STATE OF COLORADO

DIVISION OF RECLAMATION, MINING AND SAFETY
Department of Natural Resources

1313 Sherman St., Room 215
Denver, Colorado 80203
Phone: (303) 866-3567
FAX: (303) 832-8106

27 June 2013

Ben Langenfeld
Greg Lewicki and Associates, PLLC
11541 Warrington Court
Parker, CO 80136

Re: New Horizon Mine – Permit No. C-1981-008
Minor Revision No. 86 (MR-86) – Vegetation Sampling and Pasture Management
Preliminary Adequacy Review No. 3

Dear Mr. Langenfeld:

The original application for MR-86 was received by the Division on June 7, 2013. The package included proposed revisions to pages 26-30, 33, 37-38, and 59-61 of Section 2.05.4(2)(e) (Revegetation) of the New Horizon Mine permit. The Division issued a Preliminary Adequacy Review (PAR No.1) for MR-86 on June 13, 2013. The review letter itemized four adequacy comments. A response to PAR No. 1 was received on June 18, 2013, which included revised pages 27, 32, and 60.

The Division reviewed the responses provided, and issued PAR No. 2 on June 19, 2013. That letter listed a number of issues remaining to be resolved. On June 25, 2013, revised pages 27, 32 and 60 were received with the Response No. 2 submittal. The Division's summary of the adequacy items and their current status is outlined below, for your information and response.

1. *This item was resolved with the June 14, 2013 response.*

2. **DRMS 6/13:** For both Irrigated Pasture (page 27) and Dryland Pasture (page 60) herbaceous production sampling, the revised plan indicates that three and perhaps five sample points may be taken along a given transect. The permit needs to clarify how the number of sample points per transect will be determined, and why a certain number of sample points will be taken. For example, in what instance would three sample points be collected, and in what instance would four or five sample points be collected?

   WFC 6/14: The minimum number of production samples along a transect will be three, with more samples taken if they qualified biologist needs more sample data to accurately describe the transect. The number of samples per transect will be predetermined.

DRMS 6/19:

a. The revised wording on page 27 and 60 is inadequate. The permit must clearly state that the number of production quadrats to be sampled along a transect will be pre-determined. The revised wording currently proposed could be interpreted to mean that at least three quadrats will be predetermined along a transect; however, it is unclear from the revised wording how additional quadrats will be added if the operator feels they are necessary. As the response letter indicates, but the revised permit page does not, the number of quadrats per transect needs to be determined prior to field sampling. Also, the same number of quadrats need to be measured per transect.

DRMS 6/27: *Page 27 was modified as requested, but Page 60 was not. Please revise the wording on Page 60.*

b. The revised wording states, "**If** production sampling is done along the same transect tape, then a minimum of at three predetermined randomly selected intervals will be used as the production sampling points." It is unclear how production sample points will be determined **if they are not** collected along the same transect tape. The Division assumes the applicant is talking about taking production samples along the same transect tape used for cover samples. However, the applicant needs to clarify the wording to indicate how all of the production sample points will be determined.

DRMS 6/27: *Page 27 was modified as requested, but Page 60 was not. Please revise the wording on Page 60.*

c. It should be noted that according to the New Horizon NH2 Mine, Proposed 2013 Phase II and III Revegetation Monitoring Plan, the number of quadrats to be sampled per transect for herbaceous production is different than what is being described in this revision. *(No response was required.)*

d. Revised page 27 submitted with the response discusses two different ways production will be calculated. The first method indicates, "Production will be calculated by averaging the individual clip plots collected along each transect into a transect value and all of the transects from a specific area will be averaged into an area value." The second method indicates, "Production will be calculated by dividing dry weight by the quadrat frame area in acres, and the mean dry weight per acre calculated". The Division believes the second method should be deleted from this page.

DRMS 6/27: *Page 27 was modified as requested. Item resolved with 6/25 response.*

e. The revised font size on revised page 27 shifted the position of the subsequent paragraphs and distorts the organization of the subsequent un-revised page. The first paragraph from the originally submitted revised page 28 is now duplicated on revised page 27. Please adjust the page breaks to restore continuity between the pages.

DRMS 6/27: *Pagination has been restored with 6/25 response.*

3. **DRMS 6/13:** In regards to the herbaceous production quality standard, the revised plan indicates, "At least 75% of the relative production as compared to the production obtained from the Irrigated Pasture Reference Area will be comprised of seeded species or species of comparable quality as livestock forage." This revised sentence is unclear. The language needs to specify what specific area is being referenced, and the plant life form and/or species they are referring to in regards to relative production. It would be helpful to have an illustration in the permit of how this will be determined.

   WFC 6/14: The sentence referred to in the item above has been revised to be clear. As an example, if the reference area in a given year has 1,000 lbs/ac of seeded or forage comparable species, the reclaimed area needs to have at least 750 lbs/ac, i.e. 75% of the reference area production.

   DRMS 6/19: A change to the revegetation herbaceous production quality standard approved in the permit is being proposed. Currently, the production quality standard for the reclaimed areas is not derived from the reference area. This type of a change cannot be processed with a minor revision and will need to be processed through the technical revision process.

   DRMS 6/27: *WFC has determined that no change to the revegetation herbaceous production quality standard will be proposed with this Minor Revision. Item removed from discussion.*

4. **DRMS 6/13:** Similar to the item above, revised page 60 discusses the herbaceous production quality standard for the Dryland Pasture. It indicates the relative production as compared to the production obtained from the *Irrigated Pasture Reference Area* will be comprised of seeded species or species of comparable quality as livestock forage. The Division believes the sentence should refer to the Dryland Pasture Reference Area. However, as indicated above the revised sentence itself is unclear and needs to be clarified.

   DRMS 6/14: Revised page 27 submitted with the response discusses two different ways production will be calculated. The first method indicates, "Production will be calculated by averaging the individual clip plots collected along each transect into a transect value and all of the transects from a specific area will be averaged into an area value." The second method indicates, "Production will be calculated by dividing dry weight by the quadrat frame area in acres, and the mean dry weight per acre calculated". The Division believes the second method should be deleted from this page.

   DRMS 6/19: A change to the revegetation herbaceous production quality standard approved in the permit is being proposed. Currently, the production quality standard for the reclaimed areas is not derived from the reference area. This type of a change cannot be processed with a minor revision and will need to be processed through the technical revision process.

   DRMS 6/27: *WFC has determined that no change to the revegetation herbaceous production quality standard will be proposed with this Minor Revision. Item removed from discussion.*

This concludes our adequacy review for MR-86. Please submit your responses to the remaining items at your earliest convenience.

Sincerely,

Marcia L. Talvitie

Marcia L. Talvitie, P.E.
Environmental Protection Specialist

cc: Douglas C. White, Western Fuels Association, Inc. (Email)
Ross Gubka, Western Fuels-Colorado, LLC (Email)
Sandy Brown, DRMS