



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

June 13, 2022

New Elk Coal Company, LLC.  
Attn: Nick Mason  
12250 Highway 12  
Weston, Colorado 81091

**RE: New Elk Mine, C-1981-012, Permit Revision No. 5, Adequacy Review No. 3**

Dear Mr. Mason,

The Colorado Division of Reclamation, Mining and Safety (DRMS or Division) received a response to the Division's second adequacy from New Elk Coal Company LLC (NECC) on May 5, 2022. The following is a list of adequacy review items identified in the Division's November 2, 2021 adequacy review letter followed by a summary of NECC response. If an adequacy review issue has been resolved, it has been deleted from the list for simplicity; otherwise follow-up questions or adequacy items are identified. Also, additional or new issues may be identified as well. The Division is required to issue a proposed decision on the application by June 24, 2022. The following adequacy review items will need to be addressed to the Division's satisfaction by the proposed decision date. If you need additional time to address these items please request an extension of the decision date.

**Rule 2.03.4 – Identification of Interests**

1. The Coal Regulations were recently revised in 2020. Included with this revision was Section 2.03.4. Please revise the Permit Application Package (PAP) section 2.03.4 to comply with the revised rules.
  - a. **NECC Response:** Section 2.03.4 has been updated to comply with the revised rules.
  - b. **DRMS Response:** This section was not revised to comply with the requirements or formatting of the rule.
    - iii. Per Rule 2.03.4(2)(d) please provides the name, address, telephone number and taxpayer identification number of each business entity in the applicant's and operator's organizational structure, up to and including the ultimate parent entity of the applicant and operator; for every such business entity, the application shall also include the required information for every president, chief executive officer, and director (or other persons in similar positions) and every person who owns, of record, 10 percent or more of the entity.
    - iv. **NECC Response:** [Section 2.03.4 has been updated to comply with the revised rules.](#)
    - v. **DRMS Response:** Please see the enclosed memo from Jeff Thompson with DRMS. Based on a review of NECC's and Allegiance Coal Limited's (AC) corporate structure and Board of Directors/Management, it does not appear the applicant has identified the interests required under Rule 2.03.4 accurately. NECC has provided documentation to DRMS that Larry Cook as resigned from NECC's organizational structure. However, please revise the following PAP sections:



1. 2.03.4(2)(d) – For each entity in the applicant’s and operator’s organizational structure (New Elk Coal Company, LLC., New Elk holdings LLC., Allegiance Coal USA Limited, and Allegiance Coal Limited) please list these entities in this section. Also, please provide the name address, telephone number and taxpayer identification for every president, chief executive officer, and director (or other persons in similar positions) for each business entity in the organizational structure.
  2. NECC has provided documentation that the following individuals are officers of Allegiance Coal Limited: Jonathan Reynolds, Mark Gray, Matthew Wall, Gregory Mason, and Paul Vining. Please insure section 2.03.4(2)(d) accurately reflect the officers of Allegiance Coal Limited.
  3. Section 2.03.4(4)(c) – For each entity in the applicant/operator’s organizational structure, and any officer, director, etc. of those entities, please provide the date the entity or person began functioning in that position.
5. The date, PE#, and signature of the person who prepared the Maps 1, 2, 3, is missing or not provided. Please submit updated maps with this information.
  - a. **NECC Response:** Maps 1, 2, and 3 have been updated to include the required PE information.
  - b. **DRMS Response:** This item was not addressed by NECC. The maps submitted on October 11, 2021 did not include this information.
  - c. **NECC Response:** Maps have been certified by a qualified registered professional engineer or professional geologist.
  - d. **DRMS Response:** This item was not addressed by NECC. The maps submitted on May 5, 2022 did not include this information.
  - e. **DRMS Response:** The permit boundary is not clearly delineated on Map 1, the boundary appears to be covered up by another layer displayed on the map.
  - f. **DRMS Response:** The revised map includes the proposed haul road currently under review for TR76. Please remove the TR76 haul road from this map. If TR76 is approved prior to the approval of PR5, please update this map at that time taking the technical revision into account.
6. Based on Allegiance Coal’s website, Amon Mahon is a Director of New Elk Coal Company, LLC and Chief Operating Officer. Amon Mahon was not included in the list of Officers and Directors. Please clarify this discrepancy. Please add Amon Mahon to the list of Officers and Directors if necessary.
  - a. **NECC Response:** NECC is going to rearrange Officers and Directors. Amon will be moving to a different project at the beginning of October, if he can remain until October that would be ideal, as long as that does not affect the permit revision.
  - b. **DRMS Response:** Are Amon Mahon and William Larry Cook still officers within the owner and controller hierarchy? If so, they need to be included in the appropriate permit sections for Rule 2.03. If not, please provide documentation, such as board meeting minutes, that these parties are no longer officers within the hierarchy of the NECC and their owners and controllers.
  - c. **NECC Response:** Section 2.03.4 has been updated to comply with the revised rules. With the updates both Amon and Larry have been removed from this section.
  - d. **DRMS Response:** NECC has provided documentation that Larry Cook has resigned from the applicant/operator’s organizational structure. However, DRMS will need documentation such as board meeting minutes that Amon Mahon is no longer an owners or controllers of NECC and/or any business entity in the applicant/operator’s organizational structure.

*New Adequacy Issues:*

The purpose of section 2.03.4(3) is to provide a list of all names under which the applicant, operator, and partners, or principle shareholders of the applicant or operator operate or previously operated a surface coal mining operation in the United States within the five year period preceding the date of the submission of this revised PR5 application. Please update this section accordingly and address the following:

- A. Does not Allegiance Coal Limited own and operate two coal mines in Alabama? If so, please provide the names under which they operate or previously operated a surface coal mining operation in the United States within the five-year period preceding the date of the submission of this revised PR5 application. Also then please provide the information required by Rule 2.03.4(3)(a) for those operations.
- B. The applicant has a pending renewal application for the Lorencito Canyon Mine C-1996-084. Please update section 2.03.4(3)(b) with this information.

**Rule 2.03.5 – Compliance Information**

- 9. DRMS conducted an Applicant/Violator System (AVS) check based on the current information and revised information submitted for section 2.03.4 of the permit. Also, Amon Mahon identified as a Director of New Elk Coal Company, LLC on Allegiance Coal's website was included in this check. Attached are Evaluation Reports from AVS. Violations and cessation orders were found for Larry Cook and Amon Mahon. A bond forfeiture was noted for Amon Mahon. Please address each of these items listed in the Evaluation Reports and supply the information required by Rule 2.03.5(1)(c). Please note in accordance with Rule 2.07.6(1)(b) that the Division shall not issue the permit if any surface coal mining and reclamation operation that is directly owned or controlled by the applicant and has a unabated or uncorrected violations; or is indirectly controlled by the applicant or operator and has an unabated or uncorrected violations and that control was established or the violations were cited after November 2, 1988.
  - a. **NECC Response:** See above for item 6. NECC is going to rearrange the officers and directors.
  - b. **DRMS Response:** Please respond to item #6b above for both Amon Mahon and William Larry Cook. Per NECC response, these officers are "rearranged;" however if they are still officers of the applicant or the owners and controllers of the applicant then the requirements of Rule 2.03.5(1) must be addressed.
  - c. **NECC Response:** Section 2.03.5 has been updated to comply with the revised rules. With the updates both Amon and Larry have been removed from this section. The website has been updated as well.
  - d. **DRMS Response:** NECC was issued a violation on October 22, 2021 (CV-2021-001) by the Division. Please revise section 2.03.5(1)(c) to provide the required information regarding this violation.

**Rule 2.03.6 – Right of Entry Information**

- 12. It is difficult to verify which documents included in proposed Exhibit 34 is the basis for the applicant's legal right to enter and begin operations. Pursuant to Rule 2.03.6(1), please update Section 2.03.6 of the permit to

provide a list of the documents upon which the applicant bases their legal right to enter. This list shall identify those documents by type and date of execution, and identify lands to which they pertain, and an explanation of the legal rights claimed by the applicant in accordance with Rule 2.03.6(1).

- a. **NECC Response:** Section 2.03.6 of the PAP has been updated to list the information requested in this comment.
- b. **DRMS Response:** The revised section 2.03.6 does not address the adequacy review item. This item remains outstanding.
- c. **NECC Response:** [Section 2.03.6 of the PAP has been updated with a list of documents that show right of entry to the PR5 expansion area and the lease document is contained in Exhibit 34.](#)
- d. **DRMS Response:** Please add the underground coal lease between XTO Energy, Inc. and NECC dated May 3, 2007 to the list on page 11 of section 2.03.

*New Issue:*

- C. Proposed revised page 11 of section 2.03 includes text from TR76. This revision has not been approved by the Division and is currently under review and the affected and permit acreage associated with the proposed haul road are not accurate as outlined in the Division's 4<sup>th</sup> incompleteness notice for TR76. If TR76 is not finalized prior to the approval of PR5, please remove this paragraph.

**Rule 2.03.12 – Newspaper Advertisement and Proof of Publication**

- D. Revised Exhibit 4 submitted does not include a copy of the newspaper publication of the application and proof of publication of the advertisement. In accordance with Rule 2.03.12, please revise Exhibit 4 to include a copy of the publication published for PR5 and the proof of publication of the notice. Also revise section 2.03.12 of the PAP to reference Exhibit 4 as the location of the Newspaper Advertisement and Proof of Publication.

**Rule 2.04.3 – General Requirements: Site Description and Land Use information:**

14. The current approved disturbance area for the New Elk Mine is 227.8 acres with the approval of TR72 and TR74, and PR5 does not seek any additional disturbed acreage. Please revise the narrative of proposed revised page 1 of permit section 2.04.3 to reflect this. Also, please update Table 5 on page 1 and proposed page 1a to reflect this.
  - a. **NECC Response:** Pages 1 and 1a of section 2.04.3 have been updated to reflect the current disturbed area.
  - b. **DRMS Response:** NECC submitted two revised pages associated with this response, both are paginated as 2.04-1a. Please revise the pagination so these pages are different and flow logically with the existing permit text.
  - c. **NECC Response:** [The pagination of pages has been revised to flow logically with the existing permit text.](#)
  - d. **DRMS Response:** The pagination was not revised. Please revise the page numbers to be 2.04-1 and 2.04-2.

#### **Rule 2.04.4 – Cultural and Historic Resource Information**

15. On August 6<sup>th</sup>, 2021, DRMS received the enclosed undated letter from History Colorado, from the State Historic Preservation Officer (SHPO). They requested additional information from DRMS regarding PR5 which we have provided to them. Also, the SHPO recommended that a class III cultural resource inventory be completed prior to construction activities to determine the presence of cultural resources in the area of potential effect and to assess the eligibility of any resources for the National Register of Historic Places (NRHP). Rule 2.04.4 requires such an analysis for areas potentially impacted by surface activities or probable subsidence. Given this, DRMS sought clarification on SHPO's recommendation since no new surface disturbance is proposed with PR5 and since subsidence is not anticipated given the proposed mining method. SHPO responded to DRMS with the enclosed correspondence dated August 20, 2021. Upon review of Section 2.05.6 of the PAP and Exhibit 24, the current mine plan and subsidence control plan anticipates multi-seam mining and planned subsidence from retreat mining in certain circumstances. Please see the adequacy review questions under the section for Rule 2.05.6 below. Either provide the results of the class III cultural resource survey and update Section 2.04.4 accordingly, or provide a detailed rationale for not providing this information.
- NECC Response:** Section 2.05.6 has been revised to include mining method and extraction of coal. With room and pillar mining and no proposed secondary mining, subsidence will not occur. As a result, NECC requests that a class III cultural resource inventory of the PR5 not be required.
  - DRMS Response:** The Division did not receive a revised section 2.05.6(6) subsidence survey, monitoring, and control plan. Please submit a revised section as indicated above and ensure that if no subsidence is anticipated that an analysis is included that supports this conclusion and justification for not providing a cultural resource survey. Simply stating that subsidence will not occur is not sufficient, please see section 2.05.6(6) for details. Please revise page 2.04-8 as necessary to comply with Rule 2.04.4 regarding the proposed PR5 expansion and increase in affected area.
  - NECC Response:** [NECC has completed an Analysis of Multiple Seam Stress Distribution and Pillar Stability study \(included in Exhibit 24\\_3\).](#) Page 2.04-8 has been revised to reflect the conclusion of the analysis that subsidence should not occur and that NECC has not conducted an intensive cultural resource survey of the PR-5 area.
  - DRMS Response:** Please see the adequacy items regarding subsidence below (response to Simmons review #3 and adequacy review section for Rule 2.05.6(6)). The analyses provided by NECC does not appear to be valid. Therefore, NECC must conduct the cultural resource survey of the area of potential affect as required by SHPO and update section 2.04.4 and Exhibit 7 of the PAP with the required information after the survey is completed.

#### **Rule 2.04.5 – General Description of Hydrology and Geology**

16. Please revise Map 5 and 6 to depict the revised permit boundary.
- NECC Response:** Maps 5 and 6 have been revised to include the permit boundary.
  - DRMS Response:** The revised maps must be certified by a qualified registered professional engineer or professional geologist, with assistance from experts in related fields such as land surveying and landscape architecture in accordance with Rule 2.10.3(2). Please revise the maps accordingly to include this certification.

- c. **NECC Response:** Maps have been certified by a qualified registered professional engineer or professional geologist.
  - d. **DRMS Response:** DRMS only received revised Map 5 with this adequacy response, we did not receive revised Map 6 series. Further, revised map 5 did not include the required certification. This item remains outstanding.
17. Map 7 includes geologic cross sections, however the A-A' cross section does not extend into the proposed PR5 expansion area fully to the northeast. Please update Map 7 to take the expanded permit area and affected area into account.
- a. **NECC Response:** Map 7 of the PAP has been updated to include the expanded permit area.
  - b. **DRMS Response:** The revised map must be certified by a qualified registered professional engineer or professional geologist, with assistance from experts in related fields such as land surveying and landscape architecture in accordance with Rule 2.10.3(2). Please revise the maps accordingly to include this certification.
  - c. **NECC Response:** Maps have been certified by a qualified registered professional engineer or professional geologist.
  - d. **DRMS Response:** This item was not addressed by NECC. The maps submitted on May 5, 2022 did not include this information.

#### **Rule 2.04.7 – Hydrology Description**

20. The legend of Map 8 does not appear to be reflective of the various lines and symbols used on the map. For example the revised PR5 permit boundary appears to be a thick green line not an orange-yellow dashed line as the legend indicates. Also there is a red dashed line that appears to delineate the pre-PR5 boundary. Please revise the map so it features are accurately portrayed in the legend.
- a. **NECC Response:** The legend and information of Map 8 have been to be consistent with each other.
  - b. **DRMS Response:** The revised map must be certified by a qualified registered professional engineer or professional geologist, with assistance from experts in related fields such as land surveying and landscape architecture in accordance with Rule 2.10.3(2). Please revise the maps accordingly to include this certification.
    - i. **NECC Response:** Maps have been certified by a qualified registered professional engineer or professional geologist.
    - ii. **DRMS Response:** This item was not addressed by NECC. The maps submitted on May 5, 2022 did not include this information.
  - c. **DRMS Response:** Map 8 depicts many features and items referenced throughout the Permit Application package. Many of the features and labels overlap and it is difficult to find the location of specific features such as the approved surface and groundwater monitoring points. DRMS recommends NECC submit several series of Map 8 so critical features can be easily identified.
    - i. **NECC Response:** NECC Response: Map 8 has been revised and broken out into several series to make it easier to read.
    - ii. **DRMS Response:** Please update the appropriate Map 8 series maps with the following features:
      - 1. Piezometers TH-201, TH-202, and TH203.



21. Please update Section 2.04.7, Map 8, and Map 20 to depict and provide updated information required by Rule 2.04.7(1)(a)(iv) and (4)(a).
- a. **NECC Response:** Section 2.04.7 and Maps 8 and 20 have been updated to include the required information.
  - b. **DRMS Response:** Please update the following with current information:
    - i. Table 10 with a current groundwater user inventory.
    - ii. Map 8 accordingly based on a current survey of groundwater resources.
  - c. **NECC Response:** *NECC did not provide a written response to this adequacy item. However an updated PAP section 2.04.7 was provided as well as an updated Map 08 with additional detailed map sheets.*
  - d. **DRMS Response:** Revised pages 2.04-20 through assumed page 2.04-24 appears to include a revised Table 10. However the table heading is missing and the top row is partially cut off and the pages do not include any page numbers. Also, the uses for these wells need to be included per Rule 2.04.7(1)(a)(iv). Please revise these pages accordingly. Please address the enclosed review Memo from Leigh Simmons dated June 8, 2022.
24. Please update the NPDES information on Page 2.04-25.
- a. **NECC Response:** Page 2.04-25 has been updated with NPDES information.
  - b. **DRMS Response:** NECC did not submit the revised page. This item remains outstanding.
  - c. **NECC Response:** *NECC did not respond to this adequacy review question, however revised page 2.04-25c was submitted.*
  - d. **DRMS Response:** Revised page 2.04-25c includes Table 10a – “New Elk Mine NPDES Monitoring Data 2021,” however this table includes the data reported from 2009 and 2010 and is therefore inaccurate. Please update this table from the 2021 monitoring data and include all of the NPDES outfalls.

*New Adequacy Items:*

- E. Revised page 2.04-25a includes Table 11. Table 11 was not updated based on the new inventory. Please update Table 11 to reflect the new well inventory.
- F. On proposed revised page 2.04-25a, two bedrock wells (269720 and 264440) are discussed and the mines potential impact on these wells is evaluated. Additional bedrock wells are located in are near the PR5 expansion area (100182, 264674, 227348, 220597, and 284213), what impact will the mining operation have on these wells.
- G. After proposed revised page 2.04-25o, there is a blank page numbered 2.04-16. The Division believes this page was submitted in error. Please confirm?
- H. After proposed page 2.04-16 discussed above, NECC included a revised Table 11. This appears to be the second table given the designation Table 11. However in the preceding text on proposed revised page 2.04-25d, this table is referred to as Table 11a. Please revise this table with the heading Table 11a. Also, the page this table is located on should be page 2.04-26 in keeping with the current pagination.

- I. Table 12 was updated with a new Spring and Seep Inventory information, however no data was provided. NECC, will need to provide the water quality data for these spring and seep locations identified. Please provide the water quality data for the features in accordance with Rule 2.04.7(2)(b).
- J. The pagination on the page where Table 12 is provided does not flow with the currently approved text, Table 12 should begin on page 2.04-27.
- K. The last sentence on proposed revised page 2.04-25d does not follow the text as it should progress to page 2.04-28 currently approved in the PAP.
- L. It appears NECC has re-numbered the springs and seeps identified on Table 12. Current PAP pages 2.04-29 through 2.04-31 has a narrative description of each spring/seep associated with the currently approved number designations on the current Table 12 in the PAP. Given this, these descriptions will need to be added to and revised to match the proposed numbering designation for each spring/seep.
- M. No baseline surface water information was provided for Wet Canyon. It appears Pratt Canyon and Sawmill Canyon drain from the affected area to Wet Canyon. Proposed revised page 2.04-25d states that monthly flow and water quality data has been collected in Wet Canyon. The Division could not locate this information within the proposed revised material or within the current PAP. Please provide this baseline information and/or clarify very specifically the location of where this information can be located within the PAP.
- N. Please update Section 2.04.7(3) of the PAP to account for the PR5 mining operation.
- O. Enclosed is a memorandum from Leigh Simmons with DRMS dated June 8, 2022. Please address the items identified in the memorandum.

#### **Rule 2.05.2 – Operations Plan – Estimated Area for Life of the Operation**

- P. NECC revised Map 3, this maps depicts the mine plan timing by years (1 to 13). This map does not appear to be reflective of the current workings at the site and the mine plan map that was approved through MR130. In accordance with Rule 2.05.2(2), this map should identify each area of land for which it is anticipated a new, separate, five year permit will be obtained. Please revise the mine timetable to reflect where mining will occur through the remainder of the 2019-2024 permit term, then identify which areas will be mined in subsequent permit terms.

#### **Rule 2.05.3 – Operation Plan – Permit Area**

- 35. Proposed revised page 10 indicates the Golden Eagle Fan site's location is depicted on Map 3 and the surface disturbance boundary is indicated on Figure 2c. The Division could not locate this feature on the proposed revised Map 3 and the disturbance boundary is not depicted on Figure 2c. Please revise Map 3 and Figure 2c accordingly.



- a. **NECC Response:** Map 3 and Map 11B added have been updated with information regarding the Golden Eagle Fan site.
- c. **DRMS Response:** Map 11B must be certified by a qualified registered professional engineer or professional geologist, with assistance from experts in related fields such as land surveying and landscape architecture in accordance with Rule 2.10.3(2). Please revise the maps accordingly to include this certification.
- d. **NECC Response:** [The map has been certified by a qualified registered professional engineer.](#)
- e. **DRMS Response:** This item was not addressed and remains outstanding

*New Items:*

- Q. Propose revised page 2.05-1 states “As the mine plan progresses to the north, the reclaimed ventilation shaft will be reopened and a fan installed.” Please revise this sentence to specifically state which ventilation shaft will be reopened and provide designs for this facility. Otherwise either remove this sentence or revise the sentence to commit to providing the designs for this facility as a future technical revision. The Division assumed NECC is referring to the former Golden Eagle Ventilation Shaft, if so please address the adequacy review item below.
- R. In accordance with Rule 2.05.3(3)(a), please provide a description, plans, and drawings describing the construction, modification, use, maintenance, and removal of the proposed reopened Golden Eagle Vent Shaft. Plans and drawings shall include appropriate cross sections, design drawings, and specifications sufficient to demonstrate compliance with Rule 4.04. NECC provided map 11B; however, this map does not include all of the information required by the above referenced rule. Or, please revise page 2.05-2 to specifically commit to providing the plans and designs for this facility as a technical revision in the future prior to construction and re-disturbance.

**Rule 2.05.4 – Reclamation Plan**

*New Issue:*

- S. According to the adequacy review response cover letter, NECC has accepted the Division’s PR5 cost estimate and submitted a revised Exhibit 28 that included the Midterm 8 (MT8) review document and the associated cost estimate conducted for MT8. However, a revised cost estimate was provide for PR5 and addressed some of the issues identified by NECC and DRMS during the PR5 review. Please revise Exhibit 28 to include the Division’s PR5 cost estimate dated October 29, 2021. Please note the Division will update the cost estimate with current DRMS costs if the PR5 application review continues past July 1, 2022.
- T. Proposed revise page 2.05-69 does not include text for section 2.05.4(2)(h) currently included on approved page 2.05-69. Please revise this page so that it follows the preceding text on approved page 2.05-68 and include the current text from section 2.05.4(2)(h).

**Rule 2.05.6 – Mitigation of Mining Operations**

*(3) Protection of hydrologic balance*

40. Section 2.05.6(3) of the permit focuses on the protection of the hydrologic balance as it relates to mining in the Apache and Allen Seam. Please revise this section of the permit to account for the revised PR5 mining plan for mining in the Blue Seam.

a. **NECC Response:** Section 2.05.6(3) has been updated.

b. **DRMS Response:**

i. NECC submitted revised pages 2.05-69 to 74. Proposed revised Page 69 does not include currently approved text in response to section 2.05.4(2)(h) or the Section Heading “2.05.5 Post-Mining Land Use” currently included on Page 69. Please revise as necessary.

1. **NECC Response:** [Formatting of this section/page has been completed.](#)

2. **DRMS Response:** NECC did not submit revised pages, this item remains outstanding.

ii. The section regarding mitigation of impacts of mining operations on fish and wildlife is missing a section heading in keeping with the formatting of the PAP. Please revise as necessary.

1. **NECC Response:** [Formatting of this section/page has been completed.](#)

2. **DRMS Response:** NECC did not submit revised pages, this item remains outstanding.

iii. Revised page 71, the second paragraph indicates mining may also occur in the Apache or Allen Seams where secondary coal recovery will occur. Please provide a mining plan map that depicts the proposed workings in these seams. Or, if mining in these seams is not proposed during this permit term, please revise the narrative of this page to indicate this and commit to revising the permit in the future prior to reinitiating mining in these seams.

1. **NECC Response:** [Page 71 of section 2.05 has been revised to indicate that mining in the Apache or Allen Seams will occur in future permit terms and the PAP will be updated as that is proposed to occur.](#)

2. **DRMS Response:** NECC did not submit revised pages, this item remains outstanding.

iv. Revised pages 71 through 74 have a subheading that notes the date of the revision is 9/22/2020 and that the page is revised with TR75. Please revise this page with an updated date and indicate the pages are revised with PR5.

1. **NECC Response:** [Pages 71 through 74 have been updated to indicate the revision date for PR5.](#)

2. **DRMS Response:** NECC did not submit revised pages, this item remains outstanding.

c. **DRMS Response # 2:**

i. Enclosed is a memorandum dated October 27, 2021 from Leigh Simmons with DRMS. Mr. Simmons conducted a review of PR5 to assess the proposed plan for compliance with Rule 2.05.6(3), please respond to the adequacy review issues identified in this memorandum.

*Simmons Memo Response (1<sup>st</sup> Memo Dated October 27, 2021):*

1. Minimal revisions have been proposed to section 2.04.7 of the PAP, however a complete description of the hydrology in the area of the mine is necessary before the consequences of mining can be assessed. It is clear at a cursory review that parts of section 2.04.7 are out of date (for example, Table 10 presents a groundwater user inventory, but the Colorado Division of Water Resources database contains many records of wells that have presumably not been included in the inventory, as is shown in Figure 1).

**Please review section 2.04.7 of the PAP and update it as necessary given the expansion to the permit area proposed with PR-5.**

- a. **NECC Response:** Table 10 has been updated based on Colorado Division of Water Resources database search and Exhibit 11 has been updated with all the permitting documents. Map 8 has also been updated with new wells along with creating a map series (Map 8a through Map 8d) showing four detailed areas at a scale of 1" = 800' so it's easier to identify features.
  - b. **DRMS Response:** Please see the adequacy review items identified under section 2.04.7 and respond accordingly.
2. Section 2.04.7 refers to Map 8, Regional Hydrology. The proposed revision to Map 8 is a scanned image of the currently approved Map 8, dated May 10, 2012, with the proposed permit boundary overlaid on it. The data on the map has not been updated.

Please revise Map 8. Please update all data layers and all metadata on the map, in accordance with the requirements of Rule 2.10.

- a. **NECC Response:** Map 8 has been updated with new wells along with creating a map series (Map 8a through Map 8d) showing four detailed areas at a scale of 1" = 800' so it's easier to identify features.
  - b. **DRMS Response:** The revised maps must be certified by a qualified registered professional engineer or professional geologist, with assistance from experts in related fields such as land surveying and landscape architecture in accordance with Rule 2.10.3(2). Please revise the maps accordingly to include this certification.
3. It is acknowledged in the introduction to the Probable Hydrologic Consequences (PHC) section of the currently approved PAP text that one of the factors that could impact the hydrologic balance of the area is subsidence. On page 2.05-71 the following text has been proposed to be added:

*The mining method and extraction of coal will use room and pillar mining. For the Blue Seam no secondary or retreat mining is planned, and subsidence will not occur, thus, no impacts to surface water resources or groundwater wells in the area of mining is anticipated.*

The assertion that the proposed Blue Seam mining will not cause subsidence has not been supported. Although it is accepted that the subsidence impacts of room and pillar mining without retreat mining will be less than with retreat mining, it cannot be true that there is no potential for subsidence under any circumstance.

The currently approved text mentions a minimum depth of cover of 450 feet over the Apache Seam, but does not discuss the depth of cover over the Blue Seam. Based on a review of the revised maps (Map 3 Blue Mine Plan, Map 6A Sheet 5 Blue Seam Depth of Cover, and Map 7 Coal Seam Cross Sections), it appears that the depth of cover above the Blue Seam could be quite shallow, particularly at the point where the proposed workings cross beneath the Purgatoire River. For example, Map 7 shows a depth of cover of 91 feet at A-19, and 82 feet at NE-01-10.

**The potential for subsidence associated with the updated mine plan should be thoroughly evaluated, as is required by Rule 2.05.6(6). It is likely that this will involve an engineering study similar to the 2011 Agapito study found in Exhibit 24. The results of this study should be referenced when evaluating the PHC.**

- a. **NECC Response:** NECC has completed an Analysis of Multiple Seam Stress Distribution and Pillar Stability study (included in Exhibit 24\_3).
  - b. **DRMS Response:** NECC will need to address the following:
    - i. NECC included two analyses with the adequacy review submittal, one analyzing the multi seam stress distribution and pillar stability at the New Elk Mine and the other of surface subsidence for development mining in the blue seam. Both analyses were done under the assumption of deep cover conditions (depth > 1,000). This assumption is not reflective of the depth of the blue seam and Maxwell seam which is in places much shallower than 1,000 feet. Given this the results of these analyses do not appear to be reflective of the site conditions and are therefore invalid. This adequacy item remains outstanding.
4. Also on page 2.05-71, the currently approved PAP text contains a paragraph beginning:

*Well records from CDWR indicate that there are 19 permitted wells in the Raton Formation within a one mile radius of the permit boundary...*

The text goes on to refer to Exhibit 8(4), which contains a 2011 report produced by Whetstone Associates. No revisions to the currently approved text or to Exhibit 8(4) have been proposed.

The Whetstone report was produced to examine the probable hydrologic impacts of an earlier revision to the mine plan (room and pillar mining in the Allen and Apache seams to the south and east of the previously approved mine plan), and forms the basis of the currently approved analysis of the probable hydrologic consequences of mining.

It is not reasonable to suppose that such a significant change to the mine plan as is proposed with PR-5 could be approved without a similarly detailed analysis

**A thorough analysis should be made of the Probable Hydrologic Consequences of the mine plan proposed with PR-5, as is required by Rule 2.05.6(3). It is likely that this will involve a study similar to the 2011 Whetstone study found in Exhibit 8(4). The PAP text should be updated with reference to the study.**

- a. **NECC Response:** As required by Rule 2.05.6(3), the PHC has been updated for the mine plan proposed with PR5.



5. The hydrologic monitoring plan is presented on pages 2.05-104 through -110 of the PAP. The currently approved plan was appropriate for the New Elk mine prior to PR-5, while it was inactive; it is not appropriate for an active mine, or for the mine plan proposed with PR-5.

<https://drms.colorado.gov/programs/coal-regulatory-program/coal-program-guidelines-and-technical-documents/technical>

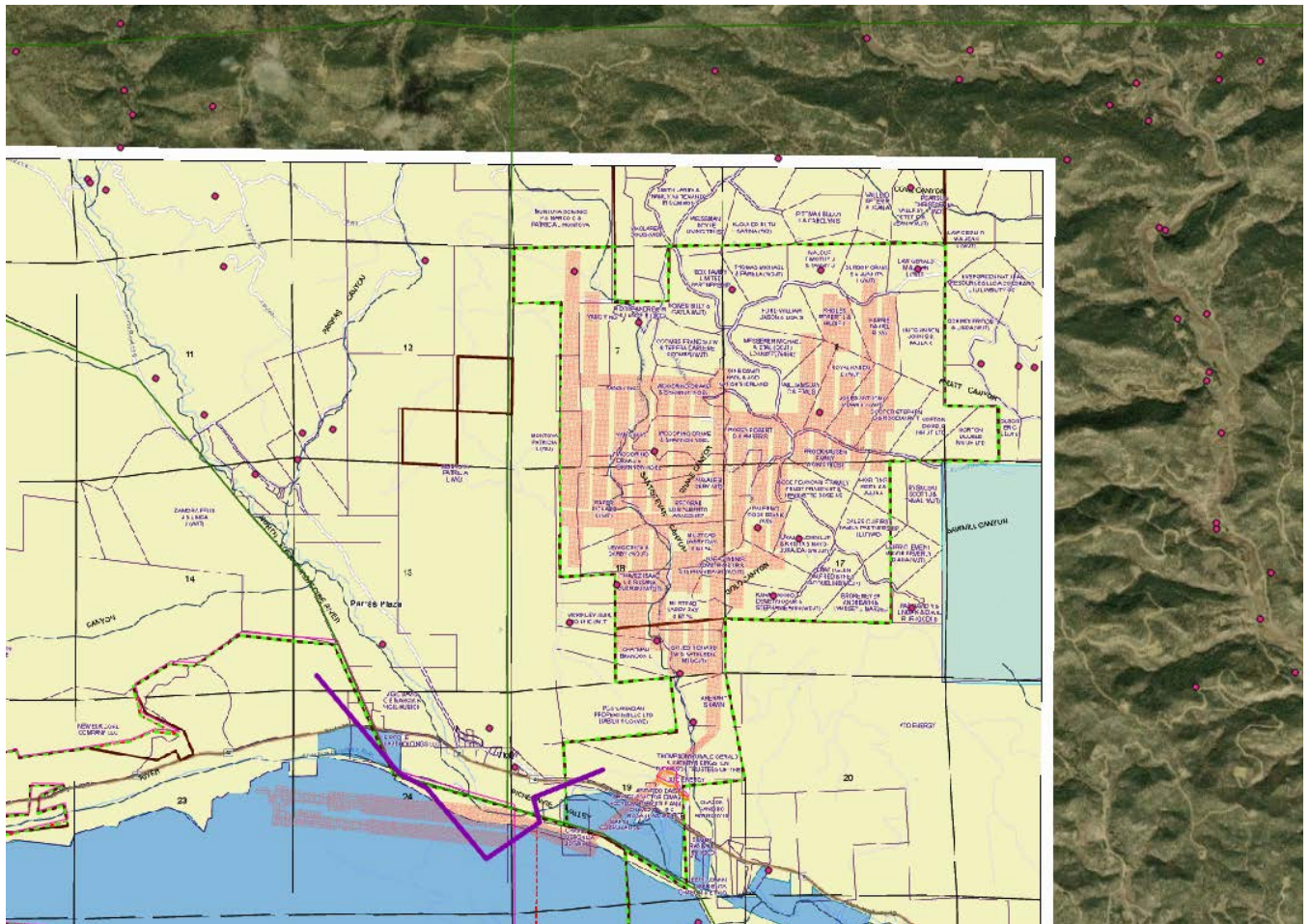


Figure 1: Screenshot showing records of constructed wells from DWR database with permit category "Residential" (pink dots) overlaid on proposed Map 1 and satellite image

- a. **NECC Response:** Prior to mining NECC will install POC wells on the north end of the PR5 area. This will include a nest of wells for the overburden and underburden coal. NECC requests this stipulation be put in place.
- b. **DRMS Response:** The Division shall not consider a stipulated approval for this item. NECC will need to address this adequacy review item in its entirety. This issue remains outstanding. Please review and update the hydrologic monitoring plan, in accordance with the performance standards given in Rule 4.05.13. Please also propose locations for Groundwater Points of Compliance as appropriate.

*(4) Protection of parks and historic places*

41. As discussed above, the SHPO has recommended a class III cultural resource inventory be conducted for the proposed affected area associated with mining in the Blue Seam resulting from subsidence, vibration, and potential surface facilities needed to support mining. The Division acknowledges that no such surface facilities are proposed with PR5 but would note that if additional surface facilities are needed to support mining in the future, appropriate revisions to the permit will be required. Based on the results of the class III cultural resource survey, please provide an update to section 2.05.6(4) of the permit if necessary. If NECC believes the survey is unnecessary, please provide a detailed justification for this.

- a. **NECC Response:** Section 2.05.6 has been revised to include mining method and extraction of coal. With room and pillar mining and no proposed secondary mining, subsidence will not occur. As a result, NECC requests that a class III cultural resource inventory of the PR5 not be required.
- b. **DRMS Response:** Please see the response to adequacy review item #42 below. Section 2.05.6(6) of the PAP was not updated with PR5 and NECC will need to revise this section of the permit for the proposed change in the mine plan. As this subsidence survey, monitoring and control adequacy item relates to the cultural resource survey, please provide a detailed analysis demonstrating mining in the blue seam will not result in surface subsidence.
- c. **NECC Response:** NECC has completed an [Analysis of Multiple Seam Stress Distribution and Pillar Stability study \(included in Exhibit 24\\_3\)](#).
- d. **DRMS Response:** As discussed above, NECC included two analyses with the adequacy review submittal, one analyzing the multi seam stress distribution and pillar stability at the New Elk Mine and the other of surface subsidence for development mining in the blue seam. Both analyses were done under the assumption of deep cover conditions (depth > 1,000). This assumption is not reflective of the depth of the blue seam and Maxwell seam which is in places much shallower than 1,000 feet. Given this the results of these analyses do not appear to be reflective of the site conditions and are therefore invalid. This adequacy item remains outstanding.

*(6) Subsidence Survey, Subsidence Monitoring, and Subsidence Control*

42. The current approved mining plan proposes retreat mining; however, the PR5 cover letter indicates that no secondary mining (retreat mining) will occur. Please clarify and specifically commit to the mining method chosen. Please revise Section 2.05.6(6) of the permit to account for the revised mining plan proposed with PR5. This section must be revised and address all of the requirements of Rule 2.05.6(6) and must comply with the performance standards of Rule 4.20. Please update the Map 20 series, Map 11, Map 12, Exhibit 8, Exhibit 24, Exhibit 42, Table 19, and any other applicable information in the PAP as necessary. The cover

letter for PR5 indicates subsidence is not expected since no secondary mining will occur, please provide a demonstration this assumption is correct specific for the Blue Seam.

- a. **NECC Response:** Section 2.05.6(6) has been revised to indicate that mining in the Blue Seam will include only room and pillar mining with no secondary recovery. As a result, no subsidence will occur. The referenced sections of the PAP have been revised accordingly.
- b. **DRMS Response:**
  - i. Section 2.05.6(6) of the PAP was not updated with PR5 or the adequacy response, and NECC will need to revise this section of the permit for the proposed change in the mine plan. Simply stating that no secondary extraction will occur and therefore subsidence will not occur is not adequate. Exhibit 24 is designed based on a previously approved mine plan submitted with TR58 and needs to be revised based on NECC proposed PR5 mine plan and NECC methods of mining. Exhibit 42 needs to be updated. The revised subsidence survey, monitoring and control plan must comply with Rule 2.05.6(6), since NECC is asserting that no subsidence will occur based on the PR5 mine plan, please provide a technical analysis/demonstration to substantiate this.
    1. **NECC Response:** NECC has completed an Analysis of Multiple Seam Stress Distribution and Pillar Stability study (included in Exhibit 24\_3).
    2. **DRMS Response:** Section 2.05.6(6) of the PAP was not updated with PR5 or the adequacy response, and NECC will need to revise this section of the permit for the proposed change in the mine plan. It does not appear NECC has updated the inventory of all structures, renewable resource lands, and drinking, domestic, or residential water supplies within the proposed permit and adjacent area since 2012 based on the proposed revised series 20 maps. Updated section 2.05.6(6) should be updated based on a current survey of these features.
    3. **DRMS Response:** As discuss above, the two subsidence analyses submitted with this adequacy review response does not appear valid. Therefore this adequacy review issue remains outstanding.
    4. **DRMS Response:** NECC submitted a copy of the currently approved Exhibit 42. This Exhibit was not updated. This item remains outstanding, please update Exhibit 42.
  - ii. The information provided in the adequacy responses does not include any new information regarding the development mining underneath the Purgatoire River. The existing information in the PAP only covers the previously mined coal seams and does not account for the Blue Seam. The Blue Seam is roughly 250-300 above the Apache Seam. New information regarding undermining the Purgatoire River in the Blue Seam needs to be addressed and included. This should include depth of the Blue Seam from the Purgatoire River in the areas planned to be over the mining areas. As well as, if/what type of measures taken to prevent impacts to the hydrologic balance.
    1. **NECC Response:** NECC will submit a plan at least three months prior to any mining underneath the Purgatoire River. The plan will include all information mentioned above, all safety precautions, and the measures taken to prevent impact to the hydrologic balance This plan is required by MSHA before mining within 300 feet of a body of water. NECC requests this stipulation be put in place.



2. **DRMS Response:** The Division will not consider a stipulated approval for this issue. This item will need to be addressed prior to approval of PR5.
- i. Regarding the Map 20 series maps, these maps must be certified by a qualified registered professional engineer or professional geologist, with assistance from experts in related fields such as land surveying and landscape architecture in accordance with Rule 2.10.3(2). Please revise the maps accordingly to include this certification.
  1. **NECC Response:** Maps have been certified by a qualified registered professional engineer or professional geologist.
  2. **DRMS Response:** This item was not addressed and remains outstanding.
  3. **DRMS Response:** According to the proposed revised Map 20 series maps, the inventory depicted on these maps were derived from a location survey conducted by Terry Surveying last updated/inserted 1-27-2012. Please update this inventory with a current survey.
  4. **DRMS Response:** Please update the Map 20 series to depict the renewable resource lands, and drinking, domestic or residential water supplies.
  5. **DRMS Response:** Please revise the Map 20 series maps to specifically identify any occupied residential buildings, any structures related thereto, and any non-commercial building.

#### **Review of Subsidence Information Provided by NECC**

- U. Clayton Wein with DRMS conducted a review of the subsidence information provided by NECC with this adequacy review response. Mr. Wein's review memo is enclosed dated June 13, 2022. Please review and address the issues raised by Mr. Wein.

The Division is required to issue a decision on the application by June 24, 2022. If you need additional time to address the Division's adequacy review please request an extension of the decision date. If the decision date arrives and there are outstanding adequacy review items, the Division will issue a proposed decision to deny the application.

If you have any question, please do not hesitate to contact me at [Jared.Ebert@state.co.us](mailto:Jared.Ebert@state.co.us) or at (303) 866-3567 extension 8120.

Sincerely,



Jared Ebert  
Senior Environmental Protection Specialist

Enclosure:     1.) AVS, *Officer and Control Information Memo*, Jeff Thompson, DRMS dated May 17, 2022,  
                  2.) *Interoffice Memorandum*, Leigh Simmons DRMS, June 8, 2022  
                  3.) *Interoffice Memorandum*, Clayton Wein DRMS, June 13, 2022

EC:     Nick Mason, NECC. [nmason@newelkcoal.com](mailto:nmason@newelkcoal.com)  
       Bill Stormes, NECC. [bstormes@newelkcoal.com](mailto:bstormes@newelkcoal.com)