat along a narrow corridor like permit boundary. Due to the small size of this portion of the permit area (approximately 0.3 acres), this area was visually inspected to ensure proper grading has been achieved as required for Phase I bond release. The reclaimed NW-MW pad and roads all blend into the undisturbed adjacent land. No erosion was observed throughout the length of the area as vegetation is well established within this portion of the permit boundary. Based on the visual assessment, AOC has been achieved at the NW-MW well pad and associated roads. The reclamation of the area remains stable and no issues were observed.

Similarly to the NW-MW area, the reclaimed Substation #2 pad and associated road is also a small area with little to no slope. The substation area is approximately 0.5 acres. Again, due to the relatively small area, this portion of the Southfield Mine was visually inspected to ensure compliance that would satisfy requirements for Phase I bond release. The substation area blends well into the adjacent native area with no signs of erosion. While the associated road has been reclaimed, it has been documented that this road has been used outside of mining related activities since reclamation was performed. Due to the use of the road over the years, the path has become reestablished. However, no erosion or issues were observed and overall, AOC and stability has been achieved at the substation area.

The remaining portion of the Magpie Diversion was inspected for Phase I bond release. The Magpie Diversion portion of the permit boundary is approximately 0.65 acres. This area was also visually inspected to ensure the ditch was stable and functional. During the inspection, no cutting or major erosion was observed throughout the length of the Magpie Diversion. The diversion is well armored with rip rap and has vegetative growth along the channel and embankment such as grasses, shrubs and trees that acts as additional stability. There was a small portion of embankment that is devoid of rip rap as documented in the SL-05 inspection report as well as previous inspection reports. The small area of missing rip rap was inspected, measured and documented in the Division's inspection report dated March 6, 2017. Based on those measurements, the total area encompasses approximately 75 sq. ft. This area within the Magpie Diversion has also received maintenance with additional riprap placement and filter bedding. Additionally, all surface runoff from the adjacent land that drains into the remaining portion of the Magpie Diversion is well vegetated. Proof of the diversion stability is apparent and remains stable. The Division has determined that the Magpie Diversion is stable.

Phase II

The Southfield Mine was inspected for compliance with relevant requirements for Phase II bond release in relation to the PAP. Discussion regarding reclamation standards and requirements for the Southfield Mine is located in Section 2.05.4 of the PAP.

Vegetative Cover Success Standard

As stated earlier under Section II of this document, the vegetative cover standard in Section 2.05.4 of the PAP indicates that herbaceous cover will be considered successful when herbaceous cover on the reclaimed area is greater than or equal to 90 percent of the herbaceous cover from the reference areas per Rule 4.15.8. At the Southfield Mine, multiple reference areas are used and the cover value comes from a weighted average based on acreage. However, during the SL-05 inspection, vegetation sampling was not conducted at the NW-MW pad and associated roads (0.3 acres), as well as the substation pad and associated road (0.5 acres) due to the size of these areas. Vegetation sampling was also not performed at the Magpie Diversion. The Magpie Diversion is a permanent post-mining channel, as such, there are no associated vegetation cover requirements.

Per Rule 4.15.11(2), “Demonstrations of sample adequacy and revegetation success for cover and productivity shall be made with one of the following statistically valid approaches in (a), (b), (c) or (d).” (a) and (b) of this Rule requires a minimum of fifteen sample observations in order to achieve statistical sample adequacy. The minimum number of sample observations for statistical adequacy for (c) of this Rule is thirty. Based on the requirements of Rule 4.15.11 and the size of the applicable areas, a sufficient number of samples cannot be achieved to ensure statistical adequacy for vegetation cover at the Southfield Mine.

As noted, due to the size of the SL-05 areas, vegetation cover at the Southfield Mine was evaluated visually for compliance. Both the reclaimed NW-MW pad and the Substation #2 pad along with associated roads were visually analyzed for vegetation cover during the SL-05 inspection.

The NW-MW well pad was established with vegetation. Grasses, shrubs and native cactus were observed along the reclaimed pad. The associated access road showed similar vegetation success. The pad and access road blend well into the undisturbed adjacent land. The road spur, located just east of the NW-MW well pad, is heavily vegetated with dense grasses and shrubs up to knee height. The area is well blended and is indistinguishable from surrounding undisturbed land.

The reclaimed substation pad is established with vegetation. Similar to other reclaimed areas of the site, shrubs, grasses and cactus were observed through the pad area and has conformed to adjacent undisturbed land. The associated reclaimed access road has intermittent vegetation success along its corridor. This is due to the continued non-mining use since reclamation was performed. However, the access road is stable and continues to display evidence of vegetation establishment from native encroachment of the adjacent undisturbed land.

Post-Mining Land Use

Section 2.05.4 of the Southfield Mine states that all existing disturbances within the Southfield Mine will be reclaimed to post-mining land uses of rangeland and wildlife habitat consistent with pre-mining land use patterns. Prior to revocation, EFCI reseeded the NW-MW pad and associated roads as well as the substation pad and associated road as documented in the Southfield Mine Annual Reclamation Reports. The seed mixture used at the Southfield Mine is outlined in Table 33, Table 33a and Table 33b of Section 2.05.4 of the PAP. The approved seed mixtures used at the Southfield Mine support the post-mining land uses of rangeland and wildlife habitat.

Sedimentology

As required by Rule 4.15.1(2)(b), vegetation cover shall be capable of stabilizing the soil surface to achieve erosion control equal to pre-mining levels. Sedimentology demonstration results are derived from site specific revegetation cover data. As discussed in the previous subsection, due to the size of Southfield Mine, sample adequacy cannot be achieved for site specific cover data. Due to this, an adequate sedimentology demonstration could not be achieved.

The Division visually evaluated vegetation cover related to the stabilization of the soil surface to ensure Rule 4.12.1(2)(b) has been satisfied. During the SL-05 inspection, no erosion was observed throughout the NW-MW pad and the Substation #2 pad per the documentation in previous inspection reports. Due to vegetation establishment, the soil has been stabilized to control erosion as required by Rule 4.12.1.

Phase III

The Southfield Mine was inspected for compliance with relevant requirements for Phase III bond release in relation to the PAP. Determination of revegetation success criteria is discussed under Section 2.05.4 of the Southfield Mine PAP that meets the requirements of Rule 4.15.11. Vegetative productivity is considered successful when vegetative biomass on the reclaimed area is greater than or equal to 90 percent of the vegetative biomass from the reference areas. Successful species diversity is determined using the results of vegetative cover data. Species diversity is considered adequate when the four dominant species, based on plant cover, comprise no more than 80 percent of the total species composition per Rule 4.15.8(5). Woody plant density success values are specific to the parcel and are evaluated using a weighted average summation of transplant clump density and seeded area wood plant density.

Vegetation sampling was not performed and productivity and woody plant density was not evaluated at the Magpie Diversion. The Magpie Diversion is a permanent post-mining channel and there are no associated vegetation requirements of productivity and woody plant density.

Revegetation Success - Productivity

Per Rule 4.15.11(2), “Demonstrations of sample adequacy and revegetation success for cover and productivity shall be made with one of the following statistically valid approaches in (a), (b), (c) or (d).” As discussed in subsection *Vegetative Cover Success Standard* under Phase II observation and findings of this document, sample adequacy cannot be achieved for site specific cover data as well as productivity data due the size of the applicable remaining areas of the Southfield Mine.

Revegetation Success – Woody Plant Density

Valid approaches for demonstrations of sample adequacy and revegetation success for woody plant density is discussed in Rule 4.15.11(3). In order to achieve sample adequacy for Rule 4.15.11(3), (a) of this rule requires a minimum sample size of thirty. Rule 4.15.11(3)(b) requires a minimum sample size of seventy-five and a minimum quadrat size of 100 square meters.

Additionally, Rule 4.15.11(3) allows for the same statistical approaches used in Rule 4.15.11(2) for vegetation productivity to be used for determining woody plant density. As discussed under the requirements for determining sample adequacy for productivity,

sample adequacy cannot be achieved using Rule 4.15.11(2) for site specific wood plant density data.

Based on the requirements of Rule 4.15.11(3) and the size of the applicable areas, a sufficient number of samples cannot be achieved to ensure statistical adequacy for woody plant density at the Southfield Mine.

Hydrology

Rule 3.03.2(2) requires Division review of bond releases to include consideration of whether pollution of surface or subsurface water is occurring, the probability of future occurrence of such pollution, and the estimated cost of abating any such pollution. The Division approved termination of water monitoring at the Southfield Mine in 2014 with the issuance of TR-43 and is presently unaware of any seeps or springs currently emanating within the remaining permit boundary. The remaining areas associated with the Southfield Mine are stable and the Division has determined that the areas associated with the remaining portions of the Southfield Mine will remain as such. It is therefore determined that pollution of surface and subsurface water is not occurring as of the date of the final bond release inspection, and that the probability of such pollution occurring in the future is low.

Section V – Proposed Decision for Phase III Bond Release and ToJ

Based on the observations above, the Division proposes to approve SL-05 and release its jurisdiction over the Southfield Mine. This release and termination of jurisdiction applies to the entire permit area.

With the maintenance activities performed to the Magpie Diversion, there is no additional forfeited bond remaining for the Southfield Mine. The Division finds that all surface coal mining reclamation operations have been completed and meet all requirements of the Rules and the Act to the extent possible considering the revoked nature of the permit.

Any person with a valid legal interest which might be adversely affected by this proposed decision may request a formal public hearing before the Mined Land Reclamation Board in accordance with Rule 3.03.2(6). Public notice of this proposed decision will be published twice in the *Cañon City Daily Record* as soon as possible. Requests for public hearing must be submitted to the Division in writing within thirty days of the first

publication in the *Canon City Daily Record*. If no hearing is requested within those thirty days, the Division's decision will become final.