

0045



P.O. BOX 1077
PRICE, UTAH 84501
PHONE: (435) 888-4000
FAX: (435) 888-4002

October 20, 2005

Utah Coal Program
Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, UT 84114-5801

Incoming
C/007/0041

Task #

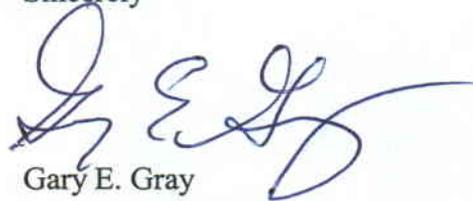
Re: Grassy Trail Dam Additional Monitoring, West Ridge Mine, C/007/0041

Dear Sirs,

WEST RIDGE Resources, Inc. is submitting a minor modification to the permit change to allow longwall extraction of Panel 7. The change consists of additional monitoring to the Grassy Trail Dam as requested by the Division of Dam Safety.

Call me at 435-888-4015, or Dave Shaver at 435-888-4017, if you have any questions.

Sincerely



Gary E. Gray
Agent/Engineer

APPLICATION FOR PERMIT PROCESSING

| | | | | | | |
|--|-------------------------------------|----------------------------------|-----------------------------------|--------------------------------------|---------------------------------------|--|
| <input type="checkbox"/> Permit Change | <input type="checkbox"/> New Permit | <input type="checkbox"/> Renewal | <input type="checkbox"/> Transfer | <input type="checkbox"/> Exploration | <input type="checkbox"/> Bond Release | Permit Number: C/007/041 |
| Name of Proposal: Minor modification to allow full longwall extraction of Panel #7 Additional monitoring of Grassy Trail Dam as requested by Division of Dam Safety | | | | | | Mine: WEST RIDGE MINE |
| | | | | | | Permittee: WEST RIDGE Resources, Inc. |

Description, include reason for application and timing required to implement.

Instructions: If you answer yes to any of the first 8 questions (gray), submit the application to the Salt Lake Office. Otherwise, you may submit it to your reclamation specialist.

| | | |
|------------------------------|-----------------------------|--|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 1. Change in the size of the Permit Area? _____ acres Disturbed Area? _____ acres <input type="checkbox"/> increase <input type="checkbox"/> decrease. |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 2. Is the application submitted as a result of a Division Order? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 3. Does application include operations outside a previously identified Cumulative Hydrologic Impact Area? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 4. Does application include operations in hydrologic basins other than as currently approved? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 5. Does application result from cancellation, reduction or increase of insurance or reclamation bond? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 6. Does the application require or include public notice/publication? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 7. Does the application require or include ownership, control, right-of-entry, or compliance information? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 9. Is the application submitted as a result of a Violation? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 10. Is the application submitted as a result of other laws or regulations or policies? Explain: |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 11. Does the application affect the surface landowner or change the post mining land use? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 12. Does the application require or include underground design or mine sequence and timing? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 13. Does the application require or include collection and reporting of any baseline information? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 14. Could the application have any effect on wildlife or vegetation outside the current disturbed area? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 15. Does application require or include soil removal, storage or placement? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 16. Does the application require or include vegetation monitoring, removal or revegetation activities? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 17. Does the application require or include construction, modification, or removal of surface facilities? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 18. Does the application require or include water monitoring, sediment or drainage control measures? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 19. Does the application require or include certified designs, maps, or calculations? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 20. Does the application require or include subsidence control or monitoring? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 21. Have reclamation costs for bonding been provided for? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 22. Does application involve a perennial stream, a stream buffer zone or discharges to a stream? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 23. Does the application affect permits issued by other agencies or permits issued to other entities? |

Attach 3 complete copies of the application.

I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein. (R645-301-123)

Signed and sworn to before me this 10/20 day of Oct 2005.

 Notary Public

My Commission Expires: _____
 Attest: STATE OF _____ COUNTY OF _____



Received by Oil, Gas & Mining

RECEIVED

OCT 21 2005

DIV. OF OIL, GAS & MINING

ASSIGNED TRACKING NUMBER

the Grassy Trail dam and reservoir from seismicity and subsidence associated with longwall mining in the West Ridge Mine. This study **involved** collection of additional data from newly-installed accelerometers, subsidence monitoring stations, and piezometers in the area around the dam. This study **was** conducted with input from BLM, DOGM, Division of Dam Safety, and East Carbon City.

On August 5, 2005 RB&G Engineering completed the seismicity study. (Refer to Appendix 5-9, Grassy Trail Dam & Reservoir Mining - Induced Seismicity Report.) In addition, RB&G prepared a second report which analyzed the Grassy Trail Dam so that East Carbon City can comply with the regulatory requirements of Utah Division of Dam Safety. There are a number of overlapping and interconnected issues addressed in the seismicity study and the dam safety study. Therefore the dam safety study is included as Appendix 5-9A (Grassy Trail Dam & Reservoir, Phase II Dam Safety Study, August 27, 2005.)

After a thorough review of the study the BLM approved a minor modification of the R2P2 (see Appendix 5-3B) to allow full extraction longwall mining of Panel #7. In the approval BLM concluded that *“The submitted report from RB&G concludes that it is unlikely that the anticipated mining of panel 7 would impact the performance of the dam and reservoir. The analysis of seismic impacts used a large maximum event (3.9 Richter Scale Magnitude) which is well above any recorded event in the immediate area. Using the maximum event, RB&G still anticipates a factor of safety still well above minimum Utah State Dam Safety standards. The BLM accepts the report and agrees with the recommendations. West Ridge is hereby authorized to extract longwall panel #7 per the approved R2P2, having met the conditions for approval.”*

The seismicity report addressed the issues of dam stability analysis, subsidence, internal erosion potential, reservoir seepage and landslide potential. The report concluded that *“it is unlikely that the anticipated mining induced seismicity will impact the performance of the dam and reservoir.”* The report also recommended the following inspection and monitoring program during the longwall mining of Panel #6 and Panel #7:

- *Bi-weekly site reconnaissance to observe any change of conditions in the embankment crest or slopes and landslide areas. Particular attention should be given to cracking, ground deformation or seepage.*
- *Monthly measurement of inclinometers, piezometers and ground motion monitoring devices.*
- *Annual survey of control points on the embankment and in the landslide areas.*

- *Daily monitoring of the UUSS list of recent seismic events (www.seis.utah.edu/reactivity/recent.shtml) should be performed. A daily record should be maintained of the largest recorded event within 5 miles of the site. When an event greater than 3.0 occurs within 5 miles of the site, a site reconnaissance of the embankment crest, slopes and landslide areas should be performed within 24 hours and a review of ground motion recordings should be made. If recorded ground acceleration exceeds 0.4g, instrumentation readings should be performed.*
- *Site reconnaissance and instrumentation reports should be forwarded to RB&G Engineering and the Utah State Dam Safety Engineer within 24 hours, and the daily monitoring record should be submitted on a monthly basis.*

The BLM R2P2 approval is conditioned upon WEST RIDGE Resources monitoring the inspection/monitoring program as outlined above. Therefore WEST RIDGE Resources, Inc. commits to implementing this inspection/monitoring program effective immediately upon Division approval for full extraction of Panel #7.

114.200

Not applicable, the fee lease mineral estate is not severed from the surface estate.

**TABLE OF CONTENTS- APPENDICES
R645-301-100 CHAPTER 1**

| <u>APPENDIX NUMBER</u> | <u>DESCRIPTION</u> |
|------------------------|--|
| APPENDIX 1-1 | Certifications, Verifications, Publications |
| | Attachment 1-1 Certificate of Liability Insurance 1 |
| | Attachment 1-2 Newspaper Advertisement 2 |
| | Attachment 1-3 Proof of Publication 3 |
| | Attachment 1-4 Filing Fee Verification 4 |
| | Attachment 1-5 Verification Statement 5 |
| APPENDIX 1-2 | Violation Information - R645-301-113.300 |
| APPENDIX 1-3 | Reference List |
| APPENDIX 1-4 | Proof of Lease Assignment |
| APPENDIX 1-5 | Current and Previous Coal Mining Permits |
| APPENDIX 1-6 | Consultation and Coordination |
| APPENDIX 1-7 | Identification of Interests |
| APPENDIX 1-8 | Letter from Carbon County |
| APPENDIX 1-9 | Coal Lease Modification |
| APPENDIX 1-10 | SITLA - Special Use Lease (Topsoil Borrow Area) |
| APPENDIX 1-11 | Material Deposit Special Use Lease Agreement |
| APPENDIX 1-12 | Waterline/Pump House Right of Way |
| APPENDIX 1-13 | Correspondence Regarding Security Gate |
| APPENDIX 1-14 | Penta Creek Fee Lease |
| APPENDIX 1-15 | Legal Description of Grassy Trail Reservoir |
| APPENDIX 1-16 | Proof of State Lease Assignment (ML-47711 and ML-49287) |
| APPENDIX 1-17 | Monitoring/Inspection Report Form for the Grassy Trail Dam |

#3

WEST RIDGE MINE

007/041

MINOR MODIFICATION
TO
THE MINING AND RECLAMATION PLAN

***TO ALLOW FULL EXTRACTION
LONGWALL MINING OF PANEL #7***

LOCATED WITHIN THE EXISTING PERMIT AREA
IN

FEDERAL LEASE UTU-068754
PENTA CREEK FEE LEASE

**THIS SUBMITTAL INCLUDES THE EXPANDED MONITORING
PLAN FOR THE GRASSY TRAIL DAM REQUESTED BY
DIVISION OF DAM SAFETY**

SUBMITTED: OCTOBER 21, 2005

- *Daily monitoring of the UUSS list of recent seismic events (www.seis.utah.edu/recactivity/recent.shtml) should be performed. A daily record should be maintained of the largest recorded event within 5 miles of the site. When an event greater than 3.0 occurs within 5 miles of the site, a site reconnaissance of the embankment crest, slopes and landslide areas should be performed within 24 hours and a review of ground motion recordings should be made. If recorded ground acceleration exceeds 0.4g, instrumentation readings should be performed.*
- *Site reconnaissance and instrumentation reports should be forwarded to RB&G Engineering and the Utah State Dam Safety Engineer within 24 hours, and the daily monitoring record should be submitted on a monthly basis.*

The BLM R2P2 approval is conditioned upon WEST RIDGE Resources monitoring the inspection/monitoring program as outlined above. Therefore WEST RIDGE Resources, Inc. commits to implementing this inspection/monitoring program effective immediately upon Division approval for full extraction of Panel #7.

Based on the conclusions of the seismicity study the Utah Division of Dam Safety has requested an additional monitoring and inspection program above and beyond that required by the R2P2. The elements of this expanded monitoring plan includes:

- *Prior to longwall mining of Panel No. 7 additional subsidence control monuments will be established across the crest of the dam on 100' centers, across the face of the dam midway down the slope on 200' centers, and along the toe of the dam on 200' centers.*
- *Prior to longwall mining the upper hillside accelerometer will be removed, recalibrated, and relocated at the dam. The dam site accelerometer will be removed, recalibrated, and relocated at a new location on the hillside approximately midway between the dam and the previous upper hillside location.*
- *Prior to longwall mining a seepage collection system will be installed at the seep area located along the east abutment of the dam. This system will be designed to collect the entire flow of the seep to a common point to allow accurate measurement of the seepage flow.*
- *Prior to longwall mining a complete set of premining baseline data will be established including:*
 - Peizometer readings.*
 - Accelerometer readings.*
 - Inclinometer readings.*

-Relative elevations of all subsidence monitoring monuments located on the dam. (Absolute elevations of all monuments will be surveyed before and after extraction of longwall Panel No. 7)

-Flow rates at the east abutment seep, west abutment seep, and toe drain.

-Visual inspection of the dam, seeps, and slide area.

-Electronic photographs at predetermined designated viewpoints.

- *RB&G will be responsible for compiling and distributing the following weekly, monthly, and event-driven inspection and monitoring reports. These reports will be generated in an electronic format and emailed on a timely basis to the Division of Dam Safety, Division of Oil, Gas & Mining, Bureau of Land Management, East Carbon City, Sunnyside City, and WEST RIDGE Resources (herein after referred to as the designated parties).*
- ***Weekly basis:** After longwall mining has commenced in Panel No. 7 the following monitoring will be done on a weekly basis:*
 - Site reconnaissance/visual inspection (weekly inspections will be done by the same individual from WEST RIDGE Resources to ensure consistency of visual observation interpretations).*
 - Electronic photographs from predetermined viewpoints.*
 - Flow rates at the east seep, west seep, and toe drain. (These flow rates will be determined by actual measurements not by visual estimates.)*
 - Reservoir level.*
 - Electronic reports including all reading and photos will be emailed immediately after the inspection to the designated parties.*
- ***Monthly basis:** In addition to the weekly monitoring the following monitoring will be conducted on a monthly basis:*
 - Accelerometer readings This information will be downloaded by RB&G and attached to the monthly summary.*
 - Piezometer readings (to be taken by RB&G)*
 - Inclinometer readings (to be taken by RB&G)*
 - Relative elevations of subsidence monitoring monuments located on the dam. These surveys will be conducted by a registered professional surveyor.*
 - Electronic reporting (emails) of the monthly measurements will be combined with the fourth weekly inspection report sent to the designated parties.*
- ***Event-driven basis:** In addition to the weekly and monthly inspections the following measures will be taken on an event-driven basis:*
 - The University of Utah seismic readings will be monitored on a daily basis, if any events are recorded greater than a magnitude 3.0 within 5 miles of the dam then, within 24 hours of such readings, a full site reconnaissance and*

visual inspection will be conducted, and accelerometer readings will be taken. If the accelerometer readings show any value greater than 0.2g then inclinometer readings, piezometer readings and drainflow measurements (east seep, west seep, and toe drain) will be taken at that time. The results of these measurements will be emailed immediately to all designated parties.

- *The standardized form of the inspection/monitoring reports is included in Appendix 1-17.*
- *Monitoring and reporting will continue on the prescribed weekly, monthly, and event driven basis during the mining of Panel No. 7 as long as seismic events continue to be recorded. At such time that the frequency and magnitude of the events diminishes sufficiently the agencies (Dam Safety, DOGM, BLM, East Carbon City, and Sunnyside City) will make a collective consensus determination to reduce, modify, and/or eliminate the various elements of the monitoring program.*

114.200 Not applicable, the fee lease mineral estate is not severed from the surface estate.

APPENDIX 1-17

**MONITORING/INSPECTION REPORT FORM FOR
THE GRASSY TRAIL DAM**

GRASSY TRAIL DAM
INSPECTION REPORT

DATE: _____ WEATHER: _____ TEMP. ____/____

INSPECTOR: _____ ORGANIZATION: _____

RESERVOIR LEVEL (Distance above or below spillway crest in inches): _____ above / below

OUTLET FLOWS (Check if flowing): Main Outlet Pipe, Stream Outlet Pipe, Spillway

| | | |
|---|--|-----------------------------|
| HAS MONUMENT SURVEY BEEN COMPLETED FOR MONTH? | <input type="checkbox"/> YES, <input type="checkbox"/> NO: | <u>DATE</u> _____ |
| HAVE SEEPAGE POINTS BEEN READ THIS WEEK? | <input type="checkbox"/> YES, <input type="checkbox"/> NO: | _____ |
| HAVE PIEZOMETERS BEEN READ THIS MONTH? | <input type="checkbox"/> YES, <input type="checkbox"/> NO: | _____ |
| HAVE INCLINOMETERS BEEN READ THIS MONTH? | <input type="checkbox"/> YES, <input type="checkbox"/> NO: | _____ |
| HAVE ACCELEROMETERS BEEN READ THIS TIME PERIOD? | <input type="checkbox"/> YES, <input type="checkbox"/> NO: | _____ |

DAM EMBANKMENT (If yes to any of the below items – describe and sketch in detail.)

CRACKING:

| | | | |
|--------------------|--|-----------------|---|
| Old Cracks Opening | <input type="checkbox"/> YES <input type="checkbox"/> NO | Crack Location: | <input type="checkbox"/> Crest |
| | | | <input type="checkbox"/> Upstream Slope |
| New Cracks Opening | <input type="checkbox"/> YES <input type="checkbox"/> NO | | <input type="checkbox"/> Downstream Slope |

SLUMPS / BULGES:

| | | | | | |
|--------------------|--|--------------------|--|-----------|-------------------------------------|
| Old Slumps Moving | <input type="checkbox"/> YES <input type="checkbox"/> NO | Old Bulges Moving | <input type="checkbox"/> YES <input type="checkbox"/> NO | Location: | <input type="checkbox"/> UPSTREAM |
| | | | | | <input type="checkbox"/> DOWNSTREAM |
| New Slumps Forming | <input type="checkbox"/> YES <input type="checkbox"/> NO | New Bulges Forming | <input type="checkbox"/> YES <input type="checkbox"/> NO | | |

SEEPAGE / WET SPOTS:

| | | | |
|-----------------------------|--|-----------|------------------------------------|
| New Seepage Points Observed | <input type="checkbox"/> YES <input type="checkbox"/> NO | Location: | <input type="checkbox"/> EAST SIDE |
| New Wet Spots Observed | <input type="checkbox"/> YES <input type="checkbox"/> NO | | <input type="checkbox"/> CENTER |
| Seepage | <input type="checkbox"/> CLEAR <input type="checkbox"/> CLOUDY | | <input type="checkbox"/> WEST SIDE |

SINKHOLES OR OTHER ABNOMALITIES (Describe): _____

ABUTMENTS, FOUNDATION, AND RESERVOIR BASIN (If yes – describe & sketch in detail.)

| | | | |
|--|-----------------------|--|--------------------|
| LANDSLIDE (Right Abutment): Southwest & Northwest | New Movement Observed | <input type="checkbox"/> YES <input type="checkbox"/> NO | (Sketch Locations) |
| | New Springs Observed | <input type="checkbox"/> YES <input type="checkbox"/> NO | (Sketch Locations) |
| LANDSLIDE (Left Abutment): | New Movement Observed | <input type="checkbox"/> YES <input type="checkbox"/> NO | (Sketch Locations) |
| | New Springs Observed | <input type="checkbox"/> YES <input type="checkbox"/> NO | (Sketch Locations) |

CRACKING:

| | | |
|--------------------|--|--------------------|
| Old Cracks Opening | <input type="checkbox"/> YES <input type="checkbox"/> NO | (Sketch Locations) |
| New Cracks Opening | <input type="checkbox"/> YES <input type="checkbox"/> NO | (Sketch Locations) |

SLUMPS / BULGES:

| | | | | |
|--------------------|--|--------------------|--|--------------------|
| Old Slumps Moving | <input type="checkbox"/> YES <input type="checkbox"/> NO | Old Bulges Moving | <input type="checkbox"/> YES <input type="checkbox"/> NO | (Sketch Locations) |
| New Slumps Forming | <input type="checkbox"/> YES <input type="checkbox"/> NO | New Bulges Forming | <input type="checkbox"/> YES <input type="checkbox"/> NO | (Sketch Locations) |

SEEPAGE / WET SPOTS:

| | | | | |
|-----------------------------|--|---------|---------------------------------|--------------------|
| New Seepage Points Observed | <input type="checkbox"/> YES <input type="checkbox"/> NO | Seepage | <input type="checkbox"/> Clear | (Sketch Locations) |
| New Wet Spots Observed | <input type="checkbox"/> YES <input type="checkbox"/> NO | | <input type="checkbox"/> Cloudy | (Sketch Locations) |

SINKHOLES OR OTHER ABNOMALITIES (Describe): _____

