C/007/041 Incoming
#3928
K

WEST RIDGE
RESOURCES, INC.

P.O. Box 910, East Carbon, Utah 84520
Telephone (435) 888-4000 Fax (435) 888-4002

September 22, 2011

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

Attn: Daron Haddock
Permit Supervisor

Re: West Ridge Mine C/007/041
Updated Surface Maps
Task #3873

Dear Mr. Haddock:

Enclosed are six copies of an amendment to the West Ridge MRP to update the surface facility map and provide design calculations for disturbed drainage culvert DC-2. This installation will not affect bonding.

If you have any questions or need any additional information, please contact me at (435) 888-4026.

Sincerely,

Dana Marrelli

Dana Marrelli

File in:
☐ Confidential
☐ Shelf
☒ Expandable
Date Folder 092811 C/0070041
Incoming

RECEIVED
SEP 28 2011
DIV. OF OIL, GAS & MINING

APPLICATION FOR COAL PERMIT PROCESSING

Permit Change ☒ New Permit ☐ Renewal ☐ Exploration ☐ Bond Release ☐ Transfer ☐

Permittee: West Ridge Resources, Inc
Mine: West Ridge Mine **Permit Number:** C/007/041
Title: Update Surface Facility Map - Addresses Deficiency List
Description, Include reason for application and timing required to implement:
Response to

Instructions: If you answer yes to any of the first eight questions, this application may require Public Notice publication.

☐ Yes ☒ No 1. Change in the size of the Permit Area? Acres: _____ Disturbed Area: _____ ☐ increase ☐ decrease.
☐ Yes ☒ No 2. Is the application submitted as a result of a Division Order? DO# _____
☐ Yes ☒ No 3. Does the application include operations outside a previously identified Cumulative Hydrologic Impact Area?
☐ Yes ☒ No 4. Does the application include operations in hydrologic basins other than as currently approved?
☐ Yes ☒ No 5. Does the application result from cancellation, reduction or increase of insurance or reclamation bond?
☐ Yes ☒ No 6. Does the application require or include public notice publication?
☐ Yes ☒ No 7. Does the application require or include ownership, control, right-of-entry, or compliance information?
☐ Yes ☒ No 8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling?
☐ Yes ☒ No 9. Is the application submitted as a result of a Violation? NOV # _____
☐ Yes ☒ No 10. Is the application submitted as a result of other laws or regulations or policies?
Explain: _____
☐ Yes ☒ No 11. Does the application affect the surface landowner or change the post mining land use?
☐ Yes ☒ No 12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P2)
☐ Yes ☒ No 13. Does the application require or include collection and reporting of any baseline information?
☐ Yes ☒ No 14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?
☐ Yes ☒ No 15. Does the application require or include soil removal, storage or placement?
☐ Yes ☒ No 16. Does the application require or include vegetation monitoring, removal or revegetation activities?
☒ Yes ☐ No 17. Does the application require or include construction, modification, or removal of surface facilities?
☒ Yes ☐ No 18. Does the application require or include water monitoring, sediment or drainage control measures?
☒ Yes ☐ No 19. Does the application require or include certified designs, maps or calculation?
☐ Yes ☒ No 20. Does the application require or include subsidence control or monitoring?
☐ Yes ☒ No 21. Have reclamation costs for bonding been provided?
☐ Yes ☒ No 22. Does the application involve a perennial stream, a stream buffer zone or discharges to a stream?
☐ Yes ☒ No 23. Does the application affect permits issued by other agencies or permits issued to other entities?
☐ Yes ☒ No 24. Does the application include confidential information and is it clearly marked and separated in the plan?

Please attach three (3) review copies of the application. If the mine is on or adjacent to Forest Service land please submit four (4) copies, thank you. (These numbers include a copy for the Price Field Office)

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.

Print Name	Position	Date	Signature (Right-click above choose certify then have notary sign below)
David W. Hibbs	President	9/22/11	David W. Hibbs

Subscribed and sworn to before me this 22nd day of September, 2011

Notary Public: Linda Kerns, state of Utah.

My commission Expires: 03-27-13
Commission Number: 578211
Address: 345 North 700 East
City: Price State: Utah Zip: 84501

} ss:

LINDA KERNS
NOTARY PUBLIC • STATE of UTAH
COMMISSION # 578211
COMM. EXP. 03-27-2013

For Office Use Only:	Assigned Tracking Number:	Received by Oil, Gas & Mining
		RECEIVED SEP 28 2011 DIV. OF OIL, GAS & MINING

Form DOGM- C1 (Revised December 10, 2007)

APPLICATION FOR COAL PERMIT PROCESSING
Detailed Schedule Of Changes to the Mining And Reclamation Plan

Permittee: West Ridge Resources, Inc
Mine: West Ridge Mine
Permit Number: C/007/041
Title: Update Surface Facility Map - Addresses Deficiency List

Provide a detailed listing of all changes to the Mining and Reclamation Plan, which is required as a result of this proposed permit application. Individually list all maps and drawings that are added, replaced, or removed from the plan. Include changes to the table of contents, section of the plan, or other information as needed to specifically locate, identify and revise the existing Mining and Reclamation Plan. Include page, section and drawing number as part of the description.

			DESCRIPTION OF MAP, TEXT, OR MATERIAL TO BE CHANGED
☐ Add	☒ Replace	☐ Remove	Appendix 7-4; Cover Page, Pages 26 thru 29; Pages 34 and 35
☒ Add	☐ Replace	☐ Remove	Computer Backup Sheet
☐ Add	☒ Replace	☐ Remove	Map 7-2
☐ Add	☐ Replace	☐ Remove	
☐ Add	☐ Replace	☐ Remove	
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Any other specific or special instruction required for insertion of this proposal into the Mining and Reclamation Plan.	Received by Oil, Gas & Mining
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APPENDIX 7-4

WEST RIDGE MINE
SEDIMENTATION AND DRAINAGE CONTROL PLAN
(AS CONSTRUCTED)

UTAH REGISTERED
#154168
DAN W. GUY
9/5/11
PROFESSIONAL ENGINEER

PREPARED BY: **DAN W. GUY, P.E.**
BLACKHAWK ENGINEERING, INC.

TABLE 10
DRAINAGE STRUCTURES

Structure	Drainage From:	Remarks:
UC-AA	UA-AA, DA-X	Right Fork Undisturbed + ASCA-X
UC-DD	UA-DD	Right Fork Undisturbed
UC-EE	UC-AA + UC-DD + 2.0 cfs Mine Water	Right Fork Undisturbed + ASCA-X
UC-FF	UA-FF	Right Fork Undisturbed
UC-GG	UC-AA Thru UC-FF	Right Fork Undisturbed + ASCA-X
UC-HH	UA-HH, DA-Y	Left Fork Undisturbed+ ASCA-Y
UC-JJ	UA-JJ	Left Fork Undisturbed
UC-KK	UC-HH and UC-JJ	Left Fork Undisturbed+ ASCA-Y
UC-LL	UC-AA Thru UC-KK	Main Canyon
UC-MM	UA-MM	Main Canyon
UC-NN	UC-AA Thru UC-MM	Main Canyon
UC-OO	UC-NN + Sediment Pond Overflow	Main Canyon + Ponds
UC-PP	UA-PP	Main Canyon (Below Pond)
UC-RR	1/3 OF UA-PP	Main Canyon (Below Pond)
UD-Z	UA-PP	Main Canyon (UC-PP)
UD-15	UA-15, DA-15	County Road
DD-1	UA-1a, UA-1b, DA-1	
DD-2	DD-1, UA-2a, UA-2b, DA-2	
DD-3	UA-3, DA-3	
DD-4	DD-2, DD-3, DA-4	
DD-4a	DA-4a, UA-4 + 0.51 cfs Mine Water	
DD-5	DD-4a, UA-5, DA-5	
DD-6	DA-6, DD-4, DD-5	
DD-8	DA-8, UA-8	
DD-8a	DD-6, DD-8	
DD-9	UA-7, DA-7, UA-9, DA-9	
DD-10	UA-10a, UA-10b, UA-10c, DA-10	
DD-11	DA-11, DD-8a	
DD-12	DD-10, UA-12, DA-12	
DD-13	DA-13	

TABLE 10 (Continued)
DRAINAGE STRUCTURES

DC-2	DD-2 + DD-3	
DC-2A	DD-2	
DC-4a	DD-4a	
DC-5	DA-5, UA-5	
DC-6	DD-5	
DC-7	DD-6, DD-8	
DC-8	DA-8	
DC-8a	DD-8a	
DC-8AR	DD-8A Freeboard	To Lower Pond
DC-10	DA-10	
DC-10A	DD-10	
DC-11	DD-11	
DC-12	DD-12	To Lower Pond
DC-13	DD-11, DD-13	To Upper Pond

TABLE 11
DRAINAGE STRUCTURE FLOW SUMMARY

Structure	10/6 Cfs	10/24 Cfs	25/6 Cfs	100/6 Cfs	Flows To:
UC-AA	12.97	45.12	25.65	46.45	Undisturbed Bypass
UC-DD	0.15	0.64	0.44	0.92	Undisturbed Bypass
UC-EE**	15.12	47.76	28.09	49.37	Undisturbed Bypass
UC-FF	0.16	0.67	0.46	0.95	Undisturbed Bypass
UC-GG	15.28	48.43	28.55	50.32	Undisturbed Bypass
UC-HH	7.39	32.82	13.08	25.48	Undisturbed Bypass
UC-JJ	0.50	2.65	1.12	2.16	Undisturbed Bypass
UC-KK	7.89	35.47	14.20	27.64	Undisturbed Bypass
UC-LL	23.17	83.90	42.75	77.96	Undisturbed Bypass
UC-MM	0.07	0.32	0.24	0.52	Undisturbed Bypass
UC-NN	23.24	84.22	42.99	78.48	Undisturbed Bypass
UC-OO	46.97	107.95	66.72	102.21	Undisturbed Bypass
UC-PP	0.11	0.49	0.33	0.69	Undisturbed Bypass
*UC-RR	0.04	0.16	0.11	0.23	Undisturbed Bypass
UD-Z	0.11	0.49	0.33	0.69	Main Canyon
UD-15	1.05	3.43	1.80	2.96	County Road
DD-1	1.79	7.13	3.48	6.17	Sediment Pond
DD-2	3.22	12.52	6.13	10.79	Sediment Pond
DD-3	1.18	4.30	2.13	3.65	Sediment Pond
DD-4	5.08	18.32	9.24	15.83	Sediment Pond
DD-4a***	1.20	2.07	1.53	2.01	Sediment Pond
DD-5	1.77	3.32	2.35	3.19	Sediment Pond
DD-6	7.13	22.25	11.99	19.58	Sediment Pond
DD-8	0.68	1.69	1.03	1.53	Sediment Pond
DD-8a	7.81	23.94	13.02	21.11	Sediment Pond
DD-9	1.26	2.86	1.88	2.75	Sediment Pond
DD-10	2.58	7.44	4.09	6.52	Sediment Pond
DD-11	8.09	24.56	13.43	21.69	Sediment Pond
DD-12	4.11	13.51	6.99	11.62	Sediment Pond
DD-13	0.28	0.61	0.40	0.56	Sediment Pond

* Carries 1/3 of drainage from UA-PP.

** Includes 2.0 cfs Mine Water.

*** Includes 0.51 cfs Mine Water.

TABLE 11 (Continued)
DRAINAGE STRUCTURE FLOW SUMMARY

Structure	10/6 Cfs	10/24 Cfs	25/6 Cfs	100/6 Cfs	Flows To:
DC-2	4.4	16.82	8.26	14.44	Sediment Pond
DC-2A	3.22	12.52	6.13	10.79	Sediment Pond
DC-4a***	1.2	2.07	1.53	2.01	Sediment Pond
DC-5	0.57	1.25	0.82	1.18	Sediment Pond
DC-6***	1.77	3.32	2.35	3.19	Sediment Pond
DC-7	7.81	23.94	13.02	21.11	Sediment Pond
DC-8	0.62	1.37	0.89	1.27	Sediment Pond
DC-8a***	7.81	23.94	13.02	21.11	Sediment Pond
DC-8AR	1.73	1.73	1.73	1.73	To Lower Pond
DC-10	2.1	4.66	3.03	4.32	Sediment Pond
DC-10a	2.58	7.44	4.09	6.52	Sediment Pond
DC-11***	8.09	24.56	13.43	21.69	Sediment Pond
DC-12	4.11	13.51	6.99	11.62	To Lower Pond
DC-13***	8.37	25.17	13.83	22.25	To Upper Pond

*** Includes 0.51 cfs Mine Water.

TABLE 14
DISTURBED CULVERT DATA

Culvert ID	Length (ft)	Slope %	Manning's No.
DC-2	45	2.0%	0.020
DC-2A	50	2.0%	0.020
DC-4A	170	6.0%	0.020
DC-5	25	2.0%	0.020
DC-6	80	2.0%	0.020
DC-7	50	2.0%	0.020
DC-8	50	10.0%	0.020
DC-8A	150	16.0%	0.020
DC-10	85	25.0%	0.020
DC-10A	60	20.0%	0.020
DC-11	60	5.0%	0.020
DC-12	75	10.0%	0.020
DC-13	65	5.0%	0.020
*DC-8AR	3@40'	6.0%	0.020

*** Relief Culverts for DC-8A.**

TABLE 15

DISTURBED CULVERT DESIGN SUMMARY

Culvert	10 yr - 6 hr Event 1.30"			10 yr - 24 hr Event 2.00"			As-Constructed Diameter (ft.)	Flow Capacity (cfs)	Rip-Rap Req'd Y/N	Rip-Rap D_{50}
	Peak Flow Cfs	Velocity fps	Min. Diam. Req'd ft.	Peak Flow Cfs	Velocity fps	Min. Diam. Req'd ft.				
DC-2	4.40	4.49	1.12	16.82	6.28	1.85	2.0	20.80	N	-
DC-2A***	3.22	4.15	0.99	12.52	5.83	1.65	1.25	5.94	N	-
DC-4A*	1.20	4.90	0.56	2.07	5.61	0.69	1.5	16.72	N	-
DC-5	0.57	2.69	0.52	1.25	3.28	0.70	1.5	9.66	N	-
DC-6*	1.77	3.58	0.79	3.32	4.18	1.01	1.5	9.66	N	-
DC-7*	7.81	5.18	1.39	23.94	6.86	2.11	2.0	20.80	Y	0.50
DC-8	0.62	5.03	0.40	1.37	6.13	0.53	1.5	21.59	Y	0.50
DC-8A*	7.81	11.30	0.94	23.94	14.95	1.43	1.5	27.31	Y	1.20
DC-10	2.10	9.62	0.53	4.66	11.74	0.71	1.5	34.14	Y	1.00
DC-10A	2.58	9.32	0.59	7.44	12.14	0.88	1.5	30.53	Y	1.00
DC-11*	8.09	7.37	1.18	24.56	9.73	1.79	2.0	32.88	Y	0.50
DC-12	4.11	8.07	0.81	13.51	10.87	1.26	1.5	21.59	Y	0.75
DC-13*	8.37	7.43	1.20	25.17	9.79	1.81	2.0	32.88	Y	0.50
**DC-8AR	1.73	5.37	0.64	1.73	5.37	0.64	3@0.64	5.19	Y	0.50

* Includes 0.51 cfs Mine Water.

** Relief Culverts for DC-8A.

*** Adequate for 10yr/6hr event.

Circular Channel Analysis & Design
Solved with Manning's Equation
Open Channel – Uniform flow

Worksheet Name: *WEST RIDGE MINE*

Comment: *CULVERT DC-2A (10/6)*

Solve For Full Flow Diameter

Given Input Data:

Slope	*0.0200 ft/ft*
Manning's n	*0.020*
Discharge	*3.22 cfs*

Computed Results:

Full Flow diameter	0.99 ft
Full Flow Depth	0.99 ft
Velocity	4.15 fps
Flow Area	0.78 sf
Critical Depth	0.77 ft
Critical Slope	0.0224 ft/ft
Percent Full	100%
Full Capacity	3.22 cfs
QMAX @ .94D	3.46 cfs
Froude Number	FULL

Circular Channel Analysis & Design
Solved with Manning's Equation
Open Channel – Uniform flow

Worksheet Name: *WEST RIDGE MINE*

Comment: *CULVERT DC-2A (10/24)*

Solve For Full Flow Diameter

Given Input Data:

Slope	*0.0200 ft/ft*
Manning's n	*0.020*
Discharge	*12.52 cfs*

Computed Results:

Full Flow diameter	1.65 ft
Full Flow Depth	1.65 ft
Velocity	5.83 fps
Flow Area	2.15 sf
Critical Depth	1.33 ft
Critical Slope	0.0206 ft/ft
Percent Full	100%
Full Capacity	12.52 cfs
QMAX @ .94D	13.47 cfs
Froude Number	FULL

Circular Channel Analysis & Design
Solved with Manning's Equation
Open Channel – Uniform flow

Worksheet Name: *WEST RIDGE MINE*

Comment: *CULVERT DC-2A*

Solve For Full Flow Capacity

Given Input Data:

Diameter	*1.25 ft*
Slope	*0.0200 ft/ft*
Manning's n	*0.020*
Discharge	*5.94 cfs*

Computed Results:

Full Flow Capacity	5.94 cfs
Full Flow Depth	1.25 ft
Velocity	4.84 fps
Flow Area	1.23 sf
Critical Depth	0.99 ft
Critical Slope	0.0215 ft/ft
Percent Full	100%
Full Capacity	5.94 cfs
QMAX @ .94D	6.39 cfs
Froude Number	FULL