ARCH
WEST ELK

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Mountain Coal Company, LLC
A subsidiary of Arch Resources, Inc.
West Elk Mine
5174 Highway 133
Somerset, CO 81434

January 3, 2022

Mr. Leigh D. Simmons
Colorado Division of Reclamation, Mining and Safety
Office of Mined Land Reclamation
1313 Sherman Street, Room 215
Denver, Colorado 80203

Re: Mountain Coal Company, LLC, West Elk Mine; Permit No. C-1980-007; Quarterly Summary of Subsidence Observations; 4th Quarter 2021

Dear Mr. Simmons:

Mountain Coal Company, LLC (MCC) began longwall mining the E-Seam in December 2008. MCC has completed longwall mining of longwall panels LWE1 through LWSS1and continued to mining in LWSS2 starting in June 2021. As of December 31, 2021, the Longwall has mined to 9 crosscut in the headgate.

There were no stock ponds within twice the angle-of-draw of the mined area of LWSS2 during this quarter, and mining was not within a mile of Monument Dam. Winter weather and ground conditions did not permit inspections for part of this quarter. All inspections will continue when weather and ground conditions allow. Routine inspection reports for Monument Dam, Forest Service Roads and Stock Ponds are included with this letter report.

Please don't hesitate to contact me should you have questions regarding this submittal.

Sincerely,

Nicole Poulos

Nicki Poulos
Environmental Engineer

Enclosures: Monument Dam Inspections – 4th Quarter 2021
US Forest Service Road Inspections – 4th Quarter 2021
Stock Pond Inspections – 4th Quarter 2021

cc: D. Gray - USFS
R. Munz – MCC
J. Wilczek – MCC
Availability of Records File

Stock Pond
Inspection Form

Date: 10/29/2021
Time: 1:00 PM
Name of Inspector: Robert G. Munz
Current Panel and XC Being Mined: LW552 1S XC in 552HG
Stock Pond(s) Being Inspected: DF 29

Yes	No	
☐	☒	Is the stock pond within twice the projected angle of draw of subsidence? If yes, which pond(s):
☐	☒	Are there visible surface cracks in or near the stock pond? If yes, describe (location, width, length, etc.):
☐	☒	Is there any evidence of potential subsidence induced water loss? If yes, describe:
☐	☒	Is there water in the pond? If yes, describe:
☐	☒	Is mitigation needed? If yes, list suggestions:

Notes:

Signature of Inspector: Robert G. Munz

* If any potential subsidence induced features are observed that could cause harm to the pond, notify Jessica Wilczek immediately.

Stock Pond
Inspection Form

Date: 11/30/2021
Time: 12:00
Name of Inspector: Robert Munz
Current Panel and XC Being Mined: LW 552 XC 12 to 13 in SSZ HG.
Stock Pond(s) Being Inspected: DF 29

Yes	No	
☐	☐	Is the stock pond within twice the projected angle of draw of subsidence? If yes, which pond(s): _____
☐	☐	Are there visible surface cracks in or near the stock pond? If yes, describe (location, width, length, etc.): _____ _____ _____
☐	☐	Is there any evidence of potential subsidence induced water loss? If yes, describe: _____
☐	☐	Is there water in the pond? If yes, describe: _____
☐	☐	Is mitigation needed? If yes, list suggestions: _____

Notes:
Unable to access due to road conditions

Signature of Inspector: _____

* If any potential subsidence induced features are observed that could cause harm to the pond, notify Jessica Wilczek immediately.

Stock Pond
Inspection Form

Date: 12/31/2021
Time: 12:00
Name of Inspector: Robert Munz
Current Panel and XC Being Mined: LWSS2 approx 10 xc in SS2 HG.
Stock Pond(s) Being Inspected: DF29

Yes	No	
☐	☐	Is the stock pond within twice the projected angle of draw of subsidence? If yes, which pond(s):
☐	☐	Are there visible surface cracks in or near the stock pond? If yes, describe (location, width, length, etc.):
☐	☐	Is there any evidence of potential subsidence induced water loss? If yes, describe:
☐	☐	Is there water in the pond? If yes, describe:
☐	☐	Is mitigation needed? If yes, list suggestions:

Notes:

Unable to inspect due to snow cover

Signature of Inspector: _____

* If any potential subsidence induced features are observed that could cause harm to the pond, notify Jessica Wilczek immediately.

Forest Service Roads
Inspection Form

Date: 10/29/2021
Time: 11:20
Name of Inspector: Robert G. Munz
Current Panel and XC Being Mined: LW552 15 XC in SS2 HG
Road(s) Being Inspected: Dry Fork.

Yes	No	
☐	☒	Is the Forest Service road within the projected angle of draw of subsidence? If yes, which road(s): _____
☐	☒	Are there visible surface cracks on the road? If yes, describe (location, width, length, etc.): _____
☐	☒	Is there any recent evidence of potential subsidence induced slope failure? If yes, describe: _____
☐	☒	Are there any other potentially damaging, subsidence induced features on or near the road? If yes, describe: _____
☐	☒	Is mitigation needed? If yes, list suggestions: _____

Notes:

Signature of Inspector: _____

* If any potential subsidence induced features are observed that could cause harm to the public or operations, notify Jessica Wilczek immediately.

Forest Service Roads
Inspection Form

Date: 11/30/2021
Time: 11:00
Name of Inspector: Robert Munz
Current Panel and XC Being Mined: LW552 approximately 12-13xc in 552 HG.
Road(s) Being Inspected: Dry Fork.

Yes	No	
☐	☒	Is the Forest Service road within the projected angle of draw of subsidence? If yes, which road(s):
☐	☒	Are there visible surface cracks on the road? If yes, describe (location, width, length, etc.):
☐	☒	Is there any recent evidence of potential subsidence induced slope failure? If yes, describe:
☐	☒	Are there any other potentially damaging, subsidence induced features on or near the road? If yes, describe:
☐	☒	Is mitigation needed? If yes, list suggestions:

Notes:
Poor road conditions in areas

Signature of Inspector: [signature]

* If any potential subsidence induced features are observed that could cause harm to the public or operations, notify Jessica Wilczek immediately.

Forest Service Roads
Inspection Form

Date: 12/31/2021
Time: 12:00
Name of Inspector: Robert Munz
Current Panel and XC Being Mined: LW SS 2 approximately 10 XC in SS2 46
Road(s) Being Inspected: Dry Fork / Deer Creek

Yes	No	
☐	☐	Is the Forest Service road within the projected angle of draw of subsidence? If yes, which road(s): _____
☐	☐	Are there visible surface cracks on the road? If yes, describe (location, width, length, etc.): _____ _____ _____
☐	☐	Is there any recent evidence of potential subsidence induced slope failure? If yes, describe: _____
☐	☐	Are there any other potentially damaging, subsidence induced features on or near the road? If yes, describe: _____
☐	☐	Is mitigation needed? If yes, list suggestions: _____

Notes: Unable to inspect due to snow cover

Signature of Inspector: _____

* If any potential subsidence induced features are observed that could cause harm to the public or operations, notify Jessica Wilczek immediately.

Monument Dam
Inspection Form

Date: 10/29/2021
Time: 11:30 am
Name of Inspector: Robert Munz
Current Panel Being Mined: LW SS2
☐ Weekly Inspection ☒ Monthly Inspection

Yes	No	
☐	☒	Is mining within 1 mile of Monument Dam?
☐	☒	Are there visible surface cracks on the dam? If yes, indicate length and size of crack. _____.
☐	☒	Is there evidence of subsided areas on or around the dam? If yes, indicate where and degree. _____.
☐	☒	Are there bulges on the dam? If yes, indicate where and degree. _____.
☐	☒	Are there signs of seeps on the dam? If yes, indicate where and estimated flow._____.
☐	☒	Are there any other potentially damaging features on the dam? If yes, describe. _____.
☐	☒	Are there any recent evidences of slope failure on the landside south of the dam (perform visual inspection and data analysis of inclinometers)? If yes, describe. _____.

Notes:

Signature of Inspector: _____

Inspections are performed under the direction of Jessica Wilczek, P.E.

If cracks or other potentially damaging features occur, notify Jessica Wilczek immediately.

Monument Dam
Inspection Form

Date: 11/30/2021
Time: 11:30
Name of Inspector: Robert Munz
Current Panel Being Mined: LW 552
☐ Weekly Inspection ☒ Monthly Inspection

Yes	No	
☐	☒	Is mining within 1 mile of Monument Dam?
☐	☒	Are there visible surface cracks on the dam? If yes, indicate length and size of crack. _____.
☐	☒	Is there evidence of subsided areas on or around the dam? If yes, indicate where and degree. _____.
☐	☒	Are there bulges on the dam? If yes, indicate where and degree. _____.
☐	☒	Are there signs of seeps on the dam? If yes, indicate where and estimated flow._____.
☐	☒	Are there any other potentially damaging features on the dam? If yes, describe. _____.
☐	☒	Are there any recent evidences of slope failure on the landside south of the dam (perform visual inspection and data analysis of inclinometers)? If yes, describe. _____.

Notes:

Signature of Inspector: _____

Inspections are performed under the direction of Jessica Wilczek, P.E.

If cracks or other potentially damaging features occur, notify Jessica Wilczek immediately.

Monument Dam
Inspection Form

Date: 12/31/2021
Time: 12:00PM
Name of Inspector: Robert Munz
Current Panel Being Mined: LW 552
☐ Weekly Inspection ☒ Monthly Inspection

Yes	No	
☐	☐	Is mining within 1 mile of Monument Dam?
☐	☐	Are there visible surface cracks on the dam? If yes, indicate length and size of crack. _____.
☐	☐	Is there evidence of subsided areas on or around the dam? If yes, indicate where and degree. _____.
☐	☐	Are there bulges on the dam? If yes, indicate where and degree. _____.
☐	☐	Are there signs of seeps on the dam? If yes, indicate where and estimated flow._____.
☐	☐	Are there any other potentially damaging features on the dam? If yes, describe. _____.
☐	☐	Are there any recent evidences of slope failure on the landside south of the dam (perform visual inspection and data analysis of inclinometers)? If yes, describe. _____.

Notes: Unable to inspect due to snow cover

Signature of Inspector: _____

Inspections are performed under the direction of Jessica Wilczek, P.E.

If cracks or other potentially damaging features occur, notify Jessica Wilczek immediately.