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DEPARTMENT OF NATURAL RESOURCES

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Division of Oil, Gas and Mining

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Division Director

July 13, 2017

Karin Madsen, Resident Agent
Genwal Resources, Inc.
P.O. Box 910
East Carbon, Utah 84520-0910

Subject: 2016 Annual Report Review Completion, West Ridge Resources, Inc., West Ridge Mine, Task ID #5404, C/007/0041

Dear Ms. Madsen:

The Division has completed the review of the 2016 Annual Report. This 2016 report provided nine years of vegetation sampling of the experimental practice. After discussion with the Division, you filed an application to discontinue the experimental practice vegetation sampling in 2017.

The Division recommends that you file an amendment to the MRP to discontinue the annual soil monitoring at T1, T2 and T3 locations, and add a commitment to sample locations T1 and T3 after final reclamation grading for pH, EC and SAR and use an alternative de-icing procedure on roadways to reduce salt accumulation in these areas.

A commitment required by the approved Mining and Reclamation Plan has been identified as outstanding. Enclosed is a copy of the review where a more detailed discussion of the outstanding commitment is provided.

Additionally, the following commitment has not been adequately addressed:

- 1) *At final reclamation, the reclaimed surface soils of the catchments will be tested for pH, EC and SAR to allow for the evaluation of the salinity and the need for a revision or addition to the final seed mix to enhance germination and establishment. (p. 14, Attach 9, Appendix 5-15).*

As the catchment A has been reclaimed, please submit the additional information to the Division by August 11th, 2017. If you have any questions, please call me at (801) 538-5325.

Sincerely,

Daron R. Haddock
Coal Program Manager

DRH/SKC/sqs



Print Form

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Annual Report

This Annual Report shows information the Division has for your mine. Submit the completed document and any additional information identified in the Appendices to the Division by the date specified in the cover letter. During a complete inspection an inspector will check and verify the information.

GENERAL INFORMATION

Company Name	West Ridge Resources	Mine Name	West Ridge Mine
Permit Number	C/007/0041	Permit expiration Date	4-1-19
Operator Name	West Ridge Resources, Inc.	Phone Number	+1 (435) 888-4000
Mailing Address	PO Box 910	Email	kmadsen@coalsource.com
City	East Carbon		
State	UT	Zip Code	84520

DOGM File Location or Annual Report Location

Excess Spoil Piles

- Required
- Not Required

Refuse Piles

- Required
- Not Required

Impoundments

- Required
- Not Required

Other:

Sediment Pond Annual Certification included.

OPERATOR COMMENTS

The Permittee provided a copy of the sediment pond inspection. The report was produced and P.E. stamped (David W. Hibbs, P.E. #6449561) on December 8th, 2016. Reported sediment levels for both Cell A and Cell B were well below the 60% clean-out elevation. No evidence of instability was noted in the inspection report. The sediment ponds were last cleaned in November of 2016.

REVIEWER COMMENTS

- Met Requirements
- Did Not meet Requirements

COMMITMENTS AND CONDITIONS

The Permittee is responsible for ensuring annual technical commitments in the Mining and Reclamation Plan and conditions accepted with the permit are completed throughout the year. The Division has identified these commitments below and has provided space for you to report what you have done during the past year for each commitment. If additional written response is required, it should be filed as an attachment to this report.

Title: EXPERIMENTAL FIELD TRIALS

Objective: Monitoring to support proposed experimental practice. Provide a comparison of growth on field trials with Douglas/Fir reference area.

Frequency: Annual evaluation in June

Status: Ongoing

Reports: Provide in annual report

Citation: MRP, Volume 1, Appendix 2-6 and Volume A, Map 2-4

Operator Comments

The required vegetation Monitoring at the Experimental Test Plot was prepared by Mt. Nebo Scientific: and is included in this submittal.

Reviewer Comments Met Requirements Did Not Meet Requirements

7/12/2017, PB. The summary report for the experimental practice begins on page 9 of the 2016 electronic annual report. This experimental practice was reclaimed in 2005 and has been monitored for 9 consecutive years. In all sample years, all plots met expectations based upon the reference area comparison. In 2016, the Division notes a trend of decreasing percent cover by forbs and increasing percent cover by grasses across all treatments. All plots, except Srych Fill, decreased in forb diversity as well. This is the opposite of the reference area life form composition (Figure 2). Also in 2016, for the first time, shrubs were noted in the Midfork stockpile and Strych fill plots. As noted in the report, a comparison of the Strych Stockpile plot and the Strych Fill plot is the best test of the conventional technique versus the experimental technique in the same soil type. After consultation with OSM, I recommended that this vegetation monitoring be discontinued (email to file 9/21/2016). An amendment to the MRP ending the requirement for vegetation monitoring was reviewed and approved under Task 5416.

Title: SOIL SAMPLING OF FILL AT T1, T2 AND T3

Objective: To protect buried substitute topsoil in the fill. Collect a composite sample from several locations near each site to obtain a more average value.

Frequency: Annual evaluation during field season.

Status: Ongoing beginning in 2010.

Reports: Annual report

Citation: MRP, Volume 1, Appendix 2-6 addendum, pg. 3 and Volume A, Map 2-4

Operator Comments

Soil Sampling of Fill at T1, T2, and T3 were prepared by Mt. Nebo Scientific: and is included in this submittal.

Reviewer Comments Met Requirements Did Not Meet Requirements

7/12/2017, PB. The mine site has been inactive since 2015. The summary report for the experimental practice begins on page 47 of the 2016 electronic annual report. Sampling locations are shown on Figure 1. Since 2010, GPS location for each sample location (T1, T2, T3), allowed approximately the same locations to be sampled each year. Laboratory analysis are provided in Table 1 for comparison of sampling from 2001 to 2016, along with the mean and standard deviation (SD) for each parameter over time at each location.

Table 1 demonstrates that the pH varies little within a sample area and varies little between sample areas. The overall SD for pH is comparable to the SD provided on Table 2, Experimental Test Plot soil sampling.

Table 1 also demonstrates that the measurement of CaCO₃ is variable within sites, and even more variable between sites. T2 has the lowest CaCO₃ content and T1 and T3 have similar CaCO₃ values. Measurement of CaCO₃ at the Experimental Test Plot (Table 2) was also accompanied by a large SD, which suggests the variability in analysis of CaCO₃ is expected with the analytical procedure.

Over time, the mean values for electrical conductivity (EC) at locations T1 (4.40 dS/m) and T3 (6.58 dS/m) have a large SD (3.50 and 4.31, respectively). The variation in EC is attributed to road salting at T1 and T3. The mean EC over time for T2 is 2.68 dS/m. T2 is out of the traffic pattern and is not affected by road salt. It is adjacent to the coal pile and as the analysis indicates, EC measurement has remained relatively constant, with a SD of 1.06 at location T2.

For T1, the mean sodium adsorption ratio (SAR) value over time is 1.97, with a SD of 1.61. The mean SAR value at T3 over time is 9.03 which has a HUGE SD of 9.82. (In 2015, the T3 SAR was 9.30, up from the previous year value of 5.10.) Both T1 and T3 locations should be monitored after final grading for EC and SAR.

The sample locations (T1, T2, T3) of fill over native soil have shown no trend towards any acid formation and only the expected effects of salt accumulation from winter road treatments. Soil locations T1, T2, and T3 have been tested for 15 years and do not appear to be a source of hazard for the native topsoil buried below the fill. One conclusion that is very clear: the operator should seek a salt substitute for treating roads in winter or cut the salt with crushed rock, which is UDOT's practice in sensitive areas (personal communication with Brian Nielson, UDOT Region 4, November 15, 2016).

I recommend an amendment to the MRP that would discontinue this annual soil monitoring, but add a commitment to use an alternative de-icing procedure on roadways and to sample locations T1 and T3 after final reclamation grading for pH, EC and SAR.

Title: SUBSIDENCE MONITORING

Objective: To monitor subsidence from longwall mining practices. Subsidence monitoring of panels until the effects of mining have stabilized and vertical movement is less than six inches per year.

Frequency: annual

Status: Ongoing

Reports: annual report

Citation: MRP, Volume 2, Chapter 5, page 5-23b to 5-23e

Operator Comments

Subsidence Monitoring information is included.

Reviewer Comments Met Requirements Did Not Meet Requirements

A chart documenting vertical displacement of various survey stations located on the surface above underground workings was included. The survey was completed by Ware Engineering during the last week in September 2016. It appears that throughout the majority of the permit area there was a negligible amount of subsidence. One survey station reported a vertical displacement of 2 inches, which was the maximum amount of subsidence observed. JE



Title: Raptor Survey

Objective: Locations within the permit area that contain potential raptor nesting habitat will be surveyed in the field within one year of any proposed mining activity that could result in subsidence. Should any nests be found, West Ridge Resources, Inc. would consult with the Division (DOGM), the Division of Wildlife Resources and the US Fish and Wildlife Service.

Frequency: One year prior to subsidence.

Status: Ongoing

Reports: Annual report

Citation: Chapter 3, Page 3-8 & 3-9

Operator Comments

Raptor Surveys were completed by EIS and are included within the CONFIDENTIAL file.

Reviewer Comments

- Met Requirements
- Did Not Meet Requirements

EIS conducted surveys and reported on the status of all nests within the permit area. There are no active nests within 1/2 mile buffer of the disturbance area (facilities) and no active nests within the subsidence zone. LR 4/6/17.

FUTURE COMMITMENTS AND CONDITIONS

The following commitments are not required for the current annual report year, but will be required by the permittee in the future as indicated by the "status" field. These commitments are included for information only, and do not currently require action. If you feel that the commitment is no longer relevant or needs to be revised, please contact the Division.

Title: RECLAMATION MONITORING

Objective: Visually assess the revegetation success.

Frequency: Quarterly for the first three years and annually in June of each year thereafter

Status: Implement at reclamation

Reports: Annual Report

Citation: MRP, Volume 1, Chapter 3, page 3-16, paragraph 2

Title: MEXICAN SPOTTED OWL SURVEY

Objective: Conduct appropriate surveys for Mexican spotted owls on the lease tract areas with 40 percent or greater slopes, cliff habitat areas, riparian habitats, and mixed conifer forest habitats, prior to any future surface disturbing activity and/or any mining activity with the potential to interrupt surface spring flows. Inventory work must be conducted by parties approved and permitted for such survey work by the Fish and Wildlife Service and qualified in accordance with R645-301-132. Surveys must follow current protocol established by Fish and wildlife service.

Frequency: As needed

Status: ongoing

Reports: Annual

Citation: Permit condition attachment A, special condition #3.

Title: SOIL SAMPLING OF FINAL GRADED FILL AT CATCHMENTS A, C AND E

Objective: At final reclamation, the reclaimed surface soils of the catchments will be tested for pH, EC and SAR to allow for the evaluation of the salinity and the need for a revision or addition to the final seed mix to enhance germination and establishment.

Frequency: Once after final grading

Status: Future commitment

Reports: Provide information to the Division

Citation: MRP, Volume 2, Appendix 5-15, Attachment 9, page 14

OPERATOR COMMENTS (OPTIONAL)**REVIEWER COMMENTS**

7/12/2017, PB. The Permittee is not in compliance with the MRP commitment for Soil Sampling of Final Graded Fill at Catchments A, C, & E. Final reclamation soil samples were not taken as described on page 14 (App. 5-15 Addendum 9) for reclaimed catchments A, C, or E. Catchment A was reclaimed in 2016. Catchments C & E were reclaimed in the fall of 2009, reestablished in 2010 (Addendum 9 of Appendix 5-15). Soils surrounding Catchments C & E were sampled during operations in September 2010 (App. 5-15, Addendum 9 p. 13 & 14 and Attachment 13). The MRP does not state whether Catchments C & E are still operational or reclaimed, but Ms. Odendahl

confirmed that they were reclaimed for a second time in 2010 (personal communication with K. Odendahl, 7/12/2017). Appendix 15, Attachment 9, Section 4a should be revised to confirm the final reclamation of Catchments C & E and reclaimed, replaced soils should be sampled at Catchments A, C, and E.

REPORTING OF OTHER TECHNICAL DATA

Please list other technical data or information that was not included in the form above, but is required under the approved plan, which must be periodically submitted to the Division.

Please list attachments:

Reviewer Comments

MAPS

Copies of mine maps, current and up-to-date, are to be provided to the Division as an attachment to this report in accordance with the requirements of R645-301-525.240. The map copies shall be made in accordance with 30 CFR 75.1200 as required by MSHA. Mine maps are not considered confidential.

Map Name	Map Number	Included		Confidential	
		Yes	No	Yes	No
Annual subsidence map	Not Required	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Mine Map		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Reviewer Comments Met Requirements Did Not Meet Requirements

A map illustrating the location of underground mains and longwall panels in relation to mining permits was included in this report. The inclusion of this map satisfies the requirements of R645-301-525.240. JE