STATE OF COLORADO

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

Flaring submission to BLM re: West Elk

Norris, Weston <WNorris@archcoal.com> Tue, Oct 29, 2019 at 7:35 AM
To: "edawson@blm.gov" <edawson@blm.gov>, "shall@blm.gov" <shall@blm.gov>, "kshedlowski@blm.gov" <kshedlowski@blm.gov>, "chad.stewart@usda.gov" <chad.stewart@usda.gov>, "lbroyles@fs.fed.us" <lbroyles@fs.fed.us>, "leigh.simmons@state.co.us" <leigh.simmons@state.co.us>
Cc: "Poulos, John" <JPoulos@archcoal.com>, "Welt, Kathy" <KWelt@archcoal.com>

Good Morning,

Please find attached the document outlining the proposed mobile flaring project at West Elk Mine. Please let us know if you have any questions.

Thanks,

Weston Norris

General Manager

West Elk Mine

6 attachments

ECC Flare #3.JPG
2034K

file.jpeg
2156K

Mountain Coal flare narrative 102519.docx
15K

Ex A - Flare Mech Drawing.pdf
585K

Ex B - Flaring Environmental Effects.docx
30K

West Elk Mobile Flaring Project Letter.pdf
220K

Mountain Coal Company

Weston Norris
General Manager

wnorris@archcoal.com

October 28, 2019

Via Electronic Mail and United States Mail

Ms. Elizabeth Dawson
Chief, Branch of Solid Minerals
Bureau of Land Management
Colorado State Office
2850 Youngfield Street
Lakewood, Colorado 80215-7210

Mr. Leigh Simmons
Environmental Protection Specialists
Colorado Division of Mining,
Reclamation & Safety
1313 Sherman Street
Room 215
Denver, Colorado 80203

Re: Request for Approval to Implement Mobile Methane Flaring Project, Federal Coal Lease Modifications COC-1362 and COC-67232

Dear Ms. Dawson and Mr. Simmons:

On December 15, 2017, the Bureau of Land Management ("BLM") issued modifications to federal coal leases COC-1362 and COC-67232 ("Lease Modifications"), associated with the West Elk Mine. Mountain Coal Company, LLC ("Mountain Coal") is the holder of Lease COC-1362, and its affiliate Ark Land LLC is the holder of Lease COC-67232.

During the lease modification process, the BLM prepared Internal Memorandum 2017-037. IM-2017-037 proposed a new special Lease Stipulation for the Lease Modifications:

> *West Elk Mine shall provide to BLM an updated report on the economic feasibility of capturing or flaring the mine's methane for beneficial use or abatement, and should provide it to BLM no later than 1 year after the modification is approved.*

("Lease Stipulations"). The Lease Stipulations were adopted as part of the Lease Modifications.

On November 19, 2018, Mountain Coal submitted for BLM's review the required updated report ("R2P2 Update"). The R2P2 Update concluded that capturing coal mine methane ("CMM") for use or flaring for abatement continued to be economically infeasible. BLM reviewed and recommended acceptance of the R2P2 in a memorandum dated February 6, 2019. The Office of Surface Mining, Reclamation, and Enforcement ("OSMRE") accepted the BLM's recommendation in a Record of Decision ("ROD") dated March 19, 2019.

Mountain Coal Company, L.L.C.
5174 Highway 133
Somerset, CO 81434

Office: 970.929.2333

Mountain Coal Company

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General Manager

wnorris@archcoal.com

The R2P2 Update discussed the continuing efforts of Mountain Coal to stay abreast of developing CMM emissions management options and technologies, including regular participation in the North Fork Coal Mine Methane Working Group ("NFCMMWG"). *See* R2P2 Update at 3 and Appendix C. That process continued after submission of the R2P2 Update. In May 2019, Mountain Coal announced at the NFCMMWG meeting that through its continued efforts with vendors it believed it had identified a potentially viable CMM emissions mitigation project.

In September 2019, Mountain Coal executed a contract with Environmental Commodities Corporation ("ECC") to partner in implementing a flaring project involving one or more mobile flares to combust coal mine methane that would otherwise be vented to the atmosphere. ECC agreed that it would provide capital and operating assistance to construct, install, and operate the system at West Elk. ECC's costs of mitigating Lease Modification CMM emissions would be partially defrayed by carbon credits, and ECC has an interest in pioneering a flaring system at West Elk, because successfully meeting the known safety and logistical challenges at West Elk would provide a strong template and assist ECC in marketing its system to other mines and applications worldwide. After taking into account ECC's contributions, the ECC system has the potential to meet the economic standard as applied to Mountain Coal.

For that reason, Mountain Coal has submitted proposed modifications to its ventilation plan to the Mine Safety and Health Administration ("MSHA") to allow use of the ECC system. MSHA is presently evaluating that application. Safety remains paramount at West Elk, and Mountain Coal cannot and will not implement flaring unless and until MSHA is satisfied that that it can be done safely. Contingent on MSHA's approval of the modified ventilation plan, Mountain Coal is hereby also requesting BLM's review of the system under 43 C.F.R. § 3482.1. Relatedly, Mountain Coal requests that CDRMS evaluate whether the implementation of flaring would require any modification to West Elk's SMCRA permit (Mountain Coal is in separate discussions with the Colorado Air Pollution Control Division regarding air quality permitting). Mountain Coal further requests that BLM coordinate with OSMRE to determine whether implementation of flaring would constitute a mine plan modification under 30 C.F.R. § 746.18, and the United State Forest Service ("USFS") to determine what other authorizations and approvals are necessary, if any, and to conduct supplemental environmental review under the National Environmental Policy Act ("NEPA") as necessary and/or prudent. Mountain Coal intends to implement the flaring system as soon as possible after applicable approvals and authorizations are received, pending equipment availability.

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To facilitate BLM's and other agencies' review, enclosed are the following documents:

(1). A Narrative description of the flare and how it will be operated;

(2). A specification sheet for the ECC flare system (Exhibit A to Narrative);

(3). A short worksheet explaining the impacts (and non-impacts) of the flare, in relation to a variety of resource areas and subjects (Exhibit B to Narrative); and

(4). Photos of the equipment in use at another mine (Exhibit C to Narrative);

As you review these materials, please do not hesitate to contact Mountain Coal with any questions, comments, or concerns. Your point of contact should be John Poulos, Manager of Engineering and Environmental Affairs, at jpoulos@archcoal.com or (970) 929-2219.

Sincerely,

Weston Norris
Mountain Coal Company, LLC
General Manager

cc:
Mr. Chad Stewart
Forest Supervisor
Grand Mesa, Uncompahgre, and Gunnison National Forest
2250 South Main Street
Delta, CO 81416

Mr. Levi Broyles
District Ranger
Gunnison National Forest
Paonia Ranger District
P.O. Box 1030
Paonia, CO 81428

Ms. Jamie Connell
State Director
Bureau of Land Management,
Colorado State Office
2850 Youngfield Street
Lakewood, Colorado 80215-7210

Mountain Coal Company, L.L.C.
5174 Highway 133
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NARRATIVE DESCRIPTION

PROPOSED FLARE SYSTEM AT WEST ELK MINE

Mountain Coal Company, LLC ("Mountain Coal") has contracted with Environmental Commodities Corporation ("ECC") to implement a mobile coal mine methane flare system at Mountain Coal's West Elk Mine, subject to applicable federal and state requirements and approvals.

The ECC system is based on a similar system employed at the Bailey Mine in West Virginia. The central component is a John Zink Hamworthy Combustion trailer-based "ZTOF" mobile flare unit. The mechanical specifications for the ZTOF flare are attached as Exhibit A. The environmental performance parameters of the flare are attached as Exhibit B. A photo of the flare in use at the Bailey Mine is attached as Exhibit C.

The ZTOF flare does not require a gathering system and will not cause any additional surface disturbance. It is designed to connect to exhauster units already in use on Methane Ventilation Boreholes ("MVBs") or directly to the MVB wellheads.

Subject to ongoing adjustments to optimize flare peformance and maintain safe conditions at the mine, Mountain Coal and ECC anticipate that the flare system will operate as follows:

- Two flare units would typically be in operation simultaneously, depending on coal mine methane ("CMM") flows through the MVBs;

- The units would generally operate continuously;

- One unit would operate on the active MVB ventilating the longwall panel presently being mined;

- The second unit would operate on an MVB on a previously mined and sealed longwall panel in a location to optimize performance. For example, once mining commences on panel LWSS1, one flare would operate on MVBs on LWSS1, while the second would operate on an MVB on panel LWE8 or another sealed panel. This will typically be the immediately adjacent panel, but it may vary over course of mining. Once mining of LWSS1 is complete, a flare would shift to LWSS2, and the other flare would remain LWE8 or move as appropriate;

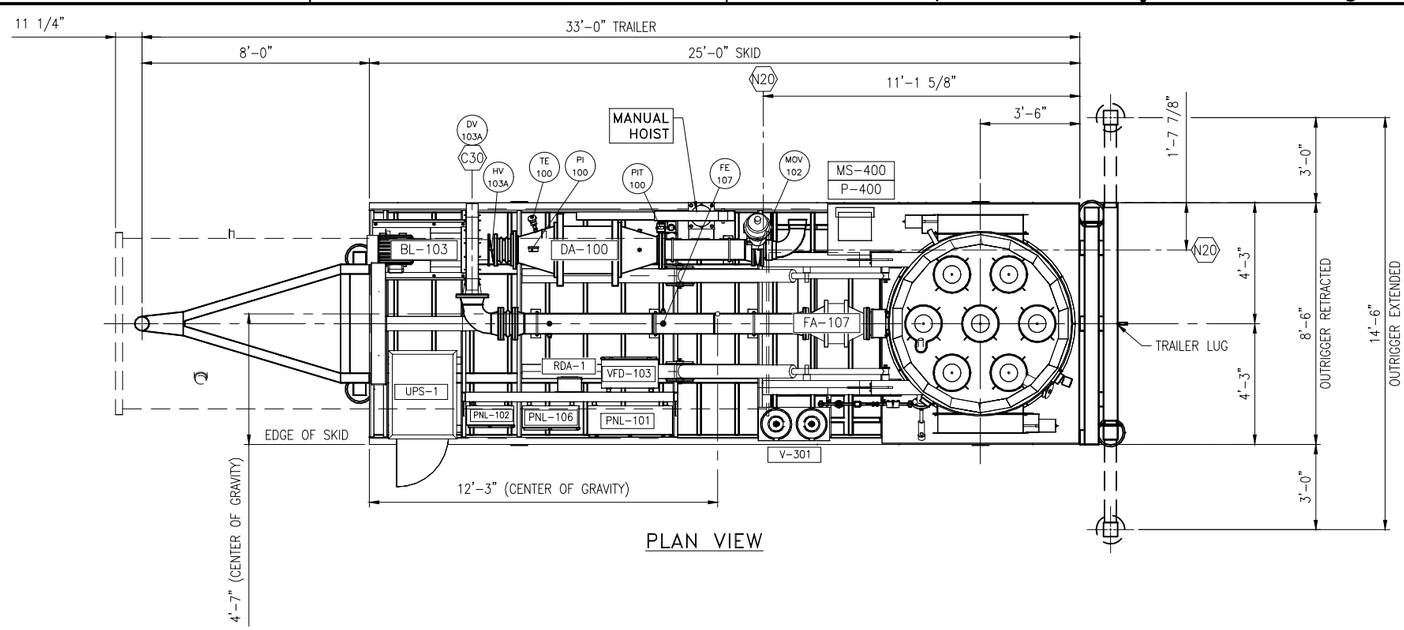
- Maintaining two flares in simultaneous operation on active and sealed longwall panels allows mine personnel to best maintain appropriate and safe atmospheric conditions in the Mine during flare operation;

- As shown in the mechanical specification sheet, the ZTOF flare has a hinged flare stack, that facilitates relocation of the flare trailer to next MVB as needed. Relocation and re-start should be achievable in a matter of hours, depending on weather and site conditions;

- The ZTOF flare as adapted for West Elk would have previously unavailable advanced telemetry that would allow mine personnel to continuously monitor and coordinate atmospheric conditions in the mine and CMM flows through both flares. Mine personnel would have the capability to remotely monitor the flares as necessary to maintain safe conditions and optimal performance. This is a significant advancement over prior flare systems;

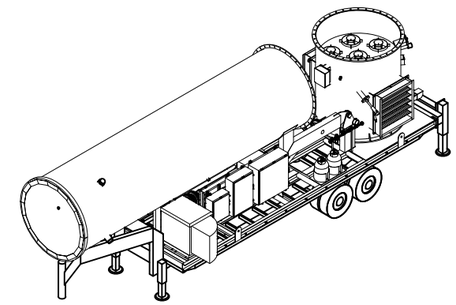
- With remote operation monitoring, trips to-and-from the MVB wellheads will be minimized, and may be less than presently needed.

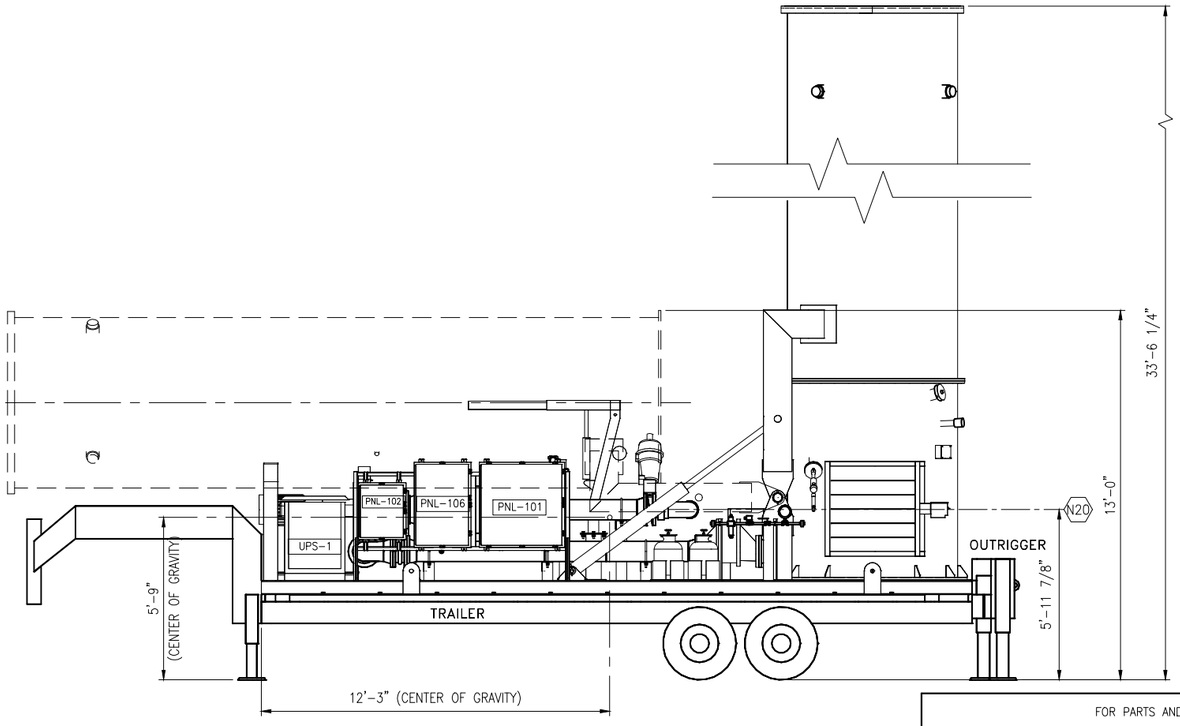
MSHA may require operational modifications or additional equipment to meet safety standards.



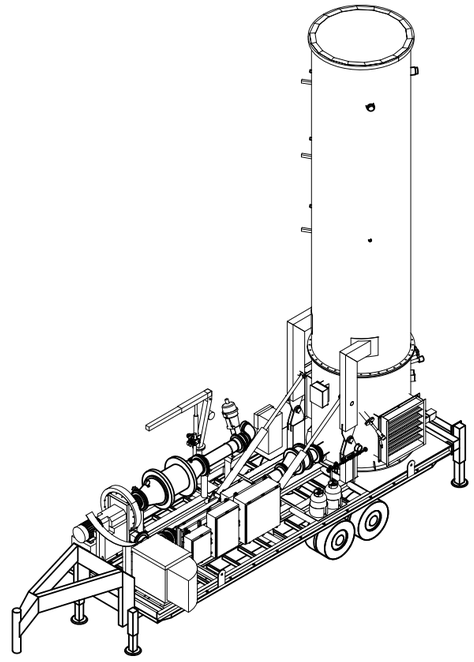
PLAN VIEW

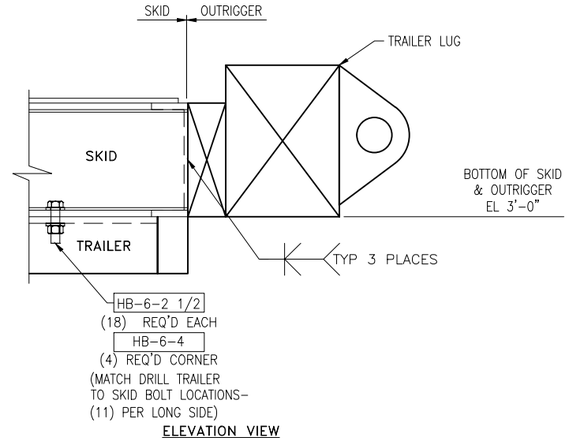
NOZZLE LEGEND		
MK	QTY	DESCRIPTION
N20	1	GAS INLET: 8" CAM LOCK
C30	1	BLOWER DRAWIN: 1/2" NPT





ELEVATION VIEW





ELEVATION VIEW

OUTRIGGER TO SKID ATTACHMENT
SKID TO TRAILER ATTACHMENT

NOTES
1. PREFIX ALL MK: NO'S WITH SALES ORDER NUMBER.
2. WEIGHT APPROX. 23,000 LBS. (DOES NOT INCLUDE TRAILER)
   30,000 LBS. (TRAILER INCLUDED)
3. JOHN ZINK RECOMMENDS THAT A SPREADER BAR BE USED TO LIFT SKID
4. ELECTRICAL AREA CLASSIFICATION – NON HAZARDOUS.
5. SKID & PIPE SUPPORTS SURFACE PREPARATION: SSPC-SP-6
   APPLY INORGANIC ZINC RICH PRIMER (2.0 TO 4.0 MILS D.F.T.)

FOR PARTS AND SERVICE: ● TEL: 1-800-755-4252 ● FAX: (918) 234-1968

NO.	REVISION DESCRIPTION	BY	CHK	APP	DATE

JOHN ZINK HAMWORTHY COMBUSTION●
JOHN ZINK COMPANY, LLC

FOR: ENVIROMENTAL COMMODITIES CORP.	ENCLOSED ZTOF FLARE COAL MINE TRAILER			
USER: ENVIROMENTAL COMMODITIES CORP.				
JOBSITE: NEW FREEPORT, PENNSYLVANIA				
	DRAWN: GFG	CHK: GFG	APP: JPR	SHEET: 1 OF 1
S.O. NO: BF-9198458	DATE: 9/25/18	DATE: 9/25/18	DATE: 10/10/18	
P.O. NO: ECCW20180731	DRAWING NUMBER: D-F-9198458-202			REV. 0
SCALE: NOT TO SCALE				

File Name: r:\active\p-vapor\9198458\drafting\drawings\202s1r0.dwg Plot Date: 10/10/2018 2:08 PM

EXHIBIT B

Environmental Subject Areas and Effects of ECC Flaring System

Primary physical characteristics of ECC Flaring System

- Two flares in operation -- one on active longwall panel, one on sealed panel.
- Each flare is a mobile, trailer-mounted unit, connecting to existing MVB wellhead or exhauster.
- 24 hour operation.
- Will not increase, may lessen, personnel trips to MVB sites.
- No new surface disturbance.
- No gathering system.
- Stack height equals 33’ 6” from ground surface.
- Folded-down stack height equals 13’ from ground surface.
- Noise levels are quieter than existing exhauster systems.
- 35’ trailer with 8’ 6” width.
- Weight equals 33,000 lbs with Trailer.

Resource Categories and Effects

1. Air Quality, Greenhouse Gases, and Climate Change

    - Flare operates at CH_4 to CO_2 conversion efficiency of 97-99%., reduces CO_{2e} of methane venting by 86%.
    - Flare also converts VOCs to CO_2 at efficiency of 98%.
    - May reduce methane quantities released through mine air ventilation system
    - 2018 MVB methane emissions totaled 1,966 tons
    - Methane emissions (absent flaring) projected to slightly decline as mining progresses south from LWSS1 through LWSS-4.

2. Topographic and Physiographic Environment

- No new surface disturbance, no effect.

3. Geology

- No effect.

4. Soils

- No new surface disturbance, no effect.

5. Watershed

- No new surface disturbance, no effect. Flare will not affect runoff.

6. Vegetation

- No new surface disturbance, no effect.
- Mine will maintain at least 25’ buffer between the flare and vegetation.

7. Threatened and Endangered Species

- No new surface disturbance, no effect.
- Equipment does not materially change the profile or intensity of existing activities.

8. Sensitive Species

- No new surface disturbance, no effect.
- Equipment does not materially change the profile or intensity of existing activities.

9. Sensitive Plants

- No new surface disturbance, no effect.

10. Management Indicator Species

- No new surface disturbance, no effect.
- Equipment does not materially change the profile or intensity of existing activities.

11. Migratory Birds

- No new surface disturbance, no effect.
- Equipment does not materially change the profile or intensity of existing activities.
- Stack height of 33’ will not interfere with migratory bird flight paths.

12. Range Resources

- No new surface disturbance, no effect.

13. Transportation System

- No change in transportation infrastructure
- No change in trips to or from mine. Trips in permit area may decline.

14. Roadless

- No new surface disturbance, no effect.

15. Heritage Resources

- No effect

16. Socioeconomics

- No effect on mine profitability, taxes, or employment.
- System will generate a small amount of economic activity from the construction/operation of the flares and receipt of carbon credits

17. Short term uses and Long term productivity

- No effect

18. Unavoidable adverse effects

- No adverse effects, net positive effects

19. Irretrievable and Irreversible Commitments of resources

- None.

20. Cumulative effects

- Flare system lowers GHG emissions from Mine overall, and as compared to other coal operations


LAMAR
Trailers Inc
Commonwealth of Pennsylvania
FIRE
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