



COLORADO

**Division of Reclamation,
Mining and Safety**

Department of Natural Resources

1313 Sherman Street, Room 215
Denver, CO 80203

June 5, 2017

Louis Head
New Elk Coal Company, LLC
12250 SH 12
Weston, CO 81091

**Re: Revised findings document for Permit Renewal Application No. 6 (RN-6)
New Elk Mine (Permit No. C-1981-012)**

Dear Mr. Head:

As you know, the Colorado Division of Reclamation, Mining and Safety proposed to approve a renewal application for coal mining and reclamation permit. Enclosed you will find a revised findings document related to this decision. The revision pertained to an error in Section XIII. on page 15. As Kent Gorham correctly noted via e-mail on May 26th, Pond 08 will not be reclaimed but will be retained as a permanent pond.

If you have any questions, please contact me.

Sincerely,

Robert D. Zuber, P.E.,
Environmental Protection Specialist

Enclosure



Proposed Decision
and
Revised Findings of Compliance
for the

New Elk Mine
C-1981-012

Permit Renewal No. 6



Photograph by Brock Bowles, 16 February 2017

June 5, 2017



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

Virginia Brannon, Director

Prepared by
Robert D. Zuber, P.E.
Environmental Protection Specialist

<u>Introduction.....</u>	<u>1</u>
<u>Proposed Decision</u>	<u>1</u>
<u>Status of Stipulations and Revisions to the Permit</u>	<u>2</u>
<u>Summary.....</u>	<u>3</u>
<u>The Review Process</u>	<u>3</u>
<u>Description of the Environment</u>	<u>4</u>
<u>Description of the Operation and Reclamation Plans</u>	<u>6</u>
<u>Findings of the Colorado Division of Reclamation, Mining and Safety</u>	<u>8</u>
<u>Section A - Rule 2.07.6</u>	<u>8</u>
<u>Section B - Rule 4</u>	<u>11</u>
I. Roads	11
II. Support Facilities.....	11
III. Hydrologic Balance.....	11
IV. Topsoil.....	13
V. Sealing of Drilled Holes and Underground Openings	13
VI. Use of Explosives	13
VII. Disposal of Excess Spoil	13
VIII. Coal Mine Waste Banks.....	13
IX. Coal Mine Waste	14
X. Backfilling and Grading.....	14
XI. Revegetation	14
XII. Post-mining Land Use	15
XIII. Protection of Fish, Wildlife and Related Environmental Values	15
XIV. Protection of Underground Mining	15
XV. Subsidence Control.....	15
XVI. Concurrent Surface and Underground Mining	15
XVII. Operations on Alluvial Valley Floors	15
XVIII. Operations on Prime Farmland	16
XIX. Mountaintop Removal.....	16
XX. Operations on Steep Slopes.....	16
XXI. In Situ Processing	16

Introduction

This document is the decision package prepared by the Colorado Division of Reclamation, Mining and Safety (the Division) for the New Elk Mine. This document includes: 1) the proposed decision to approve the renewal application; 2) a summary which includes a history of the review of the permit application, a description of the environment affected by the operation and a description of the mining and reclamation plan; and 3) the written findings of compliance the Division has made as required by the Colorado Surface Coal Mining Reclamation Act (the Act). Detailed information concerning the findings of compliance can be found in the Regulations of the Colorado Mined Land Reclamation Board for Coal Mining.

The Division has received an application for a renewal to a permit to conduct surface coal mining and reclamation operations at the New Elk Mine. The application was submitted by New Elk Coal Company, LLC (NECC). The mine will be operated by NECC. The mine is located on state and private lands within Las Animas County, Colorado. The legal description of the lands included within the permit area is: Due to the lack of a U.S. Public Land Survey of the permit area, the legal description of the lands included within the permit area is a metes and bounds description, which is included in Exhibit 34 of the permit. An approximation of the location of the permit area is as follows: portions of Sections 13, 14, 21, 22, 23, 24, 27, 28, 35 and 36 in Township 33S, Range 68W.

Proposed Decision

The Colorado Division of Reclamation, Mining and Safety proposes to approve an application for permit renewal.

The application was submitted by New Elk Coal Company, LLC for the mine. This decision is based on a finding that the operations will comply with all requirements of the Colorado State Program as found in the Colorado Surface Coal Mining Reclamation Act, C.R.S. 34-33-101 et seq., and the Regulations promulgated pursuant to the Act. If no request for a formal hearing is made within thirty (30) days of the first publication of the issuance of this proposed decision, then this decision becomes final. Upon submittal of acceptable surety by the applicant, the permit will be issued. The permit application, all supporting documentation, and any stipulations or conditions will become a binding part of the permit.

No coal mining operations may be conducted on any Federal surface or coal until the Secretary of the Interior has approved the proposed mining plan.

Status of Stipulations and Revisions to the Permit

Between 1988 and 2001, the Division submitted 13 stipulations related to the New Elk Mine. Review of the stipulation file in the Division's Permit System indicates that all stipulations have been complied with or otherwise terminated. There are no active stipulations at the time of approval of Permit Renewal #6 (RN-06).

The Division has approved two bond releases related to the New Elk Mine: SL-01 and SL-02. In 1998, the Division approved Phase I, II, and III bond release of 3,233 acres south of Highway 12 (SL-01). This action released this area from further liability, as per Division written policy for release of areas overlying underground workings. Of the 3,233 acres included in SL-01, 597 acres had been undermined, but none of the acreage had been disturbed at the surface. Included in this area are two small areas of surface disturbance (the Apache Canyon ventilation shafts), which were transferred to the Golden Eagle Mine (Division permit C-1981-013). The Division approved a partial Phase 1 Bond Release (SL-02) in 2006 for 35.14 acres. SL-02 approved completion of demolition of structures, backfill, and grading of 19.08 acres at the East Portal, and 16.06 acres at the West Portal. SL-02 also released liability for activities that had previously received approval but had never been implemented, and these activities were removed from the approved permit application package (PAP).

The following are revisions processed since the last issued midterm review (MT-06, approved October 29, 2012). This includes revisions that have decision dates after October 29, 2012 or revisions with pending decisions.

- SI-02 (Surety Increase related to MT-06) was withdrawn on 28 February 2017.
- PR-04 (Permit Boundary expansion) was withdrawn 11 December 2013.
- TR-72 (Transfer of Northwest Airshaft site from Golden Eagle permit) was submitted 27 April 2017 (decision pending).
- TR-71 (Plan for pond dewatering) was submitted 8 August 2016 (decision pending).
- TR-70 (New design of RDA haul road) was issued 24 March 2015.
- TR-69 (Ditch reconfiguration) was issued 13 May 2014.
- TR-68 (Response to 2012 midterm review) was issued 13 February 2015.
- TR-67 (Installation of new dewatering wells) was withdrawn 17 January 2014.
- MR-124 (Update of Exhibits 1 and 28) was issued 2 May 2017
- MR-123 (Transfer of water monitoring well into permit) was issued 31 August 2015.
- MR-122 (Update of Exhibit 19, Sediment Design Specifications) was issued 21 November 2014.
- MR-121 (Update of Maps 13 and 13A) was withdrawn 3 May 2013.
- MR-120 (Addition of new buildings) was withdrawn 17 January 2014.
- MR-119 (Update of parking and materials storage) was issued 8 March 2013.

Summary

The Review Process

The New Elk Mine was previously known as the Allen Mine, which began operations in 1951. The New Elk Mine operated under an interim permit issued by the Colorado Mined Land Reclamation Division (previous name of the Division of Reclamation, Mining and Safety) on January 25, 1978, pursuant to the Colorado Mined Land Reclamation Act. CF&I Steel Corporation, the previous owners, submitted an application for a new permit on February 4, 1981, pursuant to Section 34-33-109 of the Colorado Surface Coal Mining Reclamation Act. The Division reviewed that application and a proposed decision was issued on December 19, 1983.

The New Elk mine permit has been transferred on four occasions. Permit rights were transferred from CF&I Steel Corporation to Wyoming Fuel Company on January 31, 1984. Permit rights were transferred from Wyoming Fuel Company to Basin Resources, Inc. (BRI) on March 29, 1993 (SO-01). In April 1997, permit rights were transferred from BRI to Picketwire Processing, LLC (SO-02). And finally, the permit was transferred from Picketwire Processing, LLC to NECC on March 19, 2007 (SO-03). In March 2010, NECC provided information that Cline Mining Corporation had purchased NECC (MR-91). NECC provided notification that NECC would continue as the permittee, but TK Mining Services LLC, would be the mine operator (MR-98 approved November 2011). TK Mining Services, LLC, was removed as mine operator, and NECC resumed its status as mine operator (MR-108 approved March 2012).

This is the sixth renewal of the permit since it was originally issued. In accordance with Rule 2.08.5, the Division notified NECC on May 29, 2013 of the permittee's need to submit a complete application for permit renewal by August 30, 2013. The permit renewal application was received by the Division on August 26, 2013 from NECC. On August 30, 2013, the Division called the application complete, and notifications of the filing of a complete application for a permit renewal were sent to the applicant, Las Animas County Planning, Las Animas County Commissioners, the Colorado Office of Archaeology & Historic Preservation, Colorado Parks and Wildlife, U.S. Fish and Wildlife Service, and the U.S. Bureau of Land Management. NECC published notice of the application for renewal once a week for four weeks in *The Chronicle-News* beginning on March 17 and ending April 7, 2017. No public comments were received as a result of the public notice, and no issues were raised as a result of agency notification letters. Individuals from Colorado Parks and Wildlife as well as the Office of Archaeology and Historic Preservation wrote letters to say that those agencies did not object to the proposed renewal of the New Elk Mine permit.

The Division forwarded adequacy concerns to NECC on the following dates: 29 October 2013, 25 November 2015, 11 February 2016, 23 June, 2016, and 7 September 2016. NECC responses were received by DRMS on the following dates: 20 May 2016 (two separate letters), 24 June 2016, 15 August 2016, 14 October 2016, 28 October 2016, and 8 February 2017. At the time of the writing of these findings, all adequacy concerns were addressed to the satisfaction of the Division.

Applicant Violator System (AVS) checks were conducted by OSM on 8 December 2015, 13 July 2016, and 22 February 2017. Based on all three checks, there were no violations retrieved by the system.

On May 11, 2017, the Division proposed to approve the application for renewal.

Description of the Environment

The New Elk Mine, located approximately 24 miles west of Trinidad, Colorado, is located in a plateau area. The elevation of the surface facilities ranges from 7,400 to 7,800 feet. Land use in the area consists of cropland, rangeland, pastureland, and wildlife habitat. Livestock grazing and hay production on irrigated lands are the main agricultural practice conducted in the general area. A variety of large and small mammals, birds, fish, amphibians, and reptiles are permanent or temporary residents of the area.

The New Elk Mine is located in the western limb of the Raton Basin. The Raton Basin is a broad, asymmetric syncline whose axis trends north-south. Previous mining at this site was entirely within the Allen Seam, stratigraphically located in the Raton Formation (Upper Cretaceous and Paleocene). The Poison Canyon Formation (Paleocene) unconformably overlies the Raton Formation. The Poison Canyon Formation has a thickness of approximately 200 feet and occurs only as small, isolated outcrops above an elevation of 8,000 feet. Unconsolidated Quaternary alluvial and colluvial deposits overlie the Raton Formation in the low-lying areas.

The rock strata dip approximately two degrees to the north-northeast. The permit area contains one steep, normal fault trending east-northeast with vertical displacement less than 25 feet. Four coals seams are of mining interest in the New Elk Mine permit area and include (from bottom to top) the Allen, Apache, Maxwell and Blue Seams. Both the Allen and Apache Seams attain mineable thickness throughout most of the proposed permit area, whereas the Blue and Maxwell Seams are more local in extent. The rocks immediately above and below the seams consist of interbedded sandstone, siltstone and mudstone. Detailed information on the stratigraphy of these seams can be found in the 6A map series. Some key facts about these seams follows.

- The thickness of the Allen Seam varies from 2 to 8 feet. The Allen Seam lies from 450 to 900 feet below the surface.
- The Apache Seam is stratigraphically located 20 to 50 feet above the Allen Seam and has a thickness ranging from 1 to 6 feet.
- The Maxwell Seam is located 25 to 50 feet above the Apache Seam and has a thickness ranging from 1 to 5 feet. The Maxwell Seam was extracted in the Golden Eagle Mine which was a longwall operation. The seam thins westward from the Golden Eagle towards the proposed permit area where it averages 2.5 feet thick. This seam is not prominent in the New Elk mine plan.
- Potentially mineable coal occurs in the Blue Seam within the northern part of the proposed permit area and occurs high above the Maxwell Seam in the Upper Coal Zone of the Raton Formation. The thickness is shown on Map 6A - Sheet 1.

The alluvium of the Middle Fork of the Purgatoire River is a significant aquifer in the permit and adjacent areas. The Purgatoire River originates several miles west of the mine in the Sangre de Cristo Mountain Range. It flows into the Arkansas River near Las Animas, Colorado, approximately 120 miles northeast of the mine.

Portions of the Apache Canyon, Pete Canyon, and Ciruela Canyon drainages are found within the permit area. These basins contain intermittent and ephemeral streams that flow predominately in response to runoff from snowmelt during the spring and intense rainfall during the summer. A portion of the flow in intermittent drainages is sustained by groundwater discharges. Pete Canyon is tributary to the North Fork of the Purgatoire River, while Apache and Ciruela Canyons are tributary to the main stem of the Purgatoire River (aka the Middle Fork).

The region is characterized by a semi-arid climate. The prevailing wind is from the southwest and average annual precipitation is approximately 17 inches. The length of the growing season in the area varies from 90 to 110 days.

Vegetative communities in the area of the mine can be separated into two physiognomic types: the low grassland and riparian communities along the Middle Fork of the Purgatoire River valley bottom, and forest communities dominating the slopes and upland areas along the river valley. Communities on the north-facing slope and the river valley were inventoried and found to contain four distinct vegetative communities at the New Elk Mine area: a Ponderosa pine-Douglas fir-oak community, a Ponderosa pine-oak community, a grassland community, and a riparian willow carr community. The Ponderosa pine-Douglas fir-oak community is found on the north-facing slope above the mine facilities at elevations above 7,600 feet. The overstory consists of mature Ponderosa pine and Douglas fir with interspersed piñon pine and Rocky Mountain juniper. The dominant shrub species is Gambel's oak. Vegetative cover is relatively sparse (12 percent) and productivity is low (62 lb/ac). The Ponderosa pine-oak community occurs on the north facing slopes above 7,500 feet on the eastern two-thirds of the permit area. Pure Ponderosa pine stands are interspersed with Gambel's oak, piñon pine, and Rocky Mountain juniper. Vegetative cover is low (4 percent), as is productivity (44 lb/ac).

The grassland community was inventoried at the adjacent Golden Eagle Mine on a plateau above the river at 7,200 feet elevation, since no undisturbed grassland communities could be found at the New Elk Mine. Dominant grass species were blue grama and western wheatgrass, with many other minor graminoids including a number of forbs. Sage and snakeweed were the dominant shrubs. Vegetative cover can be characterized as moderate (18 percent), as is productivity (560 lb/ac). The willow carr riparian community is located in the Purgatoire River drainage at an elevation of 7,400 feet at the New Elk Mine. The dominant species was willow with a diverse graminoid and forb understory. Vegetative cover is high (43 percent), as is productivity (2,140 lb/ac).

Soils in the area range from very shallow on the steep side slopes to deep, well-drained loams with a dark-colored surface layer found in the valley bottom along the river.

The Jansen Loadout is located in an unincorporated area on the west side of Trinidad, Colorado. Land use of the site has been industrial for at least two decades. The site is located immediately

New Elk Mine

Findings for RN-06, May 11, 2017

north of and adjacent to the Burlington Northern Santa Fe (BNSF) railroad grade on a thin layer of Purgatoire River alluvial deposits capping bedrock sedimentary formations. No intermittent, ephemeral, or perennial drainages cross the site. An intermittent arroyo named Colorado Canyon arroyo borders the site on the eastern boundary. This arroyo flows only during snowmelt episodes in the spring or from storm runoff after summer thunderstorms.

Climate at the loadout is similar to that of the mine site, but slightly dryer due to lower elevation.

All soils and native vegetation have been previously removed from the loadout site. Weeds and volunteer species persist, especially on the fringes of the disturbance. The site has no natural wildlife habitat and the site is fenced to prevent access of domestic animals and big game.

Description of the Operation and Reclamation Plans

The existing operation at the time of original permitting consisted of several benches used for storage, office building, shop buildings, railroad tracks, two portals, conveyors, coal silos, substations, fans, air shafts, a water tank, a parking lot, four sediment ponds, ditches, culverts, roads, and a refuse disposal area. Surface facilities added as a result of permitting actions included a refuse disposal valley fill and sediment pond north of Highway 12, two new topsoil stockpiles, coal stockpiles, conveyors, a preparation plant and thickener tank, and the Jansen Loadout.

Mining at the New Elk Mine began with the use of the West Portal and East Portal to access the Allen Seam. The mining entailed the use of both continuous miners and longwall mining methods. The mining mainly progressed to the south and east. Old workings are shown on Map 3 along with the current mine plan, which is also described in Section 2.05.2 of the PAP. In 2011, NECC constructed a new set of portals (Bates Portals) located southeast of the coal silos. The mine plan for the Blue Seam progresses to the east and north. Also in 2011, NECC reopened the Allen Seam. The Allen Seam mine plan progresses mainly to the south and east.

In July 2012, NECC suspended coal extraction and the mine was classified as being in Temporary Cessation (TC-01). Since that time, the status has been changed to Active in anticipation of the resumption of mining, although currently the mine is on “care and maintenance” status, and no mining operations have taken place in recent years.

Several structures have been approved for permanent storage of mine waste at the New Elk Mine. The Refuse Disposal Area (RDA) was permitted in 1984 and is a valley fill north of Highway 12. Refuse from coal processing (from both the New Elk Mine and the Lorencito Canyon Mine nearby) has been transported by conveyor over Highway 12 and deposited in the RDA. Pond cleaning material and small quantities of rock were added to the original refuse pile, now referred to as the Development Waste Pile (DWP) southwest of the main mine entrance.

The DWP reached its maximum size in late 2006 and was regraded, topsoiled, and reseeded. Construction of the Bates portals and development of workings to access the Blue Seam resulted in construction of a subsoil stockpile and the Development Waste Disposal Area (DWDA#2). The DWDA#2 is located southeast of the main entrance. In 2012 with TR-65, the Division approved construction of another area for disposal of development waste, DWDA#3, which

New Elk Mine

Findings for RN-06, May 11, 2017

would be in the West Portal area; this has not been built.

During reclamation, the bench areas at the mine will be graded to the approximate original contour. The disturbed areas will receive nine inches of topsoil or will be ripped (depending on the area as discussed below), then seeded and mulched to establish a vegetative cover of a variety consistent with surrounding vegetation. The stream channel diversion of the Middle Fork of the Purgatoire River, which was approved under Permit Revision #1, is permanent and will remain as constructed. Monitoring has demonstrated that the reconstructed channel is stable. Facilities that shall be retained as permanent include Pond 004A, Pond 08, two small buildings, and several roads.

Topsoil was salvaged from the disturbed area above the RDA during each successive movement of the clean water diversion ditch above the RDA. This material (which is currently in Topsoil Stockpile #2) will be used in the reclamation of the RDA. A topsoil borrow area in the West Mine area, in addition to stockpiled topsoil, will be used to reclaim the areas of the existing and proposed surface facilities. Due to previous disturbance prior to the enactment of the Colorado Surface Coal Mining Reclamation Act, very little topsoil is available for use during reclamation of areas previously disturbed. Permitted disturbed areas, underlain by refuse, whether pre-law or post-law, will receive topsoil prior to re-seeding and mulching. Permitted disturbed areas not on refuse material will be ripped prior to reseeded and mulching. See Maps 15 and 16 for specific identification of these two types of disturbed areas.

The post-mining land use is rangeland for most of the disturbed area and wildlife habitat (upland and riparian) for the remainder of the disturbed area. These land uses are compatible with the surrounding uses. The proximity of the mine site to the Middle Fork of the Purgatoire River and the heavily forested areas to the south indicate a high probability of wildlife use following reclamation. Riparian vegetation, as well as the use of native grasses and shrubs, is planned for reclamation.

Operations at the Jansen Loadout will be limited to the weighing of coal trucks, unloading and stockpiling of coal, and conveying and loading of coal into unit trains. The operator estimates that 24,000 tons of coal can be stored at the site. The operator will utilize covered coal conveyors and water spray to minimize fugitive dust. Storm water runoff is handled by the existing grade and a series of ditches and small sumps. One small fuel tank will be stored at the site. Mine identification signs will be posted at the entrance to the site on the west side and the perimeter area will be marked.

The pre-mining and post-mining land use at the Jansen Load out is industrial. When the Jansen Loadout is no longer necessary for loading on coal, all structures, except those specifically identified in Attachment 2 of Exhibit 40 for permanent retention, will be removed and the site will be graded and returned to a rail siding for use by the landowner.

Findings of the Colorado Division of Reclamation, Mining and Safety
for the New Elk Mine

Explanation of Findings

Pursuant to Rule 2.07.6(2) of the Regulations of the Colorado Mined Land Reclamation Board for Coal Mining, and the approved state program, the Division of Reclamation, Mining and Safety or the Board must make specific written findings prior to issuance of a permit, permit renewal or permit revision. These findings are based on information made available to the Division that demonstrates that the applicant will be able to operate in compliance with the Colorado Surface Coal Mining Reclamation Act and the Regulations promulgated pursuant to the Act.

The findings in the following sections required by Rule 2.07.6(2) are listed in accordance with that Rule. The findings and specific approvals required pursuant to Rule 2.07.6(2)(m) are listed in accordance with Rule 4 and are organized under subject or discipline subtitles.

This findings document is updated upon permit renewal, which occurs every five years for most mines. This is the sixth renewal findings document for the New Elk Mine, which has a five-year permit term. The following findings were reevaluated and updated if necessary to reflect changes which have occurred during the past permit term. Any stipulations from the original permit and findings document or subsequent revisions that have been totally resolved to the satisfaction of the Division, have been removed from this document.

Section A - Rule 2.07.6

1. The permit application is accurate and complete. All requirements of the Act and these rules have been complied with (2.07.6(2)(a)).
2. Based on information contained in the permit application and other information available to the Division, the Division finds that surface coal mining and reclamation can be feasibly accomplished at the New Elk Mine (2.07.6(2)(b)).
3. The assessment of the probable cumulative impacts of all anticipated coal mining in the general area on the hydrologic balance, as described in 2.05.6(3), has been made by the Division. This assessment entitled "Cumulative Hydrologic Impact Assessment, Purgatoire River Basin" is available for inspection at the offices of the Division. The Division finds that the operations proposed under the application have been designed to prevent damage to the hydrologic balance outside the proposed permit area. Please refer to Section B.III (Probable Hydrologic Consequences) of this document for additional discussion of the predicted hydrologic consequences of mining operations at the New Elk Mine (2.07.6(2)(c)).
4. The Division finds that the affected area is, subject to valid rights existing as of August 3,

1977, not within:

- a) An area designated unsuitable for surface coal mining operations (2.07.6(2)(d)(i));
 - b) An area under study for designation as unsuitable for surface coal mining operations (2.07.6(2)(d)(ii));
 - c) The boundaries of the National Park System, the National Wildlife Refuge System, the National System of Trails, the National Wilderness Preservation System, the Wild and Scenic Rivers System including rivers under study for designation, and National Recreation Areas (2.07.6(2)(d)(iii)(A));
 - d) Three hundred feet of any public building, school, church, community or institutional building, or public park (2.07.6(2)(d)(iii)(B));
 - e) One hundred feet of a cemetery (2.07.6(2)(d)(iii)(C));
 - f) The boundaries of any National Forest unless the required finding of compatibility has been made by the Secretary of the U.S. Department of Agriculture (2.07.6(2)(d)(iii)(D));
 - g) One hundred feet of the outside right-of-way line of any public road except where mine access or haul roads join such line, and excepting any roads for which the necessary approvals have been received, notices published, public hearing opportunities provided, and written findings made (2.07.6(2)(d)(iv));
 - h) Three hundred feet of an occupied dwelling unless a written waiver from the owner has been provided (2.07.6(2)(d)(v)).
5. On the basis of correspondence with the office of the State Historic Preservation Officer, the Division finds that, subject to valid existing rights as of August 3, 1977, the mining operation will not adversely affect any publicly owned park or place listed on or eligible for listing in the National Register of Historic Places as determined by the State Historic Preservation Office (2.07.6(2)(e)(i)).
6. This is an underground mining operation, and the private mineral estate has both been severed from private surface estate in some areas and has not been severed in other areas. The documentation specified by Rule 2.03.6(1), in the form of a deed on file with the Las Animas County Courthouse, has been provided.
7. On the basis of evidence submitted by the applicant and received from other state and federal agencies as a result of the Section 34-33-114(3) compliance review required by the Colorado Surface Coal Mining Reclamation Act, the Division finds that New Elk Coal Company, LLC does not own or control any operations which are currently in violation of any law, rule, or regulation of the United States, or any State law, rule, or regulation, or any provision of the Surface Mining Control and Reclamation Act or the Colorado Surface Coal Mining Reclamation Act (2.07.6(2)(g)(i)).

8. New Elk Coal Company, LLC does not control and has not controlled mining operations with a demonstrated pattern of willful violations of the Act of such nature, duration, and with such resulting irreparable damage to the environment as to indicate an intent not to comply with the provisions of the Act (2.07.6(2)(h)).
9. The Division finds that surface coal mining and reclamation operations to be performed under this permit will not be inconsistent with other such operations anticipated to be performed in areas adjacent to the permit area (2.07.6(2)(i)).
10. The Division estimates the reclamation liability for mining operations in this permit term to be \$4,034,998.07 (based on reclamation cost estimate performed during the midterm review of 2016 (MT-07)). The Division currently holds \$4,133,137.02 in performance bonds for the New Elk Mine. NECC need not submit an additional performance bond prior to issuance of a renewed permit (2.07.6(2)(j)).
11. The Division has made a negative determination for the presence of prime farmland within the permit area. The decision was based on a letter from the Soil Conservation Service dated October 24, 1980 that demonstrates that no prime farmland mapping units are found within the permit area (2.07.6(2)(k)).
12. Based on information provided in the application, the Division has determined that two alluvial valley floors exist within the permit or adjacent area. These alluvial valley floors are located within the Stonewall Valley and the Picketwire Valley. A thorough description of these alluvial valley floors, and the impacts on them due to mining at New Elk, is found in Section VIII of the January 11, 1989 Findings of Compliance (2.07.6(2)(k)).
13. The Division hereby approves the post-mining land use of the operation. It was determined that rangeland and wildlife habitat meet the requirements of Rule 4.16 for the permit area (2.07.6(2)(l)).
14. Specific approvals have been granted or are proposed. These approvals are addressed in the following section, Section B (2.07.6(2)(m)).
15. The Division finds that the activities proposed by the applicant would not affect the continued existence of endangered or threatened species or result in the destruction or adverse modification of their critical habitats. No additional surface disturbance is planned or approved under this renewal (2.07.6(2)(n)).
16. The Division has contacted the Office of Surface Mining, Reclamation Fees Branch. As of this time, the operator is current in the payment of reclamation fees required by 30 CFR Chapter VII, subchapter R (2.07.6(2)(o)).

Section B - Rule 4

This section discusses specific approvals (see item 14. in Section A above), major changes to the New Elk Permit since RN-05, as well as other pertinent information.

I. Roads - Rule 4.03

The Permit is found to be in compliance with the requirements of Rule 4.03. Information on roads is presented in Section 2.05 and Maps 11 and 12 of the PAP (road drainage on Maps 13 and 13A). Three primary types of roads are described in the PAP: haul roads, access roads, and light-use roads.

Alternative haul road designs have been approved (e.g., slope above 10 percent in places) as long as safety precautions and environmental protection practices are met, as described in Section 2.05.

The Division has approved the retention of haul roads (depicted on Map 15 in the PAP). This is compatible with the approved post-mining land uses of rangeland and wildlife. NECC owns the land where the haul roads are located (4.03.1(1)(f)(ii)).

The Division approved the location of a portion of the haul road across the Middle Fork of the Purgatoire River as depicted on Map 11, Sheet 1 (4.03.1(2)(b)).

No specific approvals (e.g., alternative designs, location in stream buffers) are granted for access roads or light use roads.

II. Support Facilities - Rule 4.04

Construction of support facilities has not resulted in damage to other structures or property, and the reclamation of facilities is not anticipated to cause such damage. With PR-03 (issued March 2011), the Jansen Loadout was added to permit and subsequently constructed. This area created no new disturbance.

No specific approvals are granted under this section.

III. Hydrologic Balance - Rule 4.05

Water Quality Standards and Effluent Limitations

The Division proposes to grant small area exemptions (SAEs) from use of sediment ponds due to the limited size of the area and due to the fact that ponds and/or treatment facilities are not necessary for the drainage in these specific areas to meet the effluent limitations of Rule 4.05.2 and applicable State and Federal water quality standards for receiving streams. Also, no mixing of surface drainage with a discharge from underground workings will occur (4.05.2(3)(b)(ii)).

New Elk Mine
Findings for RN-06, May 11, 2017

The small areas to be exempted are located as follows:

- SAE at slurry well site and other small areas on the west side of the permit area
- Two SAEs for East Portal Water Tanks
- SAE east of the Development Coal Waste Pile
- SAE north of the river and west of the RDA belt (including Topsoil Stockpile #2)
- SAE south of Pond 007A.

Stream Channel Diversions

During a previous permit term the operator submitted design details for permanent diversion of the Middle Fork of the Purgatoire River. This diversion was necessary to accommodate coal storage and preparation plant operations. The Division approved this permanent diversion and the operator completed the approximately 580-foot diversion in the spring and early summer of 1985. This decision is based on a finding that the proposed diversion meets the requirements of 4.05.18 and 4.05.4; applicable local, State, and Federal statutes and regulations; and that the diversion is designed to safeguard public safety and to minimize adverse impacts to the hydrologic balance (4.05.4(1) and (4)). The Division has found that this diversion will not diminish downstream water rights and meets the requirements of Rule 4.05.4 (4.05.4(3)). Exhibit 21 of the PAP (Supporting Information for Permanent Diversion) contains the pertinent design formation.

Channel lining structures, retention basins, and artificial channel roughness structures are proposed for use to control erosion. These means are proposed to be approved by the Division since they are necessary to control erosion, they are stable and will require infrequent maintenance (4.05.4(2)(a)).

Sedimentation Ponds

With TR-68 (issued February 2015), the Division approved the retention of Ponds 004A and 08.

Surface and Ground Water Monitoring

The applicant will conduct monitoring of water in a manner approved by the Division. The groundwater monitoring plan and surface water monitoring plan are described in Section 2.05 of the PAP. This section includes monitoring frequency in Table 27 and a water quality parameter list in Table 28 (4.05.13(1)).

Transfer of Wells

Exploration sites 05-2011 and 08-2011 were retained as wells for monitoring purposes with MR-123 (issued in August 2015). Per Exhibit 11 in the PAP and the map of exploration boreholes (permit X201123201), they are located as follows:

- NE-05-2011 – NE quarter of NW quarter of Section 8 in Township 34S, Range 67W.
- NE-08-2011 – NW quarter of SE quarter of Section 16 in Township 34S, Range 67W.

Discharge of Water into an Underground Mine

New Elk Mine
Findings for RN-06, May 11, 2017

If TR-71 is approved (it is currently pending), the Division will approve the diversion of water from sediment ponds into underground mine workings. NECC will have to demonstrate that the diversion will abate water pollution or otherwise eliminate public hazards, be discharged as a controlled and identifiable flow, meets all applicable State and Federal water quality standards or effluent limitations, minimizes disturbance to the hydrologic balance, prevents material damage outside the permit area, does not injure vested water rights, and has been approved by the Mine Safety and Health Administration (4.05.16 and 4.05.3(1)(f)).

Stream Buffer Zones

The Division has approved underground mining panels under the Middle Fork of the Purgatoire River. This decision is based on a finding that the original stream channel will not be impacted (and restoration and revegetation will not be necessary) and water quality and quantity shall not be adversely affected. The Division has also found that the haul road bridge across the river will not have adverse impacts on the function of the river in terms of hydraulics or ecology (4.05.18(1)).

IV. Topsoil

No specific approvals are granted for this section.

V. Sealing of Drilled Holes and Underground Openings

No specific approvals are granted for this section.

VI. Use of Explosives

New Elk is an underground mine, and the use of explosives is very limited. No specific approvals are granted for this section.

VII. Disposal of Excess Spoil

New Elk is an underground mine, and this section is not relevant to the New Elk Mine.

VIII. Coal Mine Waste Banks

The Division has approved plans for use, construction, and maintenance of four coal mine waste disposal areas (4.10.1(1)):

- The Development Coal Waste Pile (aka Development Waste Pile) is located southwest of the main entrance. It is now reclaimed.

- The RDA is a large valley fill located north of Highway 12. The lower portion of it has been reclaimed.
- The Development Waste Disposal Area #2 is southeast of the main entrance. It has not been reclaimed.
- The Development Waste Disposal Area #3 was approved for the West Mine area with TR-65. No significant amount of development waste material has been placed in this area.

All disposal areas will be inspected on a regular basis by a qualified professional under the direction of the professional engineer experienced in construction of similar earth and waste structures (4.10.2(1)).

IX. Coal Mine Waste

No specific approvals are granted for this section.

X. Backfilling and Grading

The Division has approved the applicant's plan for disposal of debris, acid-forming or toxic materials, or materials constituting a fire hazard in a manner designed to prevent contamination of ground or surface waters. A contingency plan has also been developed to prevent sustained combustion of flammable materials. The applicant will cover the non-coal waste with a minimum of two feet of soil (4.14.3(1)(a)).

Small depressions in the backfill will be used to minimize erosion, create or enhance wildlife habitat, conserve soil moisture, and promote revegetation. The Division proposes to approve their construction (4.14.2(3)).

XI. Revegetation

To demonstrate that the success criteria of 4.15.8, 4.15.9, and 4.15.10 have been met, comparisons between reclaimed and approved reference areas will be based on herbaceous cover, production, species diversity, and woody plant density. The Division has approved the basis for this comparison. The Division also approved the reference areas (TR-44), based on the requirements of Rule 4.15.7(3).

The approved methods to measure herbaceous cover and production, species diversity, and woody plant density are discussed in Section 2.05 of the PAP (4.15.7(1)).

The Division approved the use of introduced species in the reclamation seed mix (e.g., smooth brome). The applicant submitted information that shows that the introduced species are desirable and necessary to achieve the approved post-mining land use, and they are not poisonous or noxious (4.15.2(3)).

With TR-68, NECC proposed (and the Division approved) a variance regarding the revegetation plan and success criteria. In particular, the establishment of shrubs will focus on clumps, which is believed to be more realistic than the prior plan. The Colorado Parks and Wildlife approved this revision to the plan for shrubs.

XII. Post-mining Land Use

No specific approvals are granted for this section.

XIII. Protection of Fish, Wildlife and Related Environmental Values

Fish and wildlife habitat is a planned post-mining land use. The applicant has selected appropriate plant species and distributions to benefit fish and wildlife. The reclamation plan calls for restoration of much of the rangeland along the Purgatoire River to riparian vegetation. The RDA will be reclaimed to upland wildlife habitat, which includes the establishment of shrub species (4.18(5)(i)). Pond 004A and Pond 08 will be retained as permanent ponds for use by wildlife.

XIV. Protection of Underground Mining

No specific approvals are granted for this section.

XV. Subsidence Control

No specific approvals are granted for this section.

XVI. Concurrent Surface and Underground Mining

No specific approvals are granted for this section.

XVII. Operations on Alluvial Valley Floors

The Division has determined that two alluvial valley floors exist within the affected or adjacent area: Stonewall Valley AVF and Picketwire Valley AVF, both located in the Purgatoire River Valley. For these two AVFs, the Division has made the following findings.

- The Division finds that activities proposed by the applicant will not interrupt, discontinue, or preclude farming on the alluvial valley floors that are irrigated or naturally subirrigated (4.24.3(1)).

- The proposed activities will not materially damage the quantity or quality of water in the surface or groundwater system described above (4.24.3(3) and 2.06.8(5)(a)(ii)).
- The proposed activities will comply with the requirements of the Act and the Regulations with respect to alluvial valley floors (2.06.8(5)(a)(iii)).
- The operation proposed by the applicant produced coal in commercial quantities and was located within or adjacent to an alluvial valley floor prior to August 3, 1977 (4.24.3(4)(a) and 2.06.8(5)(b)(i)(A)).

Furthermore, NECC has committed to conduct mining and reclamation operations that will preserve the essential hydrologic functions of alluvial valley floors outside the permit area and to reestablish the essential hydrologic functions of alluvial valley floors within the affected area throughout the mining and reclamation process (4.24.2).

An environmental monitoring system has been installed, maintained, and operated by the permittee on all alluvial valley floors during mining and reclamation operations and will continue until all bonds are released in accordance with Rule 3. A hydrologic monitoring program included as part of the approved permit monitors both surface water and alluvial groundwater in the two alluvial valley floors, Stonewall Valley AVF and Picketwire Valley AVF (4.24.4).

XVIII. Operations on Prime Farmland

No specific approvals are granted for this section.

XIX. Mountaintop Removal

No specific approvals are granted for this section.

XX. Operations on Steep Slopes

No specific approvals are granted for this section.

XXI. In Situ Processing

No specific approvals are granted for this section.