



STATE OF
COLORADO

Simmons - DNR, Leigh <leigh.simmons@state.co.us>

C1980007, West Elk Mine, October Inspection Report and NOV CV-2020-001

Simmons - DNR, Leigh <leigh.simmons@state.co.us>

Thu, Nov 12, 2020 at 12:08 PM

To: "Welt, Kathy" <KWelt@archrsc.com>

Cc: DNR DRMS_CoalAdmin - DNR <dnr_drms_coal_admin@state.co.us>

Kathy,

A hard copy of the Inspection Report and NOV will be sent to you by certified mail, but I have attached pdf copies in the meantime.

Leigh Simmons
Environmental Protection Specialist



COLORADO
Division of Reclamation,
Mining and Safety
Department of Natural Resources

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2 attachments



INSP-REPORTC_C1980007_LDS_10292020043906.pdf

11536K



NOV_C-NV-07_C1980007.pdf

69K




COLORADO
Division of Reclamation,
Mining and Safety
Department of Natural Resources

PERMIT INFORMATION

Permit Number: C-1980-007 Mine Name: West Elk Mine Operator: Mountain Coal Company, LLC Operator Address: Ms Kathleen G Welt 5174 Highway 133 Somerset, CO 81434	County: Delta, Gunnison Operation Type: Underground Permit Status: Active Ownership: Private
	Operator Representative Present: John Poulos, Kathy Welt
Operator Representative Signature: (Field Issuance Only) 	

INSPECTION INFORMATION

Inspection Start Date: October 23, 2020 Inspection Start Time: 08:00 Inspection End Date: October 23, 2020 Inspection End Time: 13:00		Inspection Type: Coal Partial Inspection Inspection Reason: Normal I&E Program Weather: Clear	
Joint Inspection Agency: None		Joint Inspection Contacts: 	
Post Inspection Agency: None		Post Inspection Contacts: 	
Inspector(s): Leigh Simmons	Inspector's Signature: 		Signature Date: November 4, 2020

Inspection Topic Summary

NOTE: Y=Inspected N=Not Inspected R=Comments Noted V=Violation Issued NA=Not Applicable

N - Air Resource Protection
 N - Availability of Records
 N - Backfill & Grading
 N - Excess Spoil and Dev. Waste
 N - Explosives
 N - Fish & Wildlife
 N - Hydrologic Balance
 N - Gen. Compliance With Mine Plan
 N - Other
 N - Processing Waste

N - Roads
 N - Reclamation Success
 N - Revegetation
 V - Subsidence
 N - Slides and Other Damage
 R - Support Facilities On-site
 N - Signs and Markers
 N - Support Facilities Not On-site
 N - Special Categories Of Mining
 N - Topsoil

COMMENTS

This was a partial inspection by Leigh Simmons of the Division of Reclamation, Mining and Safety (Division). Kathy Welt and John Poulos of Mountain Coal Company (MCC) accompanied the inspection. The weather was clear, dry and cold. The mine was active.

SUBSIDENCE - Rule 4.20:

MCC had previously notified the Division of subsidence that had occurred during the afternoon of Monday October 13th, as a result of development mining under South Prong Creek. A hole, approximately 40' across, had opened up on the surface, just upstream of the confluence with the North Fork of South Prong Creek, causing water from the creek to flow into the mine workings. MCC staff had responded immediately, setting up pumps and a temporary diversion during the night. Stream flow was initially estimated at 100 gallons per minute (0.22 cfs), and later measured at 160 gallons per minute (0.36 cfs). The stream flow had been successfully diverted around the subsidence hole by the morning of Tuesday October 14th.

Minor Revisions 450 and 452 were submitted on October 14th and 16th respectively, to permit the disturbance associated with repairing the damage. Technical Revision 148 was submitted on October 30th, to permit the design of the restoration of South Prong Creek.

The main focus of the inspection was the damaged area, the associated disturbance, and the ongoing repairs. At the time of the inspection the water in the creek had been directed into a lined sump, which gravity drained into a 16" pipe. The 16" pipe split into two 6" pipes, only one of which was in use. The other pipe was available to provide capacity in case of increased stream flows. A second sump had been constructed just downstream of the first, which allowed a small electric pump to be used to pump the small amount of water that ran under the lining to be pumped back up to the first sump through a hosepipe as necessary.

Topsoil had been salvaged from a borrow area adjacent to the subsidence and stockpiled. The perimeter of the disturbance had been protected with a silt fence. The topsoil stockpiles had been marked with sign posts, and protected with mulch and straw wattles. Cobbles and large boulders had been set aside. The subsided area had been filled with native material from the borrow area, compacted in 2' lifts. A 6-8" thick bentonite cap had then been made in place.

According to Mr. Poulos, the subsidence of the creek had occurred when the roof of the western-most of five entries in the Sunset Mains South had caved, as development was progressing from north to south. The entries

Number of Partial Inspection this Fiscal Year: 5

Number of Complete Inspections this Fiscal Year: 1

are approximately 100' apart. The fifth, fourth and third entries had been or were being backfilled at the time of the inspection, and would be sealed - the final design of the bulkhead seals will require MSHA approval. The second entry had not yet progressed as far south as those to the west, and the first had already been dropped as it was no longer required to satisfy ventilation requirements.

At the time of the inspection contractors with RACS, LLC. of Delta, CO were on site, with a small pneumatic drill rig mounted on a skid-steer. The drill rig was being used to construct holes to grout the backfilled material with the aim of reducing its permeability. The holes were being constructed using the "casing advance" technique, which is effective in unconsolidated material. A 5.5" casing is advanced in 5' lengths, with the drill stem inside of it. When the hole reaches consolidated material it is advanced a little further (8-12"), then the drill stem is withdrawn while the casing remains in place. The first section of casing is withdrawn and cement grout is poured into the hole with a bucket. This process is repeated until all of the casing has been removed and the hole is full of grout. At this point a steel plate with a pass-through port is placed over the hole and held down with the bucket of a back-hoe, the cement grout is then pressurized to approximately 150 psi using a grout pump, forcing it into the pore space of the fill material. The contractors were working on the second hole at the time of the inspection. Mr. Poulos expected that a total of 8-12 holes would be constructed in all and estimated that the total depth of the first hole was around 30' (thirty feet) and that it had been completed to the roof of the coal seam rather than the floor.

SUPPORT FACILITIES - Rule 4.04:

No recent work had taken place on the MVB pads, holes and roads for the SS2 panel and the gate remained locked.

A row of sandbags had been placed for sediment control around the perimeters of the SS1 and SS2 pads. The use of sandbags to control runoff from the pads is not required by the mining permit (C1980007). Fresh straw bales for sediment control had been placed along the roads accessing the pads.

The mobile flare was in operation on the SS1-5 pad. Mr. Poulos was able to monitor the concentration of methane in the stream of gas coming from the borehole, its flow rate, and the temperature of the flame (to verify complete combustion), using his phone.

DOCUMENTS RECEIVED

N/A

OTHER (SPECIFY)

N/A

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ENFORCEMENT ACTIONS/COMPLIANCE**Infraction Number:** CO2020001

Inspection Date: June 10, 2020

Date Issued: June 18, 2020

Primary Topic: Right of Entry

Secondary Topic: other

Tertiary Topic:

Description: On April 24, 2020 the United States Court of Appeals for the Tenth Circuit issued a mandate ordering the United States District Court for the District of Colorado to vacate the North Fork Exception to the Colorado Roadless Rule. On June 15, 2020 the United States District Court for the District of Colorado entered an order vacating the North Fork Exception to the Colorado Roadless Rule, 81 Fed. Reg. 91,811 (Dec. 19, 2016). Notwithstanding BLM coal leases C-1362 and COC-67232, after reviewing the relevant facts and Orders from the 10th Circuit and the United State District Court, the Division has determined that Mountain Coal has failed to maintain its legal right to enter the Sunset Roadless area at the West Elk Mine. Mountain Coal must immediately cease all surface disturbing activities in longwall panels LWSS-1, LWSS-2, LWSS-3, and LWSS-4 at the West Elk Mine. If Mountain Coal is currently conducting any surface disturbing activities, it must immediately stop and stabilize the area(s) to prevent any off-site impacts pursuant to the Colorado Surface Coal Mining Reclamation Act. The Division further determines that a condition of significant imminent environmental harm exists.

Abatement #: 1

Abatement Due Date: 9/14/2020

Abatement Due Extended Date:

Abatement Date: 9/14/2020

Abatement Description: Notwithstanding BLM leases C-1362 and COC-67232, Mountain Coal must provide the Division with detailed information regarding its assertion that it maintains legal right of entry to the Sunset Roadless area and why it is not in direct conflict with the District Court order vacating the North Fork Exception to the Colorado Roadless Rule.

On August 25, 2020 Mountain Coal Company provided the requested abatement documentation from the US Forest Service and the Bureau of Land Management. The letters from USFS and BLM, the Federal land management agencies, provided clarity regarding their interpretation of the Colorado Roadless Rule and associated rights under the Federal leases related to work associated with panel SS2. Specifically, the letters clarified Mountain Coal's right of entry to access and use the existing road in longwall panel SS2, which was constructed prior to the Federal District Court's vacatur of the North Fork Exception; right of entry to access the two drill pads constructed prior to the vacatur of the North Fork Exception; right of entry to construct two additional drill pads in the Sunset Roadless area for longwall panel SS2; and right of entry to drill mine ventilation boreholes on the drill pads constructed for longwall panel SS2. The letter from USFS provided its determination that the activities outlined herein are consistent with exceptions to the Colorado Roadless Rule, 36 C.F.R. § 294.42(c)(5). The letter from USFS further stated that construction of roads in the Sunset Roadless area for longwall panels SS3 and SS4 is not allowed because of the vacatur of the North Fork Exception.

Cessation Order CO-2020-001 was modified on September 17, 2020 as follows: Mountain Coal Company (MCC) is permitted access and use of the existing, temporary road constructed in the Sunset Roadless area for longwall panel SS2 prior to the vacatur of the North Fork Exception, and authorized under PR-15. MCC is permitted to access the two drill pads that were constructed in the Sunset Roadless area for longwall panel SS2 prior to the vacatur of the North Fork Exception. MCC is permitted to

Number of Partial Inspection this Fiscal Year: 5Number of Complete Inspections this Fiscal Year: 1

construct two additional drill pads in the Sunset Roadless area for longwall panel SS2. MCC is permitted to drill mine ventilation boreholes on the drill pads constructed in the Sunset Roadless area for longwall panel SS2.

MCC is not permitted to construct any additional roads in the Sunset Roadless area for longwall panel SS2.

MCC is not permitted to conduct any ground disturbing activities in the Sunset Roadless area for longwall panels 3 or 4, or any area not discussed above.

Abatement #: 2

Abatement Due Date: 12/11/2020

Abatement Due Extended Date:

Abatement Date:

Abatement Description: Notwithstanding BLM leases C-1362 and COC-67232, Mountain Coal must provide the Division with detailed information regarding its assertion that it maintains legal right of entry to the Sunset Roadless area and why it is not in direct conflict with the District Court order vacating the North Fork Exception to the Colorado Roadless Rule. This abatement step is specific to longwall panels SS3 and SS4 in the Sunset Roadless area.

On October 29, 2020, the 10th Circuit Court of Appeals issued an Order stating: "Pending our consideration of the appeal, we enjoin Appellee Mountain Coal Company from imminently bulldozing additional drilling pads on [the road constructed after issuance of this court's April 24, 2020, mandate in No. 18-1374] and drilling methane ventilation boreholes in preparation for coal mining in the Sunset Roadless Area."

Cessation Order CO-2020-001 remains in place, however the Appeals Court Order controls the Cessation Order

Infraction Number: CV2020001

Inspection Date: October 23, 2020

Date Issued:

Primary Topic: Subsidence

Secondary Topic: Hydrologic Balance

Tertiary Topic:

Description: Failure to conduct subsidence survey; failure to protect hydrologic balance

Abatement #: 1

Abatement Due Date: 12/1/2020

Abatement Due Extended Date:

Abatement Date:

Abatement Description: Submit a technical revision to: (1) reconcile the mine plan with the subsidence survey and include the information in an updated subsidence control plan as required by 2.05.6(6)(i); (2) update predictions of probable hydrologic consequences as necessary

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PHOTOGRAPHS



Figure 1: Overview of subsidence at South Prong Creek

Number of Partial Inspection this Fiscal Year: 5

Number of Complete Inspections this Fiscal Year: 1



Figure 2: Access to work area, protected by fence

Number of Partial Inspection this Fiscal Year: 5

Number of Complete Inspections this Fiscal Year: 1



Figure 3: South Prong Creek upstream of subsidence

Number of Partial Inspection this Fiscal Year: 5

Number of Complete Inspections this Fiscal Year: 1



Figure 4: Sump at inlet to temporary diversion

Number of Partial Inspection this Fiscal Year: 5

Number of Complete Inspections this Fiscal Year: 1



Figure 5: Temporary diversion

Number of Partial Inspection this Fiscal Year: 5

Number of Complete Inspections this Fiscal Year: 1



Figure 6: 16" pipe splits into two 6" pipes, one in use the other for surge capacity

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Number of Complete Inspections this Fiscal Year: 1



Figure 7: Outlet of temporary diversion

Number of Partial Inspection this Fiscal Year: 5

Number of Complete Inspections this Fiscal Year: 1



Figure 8: South Prong Creek downstream of temporary diversion

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Number of Complete Inspections this Fiscal Year: 1



Figure 9: Salvaged topsoil, signposted, mulched, and protected with straw wattle

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Number of Complete Inspections this Fiscal Year: 1



Figure 10: Disturbed area run-off controlled by silt fence (1)

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Figure 11: Disturbed area run-off controlled by silt fence (2)

Number of Partial Inspection this Fiscal Year: 5

Number of Complete Inspections this Fiscal Year: 1



Figure 12: South Prong Creek channel protected from disturbed area run-off with straw bales



Figure 13: Stockpiled cobble and boulders, with 5' lengths of 5.5" drill casing in foreground

Number of Partial Inspection this Fiscal Year: 5

Number of Complete Inspections this Fiscal Year: 1



Figure 14: Bentonite left over after construction of cap



Figure 15: Grout pump

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Number of Complete Inspections this Fiscal Year: 1



Figure 16: Skidsteer mounted drill rig, positioned over second hole. First hole visible in foreground.

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Number of Complete Inspections this Fiscal Year: 1



Figure 17: New sandbags for sediment control on SS1-1 pad (1)



Figure 18: New sandbags for sediment control on SS1-1 pad (2)

Number of Partial Inspection this Fiscal Year: 5

Number of Complete Inspections this Fiscal Year: 1



Figure 19: Access to SS2 MVB pads still restricted by locked gate

Number of Partial Inspection this Fiscal Year: 5

Number of Complete Inspections this Fiscal Year: 1



Figure 20: Mobile flare on SS1-5. Sandbags for sediment control shown



Figure 21: SS1-5 sediment control

Number of Partial Inspection this Fiscal Year: 5

Number of Complete Inspections this Fiscal Year: 1



Figure 22: SS2-5 visible from SS1-5, sandbags for sediment control shown

Number of Partial Inspection this Fiscal Year: 5

Number of Complete Inspections this Fiscal Year: 1



Figure 23: Refreshed straw bales for sediment control on SS1 road

Number of Partial Inspection this Fiscal Year: 5

Number of Complete Inspections this Fiscal Year: 1



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1313 Sherman St. Room 215 Denver, CO 80203
P (303) 866-3567 F (303) 832-8106
<https://colorado.gov/drms>

NOTICE OF VIOLATION

NOV No. **CV-2020-001**
Permit No.: **C-1980-007**
Type of Mine: **Underground**

Operator (If Other than Permittee): **Mountain Coal Company, LLC**
Mail Address: **5174 Highway 133
Somerset, CO 81434
Somerset, CO 81434**

Inspector: **Leigh Simmons**
Person Served: **Weston Norris**

Mine: **West Elk Mine**
County: **Delta, Gunnison**
Permittee: **Mountain Coal Company, LLC**

Mail Address: **5174 Highway 133
Somerset, CO 81434**

Date/Time of Inspection: **October 23, 2020**

Served by: **Leigh Simmons**

*(Signature of Authorized Representative of the
Division of Reclamation, Mining and Safety)*

(Signature of Person Served)

(Please Print Name and Title)

CERTIFIED MAIL NO.

Date and Time of Service:

The Division of Reclamation, Mining and Safety ("the Division") has conducted an inspection of the above mine and has made the findings stated in the attached schedule and has found violations of the Colorado Surface Coal Mining Reclamation Act, or violations of required permit conditions, listed in the attached schedule. This notice constitutes a separate notice of violation for each violation listed.

You must abate each of these violations within the designated abatement time. Where the remedial action requires submission of plans, the plans are to be submitted to the Division within the designated time. You are responsible for doing all work in a safe manner in compliance with all applicable laws and regulations.

The undersigned finds that cessation of mining is ____ is not X expressly, or in practical effect, required by this notice. For this purpose, "mining" means extracting coal from the earth or from a waste pile and transporting it within or from the mine site.

C.R.S. 1973, 34-33-123(8) provides for imposition of civil penalties of up to \$5,000 for each violation and provides that each day of continuing violation may be deemed a separate violation.

Important: Please read the reverse side of this page.

IMPORTANT: Please read carefully.

1. Expiration Date of Notice - Informal Hearing at Site. If this notice requires cessation of mining, expressly or in practical effect (but not otherwise), it will expire automatically 30 days after service upon you, unless, within that time, (a) an informal hearing on the cessation has been held at or near the site, or (b) the operator has waived the holding of such a hearing. The hearing will be presided over by representatives of the Division other than the representative who issued the order. Temporary relief from the order may not be requested at such hearing. Your right to a formal review is not affected by any waiver on your part of an informal hearing.
2. Formal Review and Temporary Relief. The operator has the legal right to a review of this notice of violation in a public hearing before the Colorado Mined Land Reclamation Board. You may apply for review by submitting a request for review within 90 days of the issuance of this order. The request for review must be submitted to: Colorado Mined Land Reclamation Board, 1313 Sherman Street, Room 215, Denver, Colorado 80203.

If you request a formal hearing, you may request temporary relief from this notice of violation, pending hearing, but the filing of a request for review does not operate as a stay of any order or notice. Procedures in this regard are found in C.R.S. 1973, 34-33-124.

3. Penalties. If you fail to correct any of the violations described in this notice within the period permitted for its correcting, a minimum penalty of \$750.00 or more must be assessed for each day during which the violation(s) continues beyond the abatement period set forth in this notice.

If you willfully and knowingly fail or refuse to comply with a condition of a permit, you will be subject to criminal prosecution and will, upon conviction, be punished by a fine of not more than \$10,000.00 or by imprisonment for not more than one year, or both.

In accordance with Section 5.04.3(1) of the Rules and Regulations of the Colorado Mined Land Reclamation Board for Coal Mining, within 15 days of service of a notice of violation or cessation order, you may submit written information about the violation to the Division. The Division shall consider any information so submitted in determining the facts surrounding the violation and the amount of civil penalty to be proposed under Section 5.04.3(2).

4. Effect on Permit. In addition, if it is determined that a pattern of violations exists and that the violations were caused by unwarranted failure to comply, or were willful, your permit may be suspended or revoked.

SCHEDULE TO NOTICE OF VIOLATION

Notice of Violation No.: **CV-2020-001**

NATURE OF VIOLATION:

Failure to conduct subsidence survey; failure to protect hydrologic balance

ACT, REGULATION, OR PERMIT PROVISION(S) VIOLATED:

ACT SECTION(S): **111(1)(m)**

121(2)(a)(I)

REGULATIONSECTION(S): **2.05.6(3)**

4.05.1(4)(c)

2.05.6(6)

4.20

PERMIT SECTION(S): **2.05.6(6)**

Exhibit 55B

Exhibit 60E

PORTION OF THE OPERATION TO WHICH THIS NOTICE APPLIES:

The operator, Mountain Coal Company (MCC), had previously notified the Division of subsidence that had occurred during the afternoon of Monday October 13th, as a result of development mining under South Prong Creek. During the inspection it was apparent that the depth of cover at the location where the subsidence had occurred was extremely shallow, on the order of 30' (thirty feet).

The inspection prompted further research of materials relating to subsidence in the approved Permit Application Packet (PAP). The requirements of Rule 2.05.6(6) - Mitigation of the Impacts of Mining Operations; Subsidence Survey, Subsidence Monitoring, and Subsidence Control Plan - are addressed by sections 2.05.6(6) of the PAP text and Exhibit 60E - Subsidence Evaluation for the Southern Panels, Apache Rocks West, & Sunset Trail Mining Areas.

Exhibit 55B - Stream Channel Parameters and Changes due to Mining-Induced Subsidence - is a separate study that analyses the potential subsidence impacts to stream basins overlying the mine workings, based on the subsidence evaluation made in Exhibit 60E. On page 13 of Exhibit 55B the authors conclude that "The mining-induced subsidence impacts on existing stream channel parameters and basin sediment yield are not significant. Any changes in channel characteristics will occur gradually and reach the new regime over a period of several years"

The subsidence predictions in Exhibit 60E are made by subject matter experts based on a range of observations and assumptions concerning the mining that will be conducted. The authors assume that the typical overburden depth will range from 400' to 2,100', with a minimum depth of 375' (see pages 15, 20, 36, 39). In their summary of anticipated effects the authors state that "at least several hundred feet of rock will typically exist between any mine-induced surface fractures and the upper part of any mine-induced fractures above the caved zone in the mining panels. Therefore, from a practical standpoint, no interconnection between the surface fractures and the mine workings is anticipated. Again, under a worst-case scenario, if a surface fracture were to occur concurrently within an area controlled by faults or bedrock lineaments, there could be interconnection between adjacent sandstones. However, even under these conditions, the fractures would not extend through the

claystones and shales present in the overburden” (page 41).

The actual depth of cover at the location where subsidence occurred under South Prong Creek was an order of magnitude less than the minimum depth of cover contemplated by the authors of the approved subsidence evaluation study in Exhibit 60E. As the subsidence predictions made in Exhibit 60E were not valid for the actual mining conditions, the predictions of hydrologic impacts made in Exhibit 55B were also not valid.

STEPS NECESSARY TO ABATE VIOLATION (REMEDIAL ACTION):

Abatement Step #	Description
1	Submit a technical revision to: (1) reconcile the mine plan with the subsidence survey and include the information in an updated subsidence control plan as required by 2.05.6(6)(i); (2) update predictions of probable hydrologic consequences as necessary

TIME FOR ABATEMENT (NOT MORE THAN 90 DAYS):

ON OR BEFORE last abatement due date

Abatement Step #	Due Date
1	December 1, 2020