APPENDIX AE

ADDITIONAL INFORMATION ON UBB MMU'S

U. S. Department of Labor

Mine Safety and Health Administration
100 Bluestone Road
Mount Hope, WV 25880-1000

UNDERGROUND MINE FILE
DATE FWD. 1/27/2010
INITIALS TW

This acknowledges receipt of the Methane and Dust control Portion of the Ventilation Plan required by Section 75.370 CFR or Respirable Dust Control Plan required by Section 71.300 CFR.

The Plan Dated **12/30/2009** is ☒ Approved

Mine ID No. ☐ General Dust Control Plan ☒ MMU ☐ Addendum

46-08436 ☐ DWP ☐ Designated Areas

Mine Name
Upper Big Branch Mine-South

Company Name
Performance Coal Company

Post Office Address of Mine Operator

Mr. Chris Blanchard
P. O. Box 69
Naoma, WV 25140

MSHA
MOUNT HOPE, WV
JAN 27 2010
RECEIVED
MOUNT HOPE FIELD

Remarks

☒ This Methane and Dust Control Plan received **12/30/2009** has been approved and consists of **MMU 029-0 Plan Revision**.

Note: This plan is approved for line curtain distance only. This does not give this operator permission to take extended cuts unless a roof control plan with an extended cut provision is in effect. Any MMU that has been restricted to a reduced cut and line curtain distance due to an excessive dust violation must continue in this phase of operation (reduced line curtain and cut depth) until compliance has been achieved on both operator and MSHA respirable dust surveys.

FIELD OFFICE FILE
DATE FILED 1/27/10
INITIALS

Date

1/26/2010

Signature

Robert D. Hardman

Performance Coal Company
P.O. Box 69 Naoma, WV 25140

December 30, 2009

Mr. Robert G. Hardman
Mine Safety and Health Administration
100 Bluestone Road
Mount Hope, WV 25880

Re: Performance Coal Company
Upper Big Branch Mine
MSHA ID: 46-08436
State ID: U-3042-92
MMU 029-0 – Methane and Dust Plan

Dear Sir:

Enclosed for your review and approval please find an update to the MMU 029-0 plan for the Upper Big Branch Mine.

There is currently no miner's representative at the Upper Big Branch Mine. This plan will be posted at the mine office at time of submittal. If you have any questions or comments, feel free to contact me at (304) 854-3516.

Respectfully Submitted,
Performance Coal Company, Inc.

Eric Lilly
Mine Engineer

SECTION SPECIFIC METHANE DUST CONTROL PLAN

DATE: 01-22-2009 **Mine:** Upper Big Branch Mine **MINE ID:** 46-08436

MMU No.: 029-0 **SECTION NAME:** Unit No.1 **SEAM NAME:** Eagle Seam

METHOD OF MINING: Continuous (X) Longwall ( ) Other ( )

a. Make and Model of Mining Equipment: Two (2) Joy 12-12 Miners
Serial Numbers : Primary : JM4918B Secondary : JM5811

b. Mining Height – approximately 78 - 96 inches

c. Type Water Spray System: Pressure Spray Nozzle (Hollow Cone #3 and #5)

d. Number of Sprays: 50 A minimum of 47 sprays will be operative at any time.
Minimum Operating PSI: 75 psi

e. Location, angle and type of sprays: (See attached sketch)

f. Remote Control (X) Yes ( ) No If Yes, Type: Radio

SCRUBBER SYSTEM

a. CFM of Scrubber: 6,000

b. HP of Scrubber: 30 hp

c. Scrubber Screen Type: 30 Mesh (30 layer)
The screen spray will be examined each shift, to insure it is operative and wetting the entire surface of the screen.

d. Sketch of Ductwork with size: (See attached sketch)

e. Scrubber maintenance Program: Frequency Screen cleaned Twice per shift when mining coal strata. Every 40ft of material mined when strata contains rock top, bottom or binder.

f. Frequency Ductwork Cleaned/Inspected: Ductwork will be cleaned out and washed each shift.

g. Scrubber operation is not required for pillar recovery mining when air is coursed away from the operator directly into the gob.

h. If scrubber becomes inoperative, the following minimum backup system will be used:
Curtain Distance: 20 ft. Face Ventilation: Exhausting (X) Blowing ( )
Minimum CFM*: 7,000 MEAV*: 60
*Note: Whichever is Greater

i. The sump and demister will be cleaned out and washed weekly, and recorded with pitot tube in pre-shift exam book.

ROOF BOLTER:

a. Make and Model: Fletcher RR2 Single Head ( ) Dual (X)

b. Dust Control Method: Water through steel ( ) Permissible Dust Collector (X)

c. Is Roof Bolter operated in return of other equipment? (X) Yes ( ) No
If Yes, Explain: The bolter will operate in the return a maximum of once per shift when not using a scrubber or three times per shift when the scrubber is in use.

d. Method of emptying dust collector: Dust collector will be emptied in the face where it can be scooped up during clean-up cycle or cleaned up with the miner.

e. CFM where roofbolter operating*: 3,500
Line Curtain Configuration Exhausting If applicable, MEAV*: 45 LFM
*Note: Whichever is Greater

FACE VENTILATION

a. Line curtain in each working place: Distance from Face 40 feet

b. Line curtain configuration:
Under Split Ventilation: All Faces – Exhausting
Under Sweep Ventilation: All Faces – Exhausting

c. Minimum CFM*: 7,000 cfm measured with scrubber off.
MEAV* (if applicable): 60 LFM
*Note: Whichever is Greater

d. When second mining with this miner, the required minimum quantity of air coursed over the miner into the gob will be equivalent to part (C) of the Face Ventilation Section.

e. A minimum of 3,000 CFM will be maintained in all idle faces.

f. The minimum amount of air in the last open break will be 15,000CFM

Safety Precautions

1. The inby end of the line curtain will not be advanced beyond the scrubber discharge when an exhausting line curtain is used.

2. The continuous miner will be operated by remote control only. In the event radio communications fail, the continuous miner will be utilized by remote control using an umbilical cord.

3. The continuous miner will be equipped with a strobe light that will flash when the methane concentrations reach 1.0% or a 2-inch digital readout methane monitor, which is easily and fully visible during deep cuts.

4. Where the face exceeds 5 feet from the last row of permanent roof support, tests for methane will be done using extendable probes or magnets attached to the miner while mining. The methane detectors to be used are CSE 102, CSE 102LD, or equivalent.

5. The line curtain shall be advanced to the next to last row of bolts during the bolting operations, until it is within 10 feet of the face.

6. If the methane warning light comes on during mining, the line curtain will be maintained to within 10 feet of the face until mining is completed in that working face.

7. When using an exhausting line curtain, the curtain will be placed on the same side as the scrubber discharge.

8. When open end pillaring without the use of the scrubber system, the airflow will be maintained across the top of the miner and into the gob when cutting.

9. At least 90 percent of the cutting bits will be maintained with carbon inserts intact and missing or damaged bit lugs and bit lug inserts will be replaced within 24 hours.

10. Miner operator will not advance inby the end of the exhaust line curtain while mining.

11. Line Curtain will be maintained to within 40 feet of the deepest point of penetration where the continuous miner is operated. Line Curtain distance measurement will be taken from the inby corner of the outby block.

12. When the average of five or more dust samples obtained by the operator or by MSHA in the same bimonthly sampling period exceeds the applicable standard and results in an excessive dust violation or respirable dust samples collected by MSHA or Operator contain in excess of 100 ug/m^3 silica (100 micrograms per cubic meter), the following remedial measures shall take effect immediately:

- The operator shall revert back to a twenty-foot curtain setback (ventilation plan) and twenty-foot cut (roof control plan).
- The operator shall achieve compliance on both operator samples (mining with 20 foot plans) and MSHA survey samples (surveyed with curtain set back and

deep cut) before normal extended cut operations can resume. The operator shall only utilize the line curtain setback and extended cut during the MSHA survey until compliance has been established.

- These requirements do not apply to pillar recovery mining.

13. Scrubber volumes will be measured weekly using the full traverse method and the scrubber volume will be recorded in the Pre-shift examination book. This book will be kept at the mine site and readily available for review.

14. The roof bolting machine vacuum pressure will be maintained to at least the minimum vacuum pressure listed on the machine permissibility tag in inches of mercury (inHg). The vacuum pressure will be measured at the drill chuck and will be checked at least once every operating shift as part of the dust control parameter examination required by 30 CFR 75.362 (a) (2).

15. The final cut-thru of crosscuts into entries or entries into crosscuts, will be accomplished from the intake side towards the return side, so that the air courses over and away from the miner operator. When adverse conditions or special mining projections occur requiring mining entries and/or crosscuts into intake air, a sufficient ventilation control to prevent an air exchange will be installed immediately prior to hole thru into the intake entry and/or crosscut to prevent a flow of air across where the continuous miner operator is positioned.

16. When using line curtain as a face ventilation control, the curtain will be installed with each new curtain overlapped a distance of at least one row of bolts in the direction of airflow.

17. At least one provision of the approved MMU plan will be discussed with each production crew prior to production of coal on this MMU. The discussion topic will be recorded in the on-shift record.

18. A modified cut will be utilized to cut rock to a free face when mining height permits.

19. A spare screen will be maintained so that the screen may be cleaned and fully dried each shift.

20. When mining extended cuts, pillars will be sized to avoid a cut sequence which would leave a final lift of less than 5 ft.

21. Only one miner per MMU will be operated at any given time.

PERFORMANCE COAL CO.

UPPER BIG BRANCH MINE

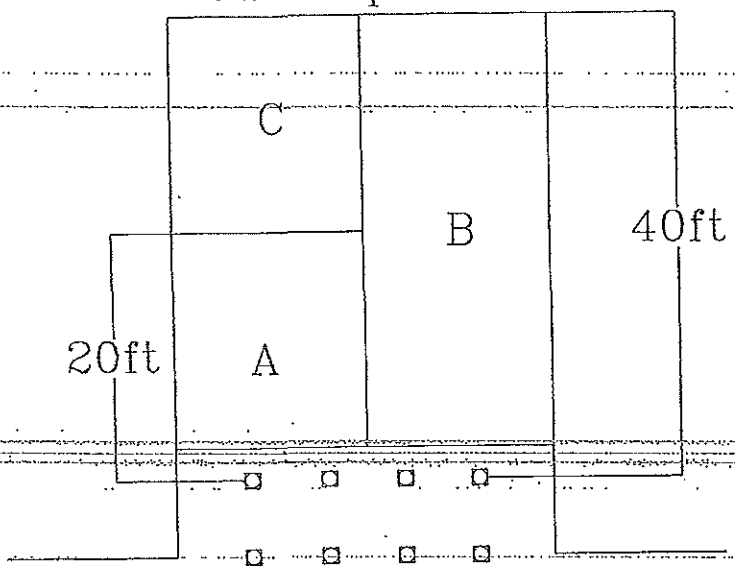
MSHA ID: 46-08436

STATE ID: U-3042-92

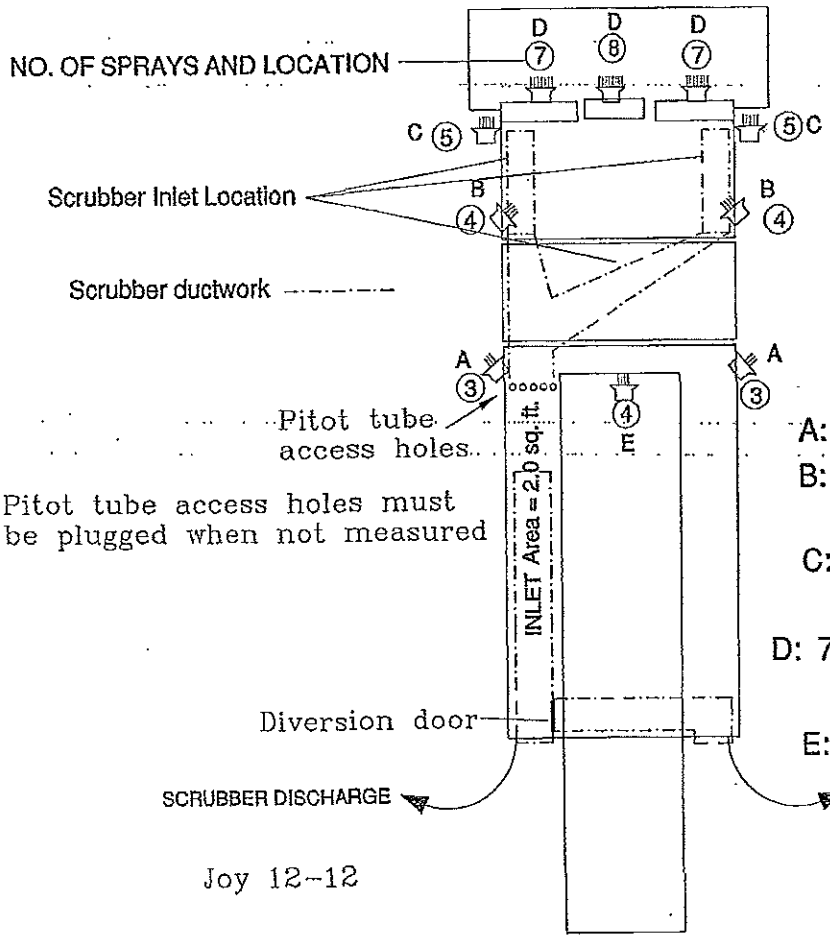
MMU 029-0

Joy 12-12 Miner

Cut Sequence



Cut sequence may be altered as indicated in the approved roof control plan. First cut will always start on the line curtain side.



Pitot tube access holes must be plugged when not measured

Sprays are no. 3s and no. 5s
No. 5s produce 1.2 gpm @ 75 psi
No. 3s produce 0.7 gpm @ 75 psi
50 TOTAL SPRAYS
Total GPM = 57.0

A: 3, #3 sprays spraying toward rib

B: 4, #5 sprays located in conveyor pan spraying toward gathering pots

C: 5, #5 sprays spraying in a fan like arrangement at end of cutter drums

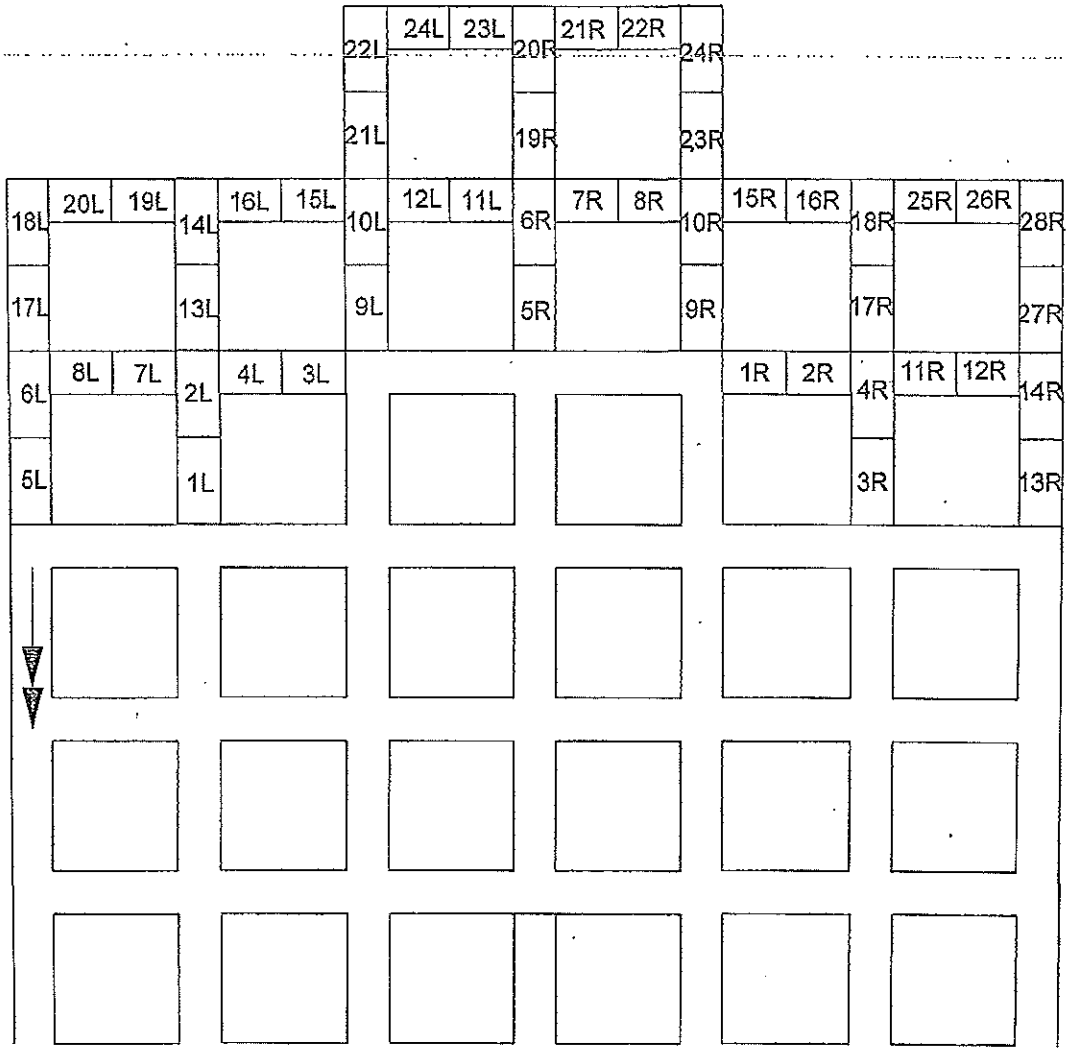
D: 7 or 8, #5 sprays spraying forward over top of cutter drums

E: 4, #5 sprays spraying down into conveyor

Joy 12-12

Massey Energy
Typical Cut Sequence

Using Sweep Ventilation



(Mirror image may apply.)

MSHA
MOUNT HOPE, WV

Return air

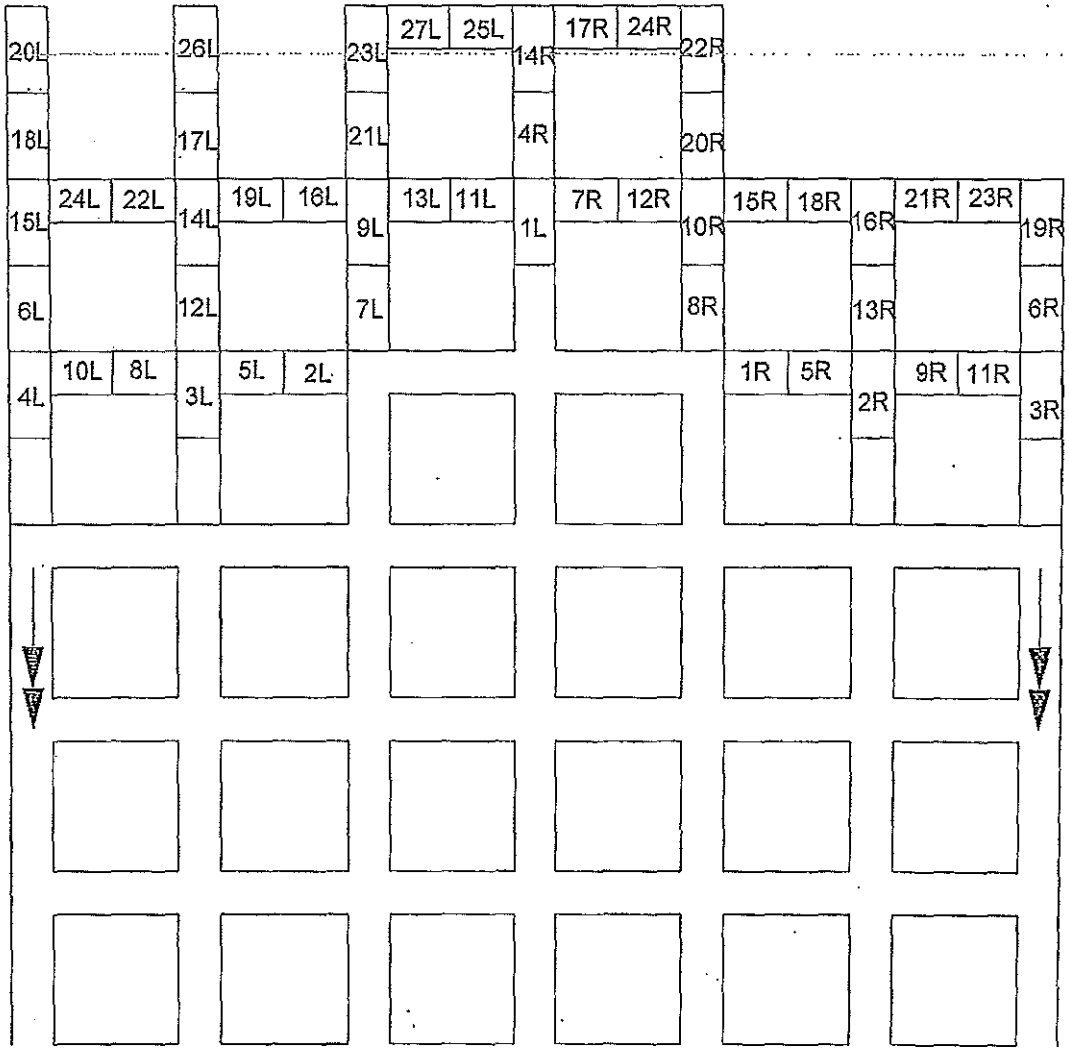
DEC 30 2009

RECEIVED
DISTRICT HEALTH

Cut Sequences may vary due to conditions.

Massey Energy
Typical Cut Sequence

Using Split Ventilation



Return air

Cut Sequences may vary due to conditions.

Performance Coal Company
P.O. Box 69 Naoma, WV 25140

October 22, 2009

Mr. Robert G. Hardman
Mine Safety and Health Administration
100 Bluestone Road
Mount Hope, WV 25880

Re: Performance Coal Company
Upper Big Branch Mine
MSHA ID: 46-08436
State ID: U-3042-92
MMU 040-0 – Methane and Dust Control Plan Revision

Dear Sir:

Please find the enclosed MMU 040-0 Methane and Dust Control Plan revision for the Upper Big Branch Mine for your review and approval.

There is currently no miner's representative at the Upper Big Branch Mine. This plan has been posted at the mine office at time of submittal. If you have any questions or comments, feel free to contact me at (304) 854-3516.

Respectfully Submitted,
Performance Coal Company, Inc.

Matthew Walker
Mine Engineer

SECTION SPECIFIC METHANE DUST CONTROL PLAN

DATE: 01-22-2009 **Mine:** Upper Big Branch Mine **MINE ID:** 46-08436

MMU No.: 040-0 **SECTION NAME:** Unit No.2 **SEAM NAME:** Eagle Seam

METHOD OF MINING: Continuous (X) Longwall ( ) Other ( )

a. Make and Model of Mining Equipment: (2) Joy 14-15 Miners
Serial No. Primary: JM6053 Secondary: JM5186

b. Mining Height – approximate 72 inches

c. Type Water Spray System: Pressure Spray Nozzle (Hollow Cone #5)

d. Number of Sprays: 33/33 Minimum Operating PSI: 75/75 psi

e. Location, angle and type of sprays: (See attached sketch)

f. Remote Control (X) Yes ( ) No If Yes, Type: Radio

SCRUBBER SYSTEM

a. CFM of Scrubber: 6,000

b. HP of Scrubber: 33 hp

c. Scrubber Screen Type: 30 Mesh (30 layer).
The screen spray will be examined each shift, to insure it is operative and wetting the entire surface of the screen.

d. Sketch of Ductwork with size: (See attached sketch)

e. Scrubber maintenance Program: Frequency Screen cleaned Twice per shift when mining coal strata, Every 40ft of material mined when strata contains rock top, bottom or binder.

f. Frequency Ductwork Cleaned/Inspected: Once per day/Once per shift and cleaned if obstructions are observed.

g. Scrubber operation is not required for pillar recovery mining when air is coursed away from the operator directly into the gob.

h. If scrubber becomes inoperative, the following minimum backup system will be used:
Curtain Distance: 20 ft. Face Ventilation: Exhausting (X) Blowing ( )
Minimum CFM*: 7,000 MEAV*: 60
*Note: Whichever is Greater

i. The sump and demister will be cleaned out and washed weekly, and recorded with pitot tube in pre-shift exam book.

ROOF BOLTER:

a. Make and Model: Fletcher RR2 Single Head ( ) Dual (X)

b. Dust Control Method: Water through steel ( ) Permissible Dust Collector (X)

c. Is Roof Bolter operated in return of other equipment? (X) Yes ( ) No
If Yes, Explain: The Roof Bolter will operate in the return of the miner a maximum of 3 times per shift when the scrubber is in use and once per shift when the scrubber is not in use.

d. Method of emptying dust collector: Dust collector will be emptied in the face where it can be scooped up during clean-up cycle

e. CFM where roofbolter operating*: 3,500
Line Curtain Configuration Exhausting If applicable, MEAV*: 45 LFM
*Note: Whichever is Greater

FACE VENTILATION

a. Line curtain in each working place: Distance from Face 40 feet

b. Line curtain configuration:
Under Split Ventilation: All Faces – Exhausting
Under Sweep Ventilation: All Faces – Exhausting

c. Minimum CFM*: 7,000 with scrubber off.
MEAV*: (if applicable) 60 LFM
*Note: Whichever is Greater

d. When second mining with this miner, the required minimum quantity of air coursed over the miner into the gob will be equivalent to part (C) of the Face Ventilation Section.

e. A minimum of 3,000 CFM will be maintained in all idle faces.

f. The minimum amount of air in the last open break will be 15,000CFM

Safety Precautions

1. The inby end of the line curtain will not be advanced beyond the scrubber discharge when an exhausting line curtain is used.

2. The continuous miner will be operated by remote control only. In the event radio communications fail, the continuous miner will be utilized by remote control using an umbilical cord.

3. The continuous miner will be equipped with a strobe light that will flash when the methane concentrations reach 1.0% or a 2-inch digital readout methane monitor, which is easily and fully visible during deep cuts.

4. Where the face exceeds 5 feet from the last row of permanent roof support, tests for methane will be done using extendable probes or a magnet cradling a methane detector while mining. The methane detectors to be used are CSE 102, CSE 102LD, or equivalent.

5. The line curtain shall be advanced to the next to last row of bolts during the bolting operations, until it is within 10 feet of the face.

6. If the methane warning light comes on during mining, the line curtain will be maintained to within 10 feet of the face until mining is completed in that working face.

7. When using an exhausting line curtain, the curtain will be placed on the same side as the scrubber discharge.

8. When open end pillaring without the use of the scrubber system the airflow will be maintained across the top of the miner and into the gob when cutting.

9. At least 90 percent of the cutting bits will be maintained with carbon inserts intact and missing or damaged bit lugs and big lug inserts will be replaced within 24 hours.

10. Miner operator will not advance inby the end of the exhaust line curtain while mining.

11. Line Curtain will be maintained to within 40 feet of the deepest point of penetration where the continuous miner is operated. Line Curtain distance measurement will be taken from the inby corner of the outby block.

12. When the average of five or more dust samples obtained by the operator or by MSHA in the same bimonthly sampling period exceeds the applicable standard and results in an excessive dust violation or respirable dust samples collected by MSHA or Operator contain in excess of 100 ug/m^3 silica (100 micrograms per cubic meter), the following remedial measures shall take effect immediately:

- The operator shall revert back to a twenty-foot curtain setback (ventilation plan) and twenty-foot cut (roof control plan).

- The operator shall achieve compliance on both operator samples (mining with 20 foot plans) and MSHA survey samples (surveyed with curtain set back and deep cut) before normal extended cut operations can resume. The operator shall only utilize the line curtain setback and extended cut during the MSHA survey until compliance has been established.
- These requirements do not apply to pillar recovery mining.

13. Scrubber volumes will be measured weekly using the full traverse method and the scrubber volume will be recorded in the Pre-shift examination book. This book will be kept at the mine site and readily available for review.

14. The roof bolting machine vacuum pressure will be maintained to at least the minimum vacuum pressure listed on the machine permissibility tag in inches of mercury (inHg). The vacuum pressure will be measured at the drill chuck and will be checked at least once every operating shift as part of the dust control parameter examination required by 30 CFR 75.362 (a) (2).

15. The final cut-thru of crosscuts into entries or entries into crosscuts, will be accomplished from the intake side towards the return side, so that the air courses over and away from the miner operator. When adverse conditions or special mining projections occur requiring mining entries and/or crosscuts into intake air, a sufficient ventilation control to prevent an air exchange will be installed immediately prior to hole thru into the intake entry and/or crosscut to prevent a flow of air across where the continuous miner operator is positioned.

16. When using line curtain as a face ventilation control, the curtain will be installed with each new curtain overlapped a distance of at least one row of bolts in the direction of airflow.

17. At least one provision of the approved MMU plan will be discussed with each production crew prior to production of coal on this MMU. The discussion topic will be recorded in the on-shift record.

18. A modified cut will be utilized to cut rock to a free face when mining height permits.

19. When mining extended cuts, pillars will be sized to avoid a cut sequence which would leave a final lift of less than 5 ft.

PERFORMANCE COAL COMPANY, INC.

UPPER BIG BRANCH MINE

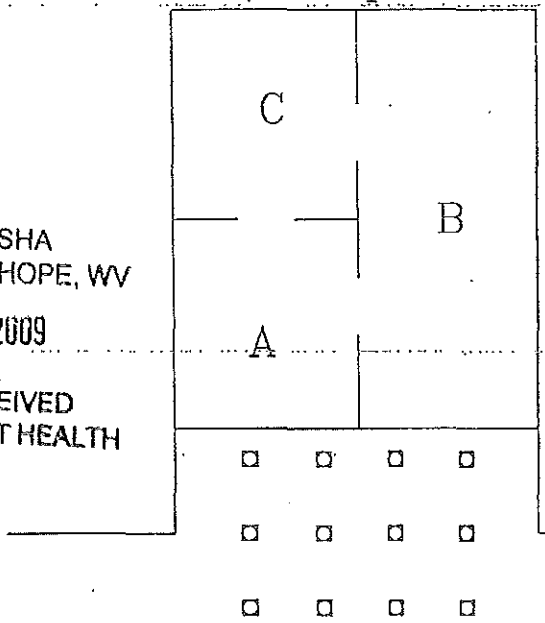
MSHA ID: 46-08436

STATE ID: U-3042-92

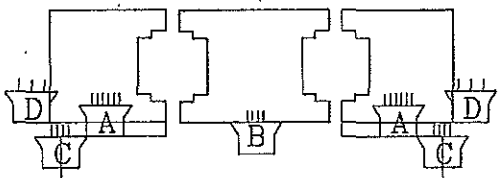
MMU 040-0

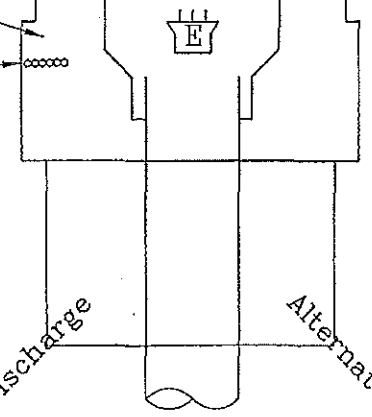
PRIMARY JM6053

Cut Sequence



Cut sequence may be altered. First cut will always start on the line curtain side.

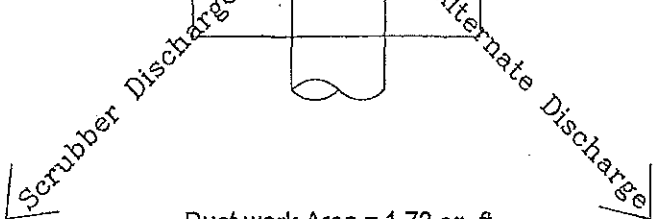




Scrubber Inlet

Pitot Tube Access Holes

Pitot tube access holes must be plugged when not measured.



Duct work Area = 1.72 sq. ft

LEGEND

- Water Spray and Location
- N — Number of sprays in block
- A — 6 – #5 Sprays, top front edge of Cutter Boom, Sprays forward
- B — 4 – #5 Sprays, top front edge of Cutter Boom, Sprays forward
- C — 4 – #5 Sprays, Conveyor Pan spraying toward gathering pots
- D — 3 – #5 Sprays, Cutter Motor
- E — 3 – #6 Sprays, spraying down into conveyor

Number of Sprays:	33
Type of Sprays	#5
PSI of Sprays	75
GPM of Sprays	1.3
Total GPM	42.9

Note:

A minimum of 30 sprays will be operative at anygiven time.

No more than one spray per block will be inoperative at any time.

PERFORMANCE COAL COMPANY, INC.

UPPER BIG BRANCH MINE

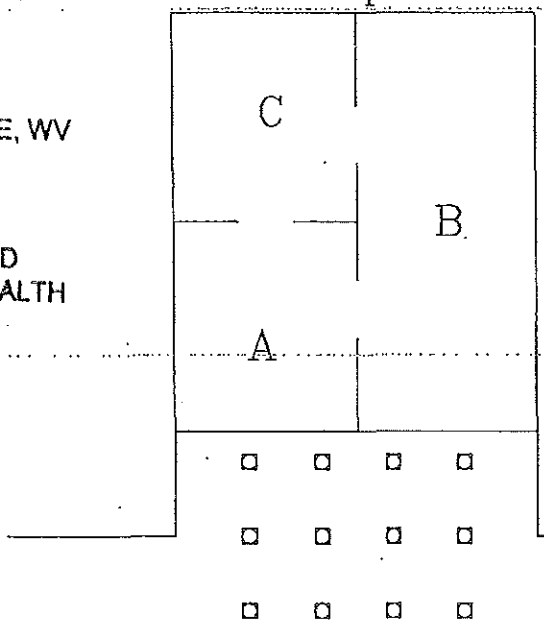
MSHA ID: 46-08436

STATE ID: U-3042-92

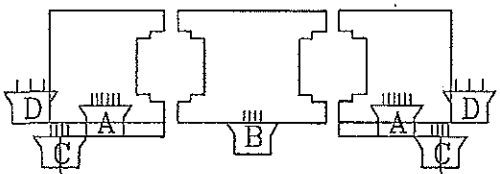
MMU 040-0

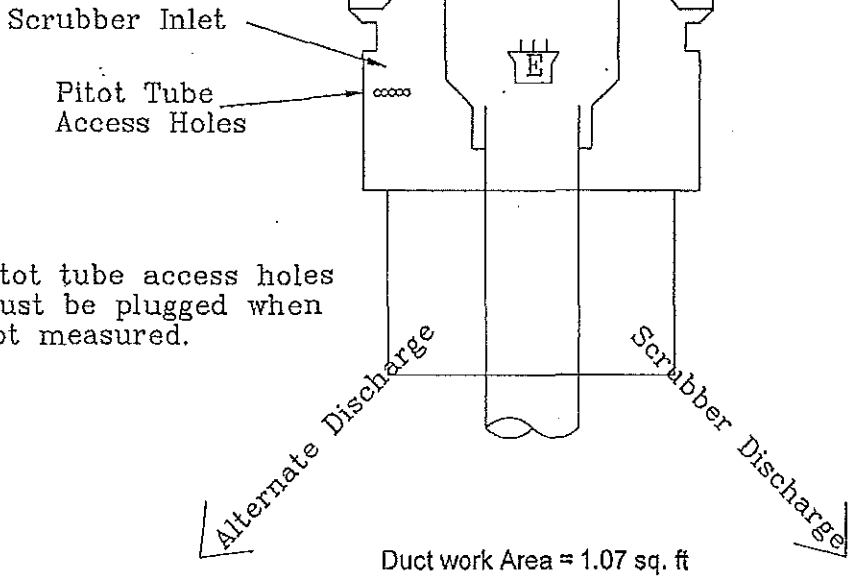
SECONDARY JM5186

Cut Sequence



Cut sequence may be altered. First cut will always start on the line curtain side.





Duct work Area = 1.07 sq. ft

Pitot tube access holes must be plugged when not measured.

LEGEND

- Water Spray and Location
- N — Number of sprays in block
- A — 6 – #5 Sprays, top front edge of Cutter Boom, Sprays forward
- B — 4 – #5 Sprays, top front edge of Cutter Boom, Sprays forward
- C — 4 – #6 Sprays, Conveyor Pan spraying toward gathering pots
- D — 3 – #5 Sprays, Cutter Motor
- E — 3 – #5 Sprays, spraying down into conveyor

Number of Sprays:	33
Type of Sprays	#5
PSI of Sprays	75
GPM of Sprays	1.3
Total GPM	42.9

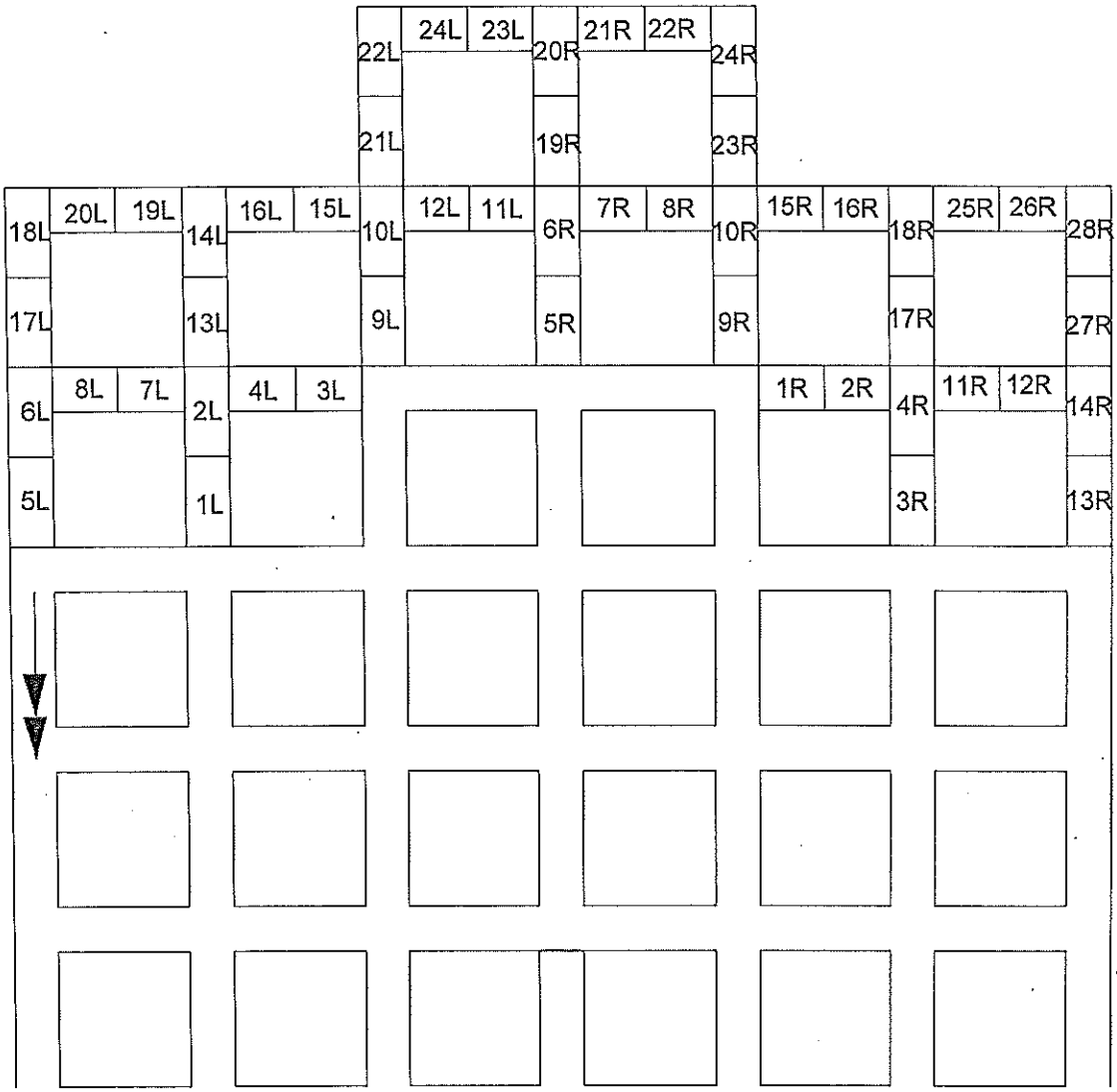
Note:

A minimum of 30 sprays will be operative at anygiven time.

No more than one spray per block will be inoperative at any time.

Massey Energy
Typical Cut Sequence

Using Sweep Ventilation



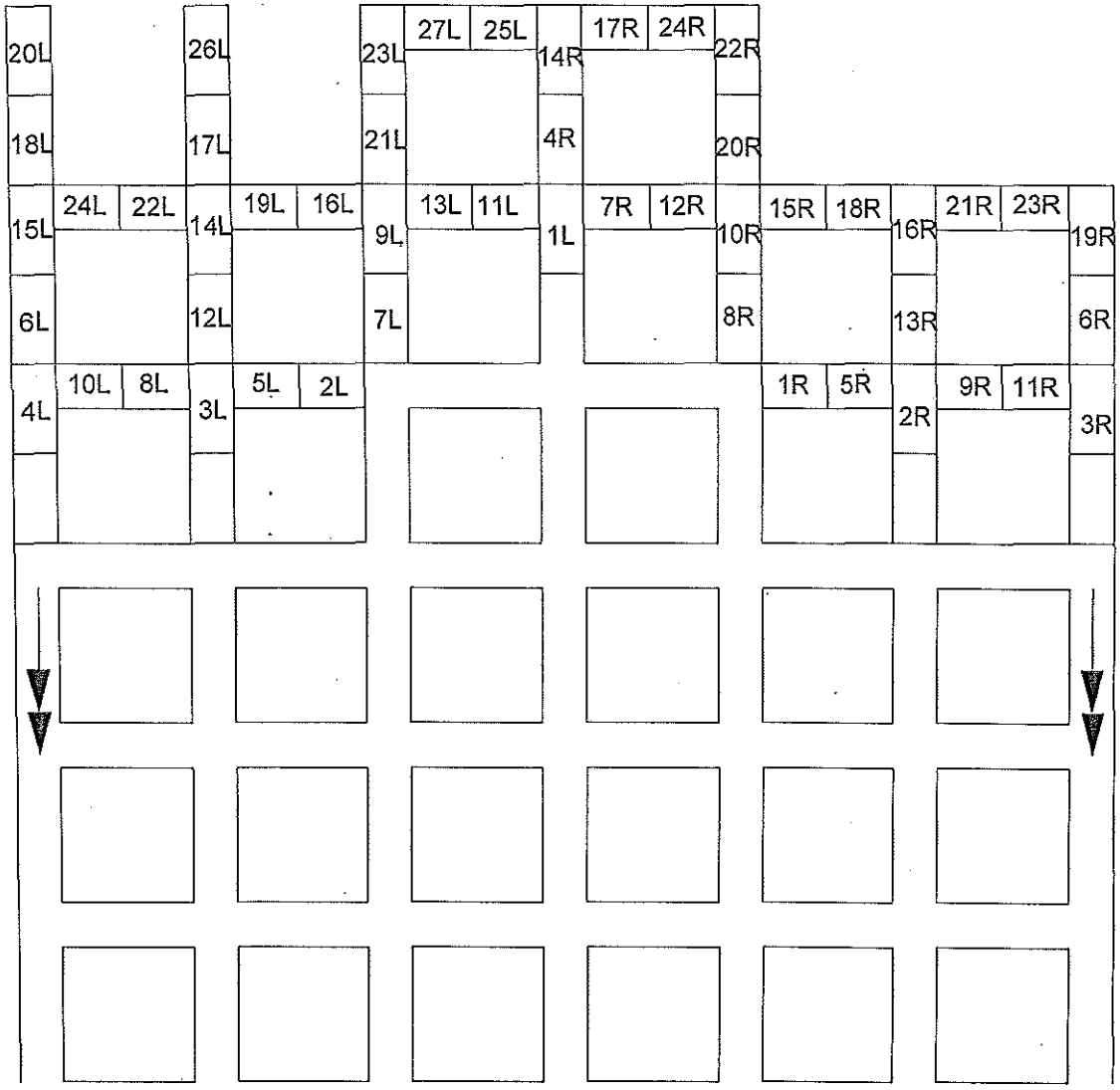
(Mirror image may apply.)

Return air

Cut Sequences may vary due to conditions.

Massey Energy
Typical Cut Sequence

Using Split Ventilation



Return air

Cut Sequences may vary due to conditions.

U. S. Department of Labor

Mine Safety and Health Administration
100 Bluestone Road
Mount Hope, WV 25880-1000

UNDERGROUND MINE FILE
DATE FWD. 11-13-08
INITIALS lm

This acknowledges receipt of the Methane and Dust control Portion of the Ventilation Plan required by Section 75.370 CFR or Respirable Dust Control Plan required by Section 71.300 CFR.

The Plan Dated **10/22/2008** is ☒ Approved

Mine ID No. ☐ General Dust Control Plan ☒ MMU ☐ Supplements

46-08436 ☐ DWP ☐ Designated Areas

Mine Name
Upper Big Branch Mine-South

Company Name
Performance Coal Company

Post Office Address of Mine Operator

Mr. Chris Blanchard
P. O. Box 69
Naoma, WV 25140

Remarks

☒ This Methane and Dust Control Plan received **10/22/2008** has been approved and consists of **062-0 MMU Plan**.

MSHA
MOUNT HOPE WV
NOV 17 2008
RECEIVED
MOUNT HOPE FIELD

11/21/08

Date

11/13/2008

Signature

Robert D. Friedman

PLAN APPROVAL SIGNATURE SHEET

Date Plan Received: 10/22/2008	PN:
Type: Methane/Dust Control ☒ Hearing Conservation ☐ Part 90 ☐	
Company Name: **Performance Coal Company**	Miners Rep: **No**
Mine Name: **Upper Big Branch Mine-South**	Copy Provided: **Yes**
Mine ID: **46-08436**	Plan Posted: **Yes**
Entity: **062-0 MMU Base Plan**	Office: **Mt. Hope (0401)** Work Group: **01**

Reviews:

Technical Program Specialist: Reba Ann Crawford Date: 11-10-08

☑ Recommend Approval/ ☐ Recommend Disapproval

Comments: Plan reflects new SOP's
2 Joy 14-15 CM 24 sprays @ 75 psi;
Face vent: all faces exhausting
6,000 cfm for 60 MEAV 20' max. curtain

District Health Specialist: Reba Ann Crawford Date: 11-12-08

☑ Recommend Approval/ ☐ Recommend Disapproval

Comments: Reviewed with Roger Richmond, 02 Supervisor

ADM, Technical Programs: Larry E. Cook Date: 11/12/08

☑ Recommend Approval/ ☐ Recommend Disapproval

Comments:

Inspection Division ADM: L Selfe Date: 11/12/08

☑ Recommend Approval/ ☐ Recommend Disapproval

Comments:

Performance Coal Company
P.O. Box 69 Naoma, WV 25140

October 22, 2008

Mr. Robert G. Hardman
Mine Safety and Health Administration
100 Bluestone Road
Mount Hope, WV 25880

Re: Performance Coal Company
Upper Big Branch Mine
MSHA ID: 46-08436
State ID: U-3042-92
MMU 062-0/063-0 Submittal

Dear Sir:

Please find the enclosed MMU plans for the Upper Big Branch Mine for your review and approval. These plans are needed to allow a fourth unit to begin mining.

This mine currently has no miner's representative. This plan will be posted on the board at the mine at time of submittal. If you have any questions or comments, feel free to contact me at (304) 854-3516.

Respectfully Submitted,
Performance Coal Company, Inc.

Eric Lilly

Eric Lilly
Mine Engineer

SECTION SPECIFIC METHANE DUST CONTROL PLAN

DATE: 11-06-2008 **Mine:** Upper Big Branch Mine **MINE ID:** 46-08436

MMU No.: 062-0 **SECTION NAME:** Unit No.4 **SEAM NAME:** Eagle Seam

METHOD OF MINING: Continuous (X) Longwall ( ) Other ( )

a. Make and Model of Mining Equipment: (2 identical) Joy 14-15 Miner
b. Mining Height – approximate 72 inches
c. Type Water Spray System: Pressure Spray Nozzle (BD#5)
d. Number of Sprays: 24/24 Minimum of 20 sprays must be operating at any time
Minimum Operating PSI: 75psi/75psi
e. Location, angle and type of sprays: (See attached sketch)
f. Remote Control (X) Yes ( ) No If Yes, Type: Radio

SCRUBBER SYSTEM – Not applicable until curtain setback obtained.

ROOF BOLTER:

a. Make and Model: Fletcher RR2 Single Head ( ) Dual (X)
b. Dust Control Method: Water through steel ( ) Permissible Dust Collector (X)
c. Is Roof Bolter operated in return of other equipment? (X) Yes ( ) No
If Yes, Explain: Once per Shift.
d. Method of emptying dust collector: Dust collector will be emptied in the face where it can be scooped up during clean-up cycle
e. CFM where roofbolter operating 4500 CFM
Line Curtain Configuration Exhausting If applicable, MEAV 45 LFM

FACE VENTILATION

a. Line curtain in each working place: Distance from Face 20 feet
b. Line curtain configuration:
Under Split Ventilation: All Faces – Exhausting
Under Sweep Ventilation: All Faces – Exhausting

c. Minimum CFM 6000 CFM.
MEAV (if applicable) 60 LFM
d. A minimum of 3,000CFM will be maintained in all idle faces.

Safety Precautions

1. The continuous miner will be operated by remote control only. In the event radio communications fail, the continuous miner will be utilized by remote control using umbilical cord.

2. The continuous miner will be equipped with a strobe light that will flash when the methane concentrations reach 1.0% or a 2-inch digital readout methane monitor, which is easily and fully visible during deep cuts.

3. Where the face exceeds 5 feet from the last row of permanent roof support, tests for methane will be done using extendable probes or a magnet on remote control miner while mining.

4. The line curtain shall be advanced to the next to last row of bolts during the bolting operations, until it is within 10 feet of the face.

5. If the methane warning light comes on during mining, the line curtain will be maintained to within 10 feet of the face until mining is completed in that working face.

6. At least 90 percent of the cutting bits will be maintained with carbon inserts intact and missing or damaged bit lugs and big lug inserts will be replaced within 24 hours.

7. Line Curtain will be maintained to within 20 feet of the deepest point of penetration where the continuous miner is operated. Line Curtain distance measurement will be taken from the inby corner of the outby block.

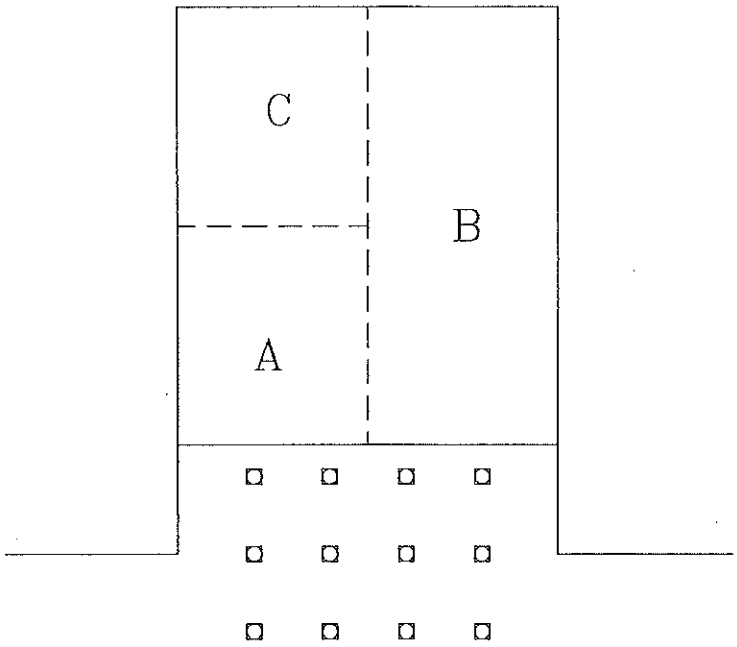
8. The miner operator will not advance inby the end of the line curtain while mining.

9. The final cuthrough of crosscuts in the entries or entries in the crosscuts, will be accomplished from the intake side towards the return side, so that the air courses over and away from the miner operator.

10. Only one miner per MMU will be operated at any time.

MARFORK COAL COMPANY, INC.
UPPER BIG BRANCH MINE

Cut Sequence



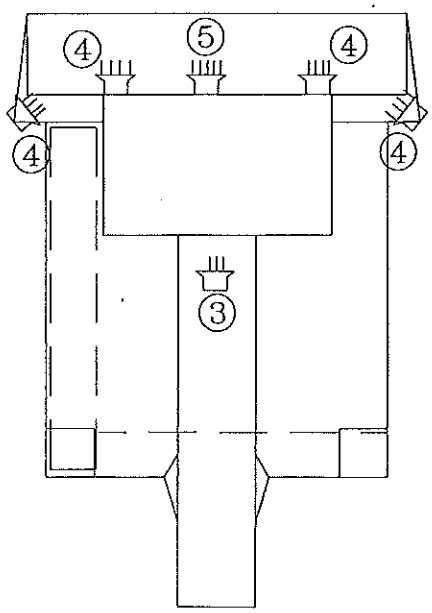
Cut sequence may be altered as indicated in the approved roof control plan. First cut will always start on the line curtain side.

⑤ – Sprays Located at Top of Ripper Compartment (center).

④ – Sprays Located at Top of Ripper Compartment (offset right and left).

④ – Sprays Located at top of pan (spraying into pan).

③ – Sprays Located above Chain Conveyor at Throat (spraying down).



Number of Sprays:	24
Type of Sprays	#5
PSI of Sprays	75
GPM of Sprays	1.3
Total GPM	31.2

NOTES

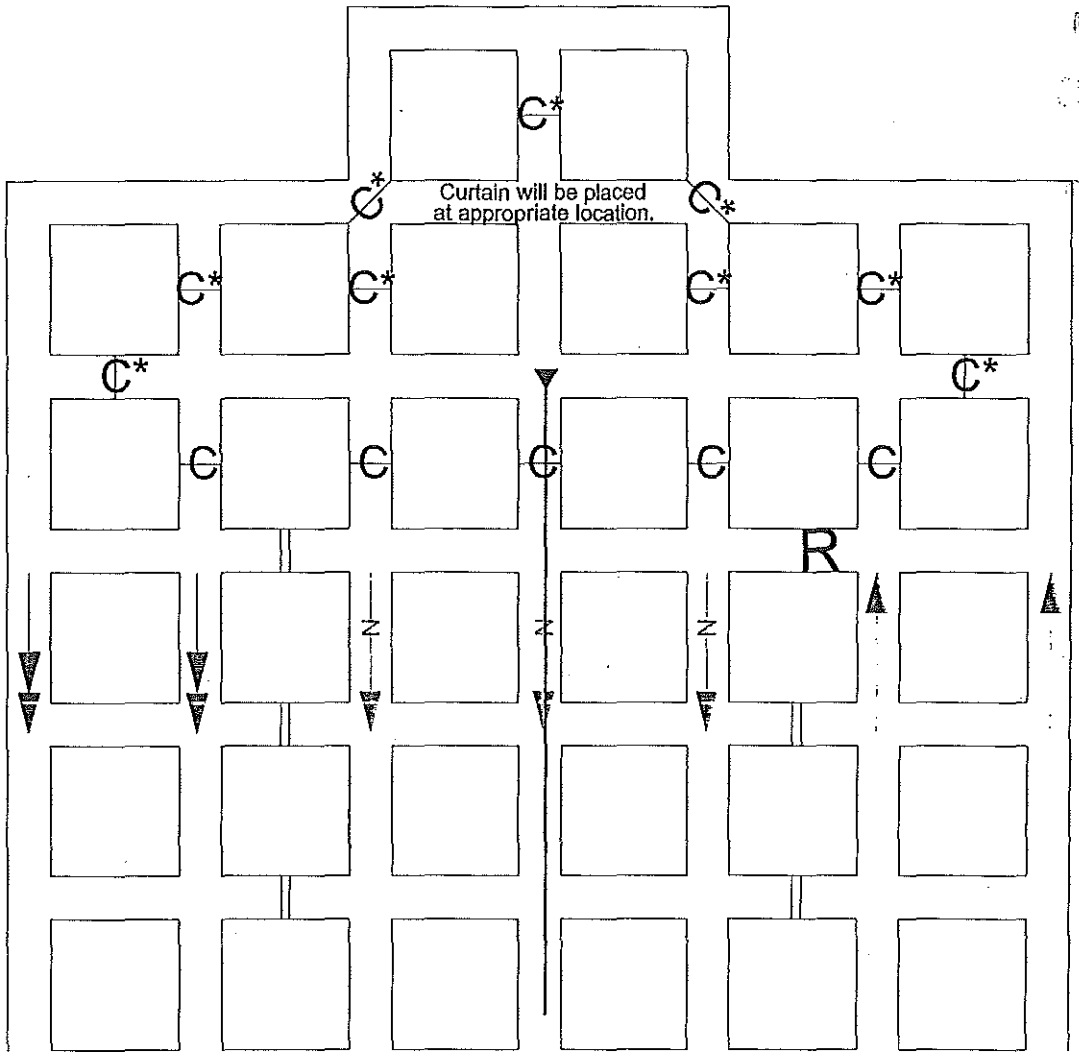
1. No more than one spray per block will be inoperative at any time.
2. A minimum of 20 Sprays must be operating at any time.

MMU 062-0
MSHA ID: 46-08436
STATE ID: U-3042-92

Joy 14-15

Performance Coal Company, Inc.

Typical Section Advance Sweep Ventilation Upper Big Branch Mine



Intake air

Belt air

Return air

Belt Tail piece

Check Curtain

Regulator

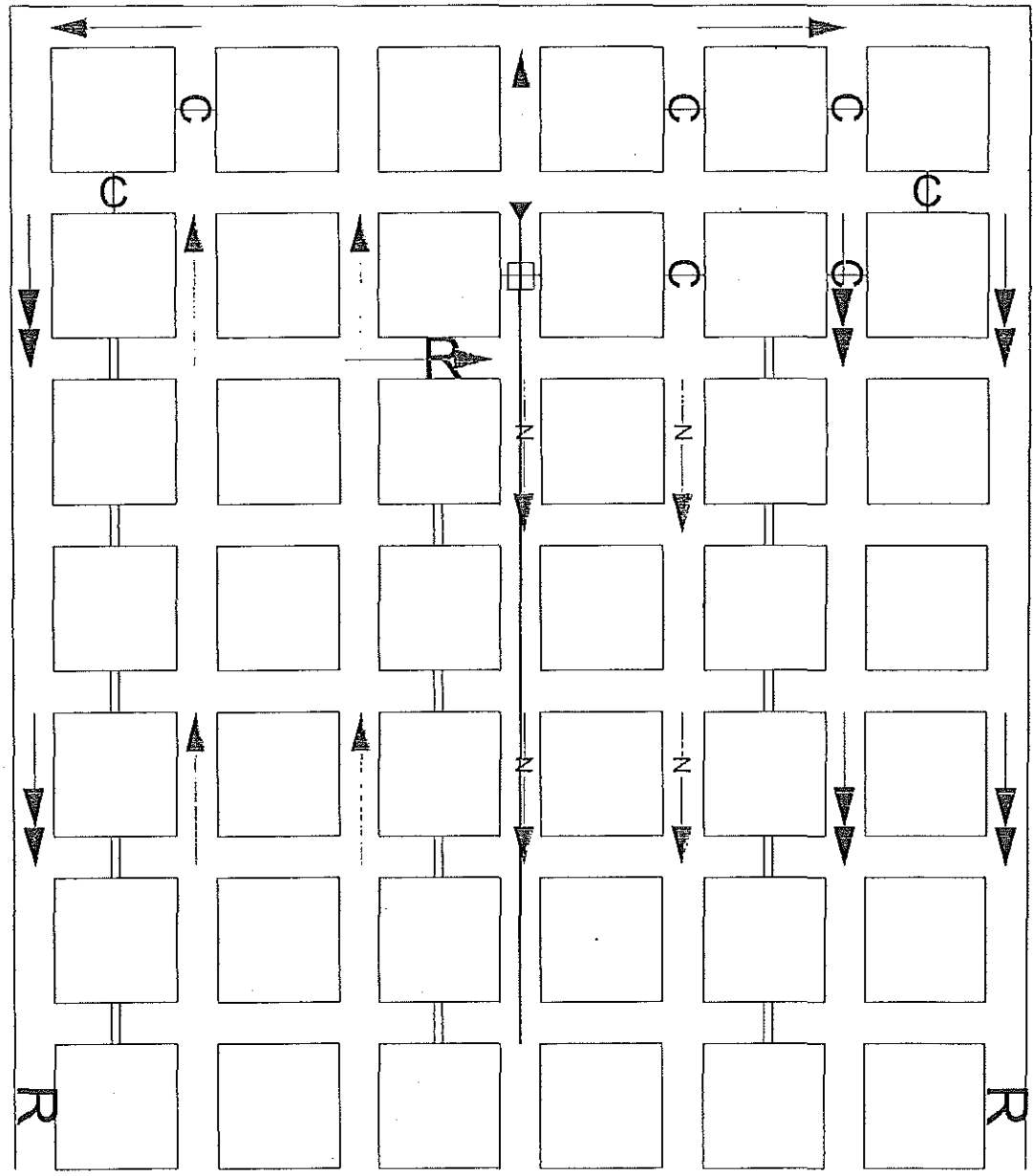
Stopping

* When mining, as many as two check curtains may be removed to allow haulage. At no time will curtains be removed to allow short short circuit from intake to return sides.

Typical Face Ventilation Plan

Typical development
Split Ventilation
Upper Big Branch Mine

(Mirror Image Can Apply)



Intake air		Check Curtain	Note: This plan can apply to development of panels with more or less entries.
Belt air	R	Regulator	
Return air		Stopping	Air splits are regulated by regulator located outby face area. (See Map)
Belt Tail piece		Box Check	

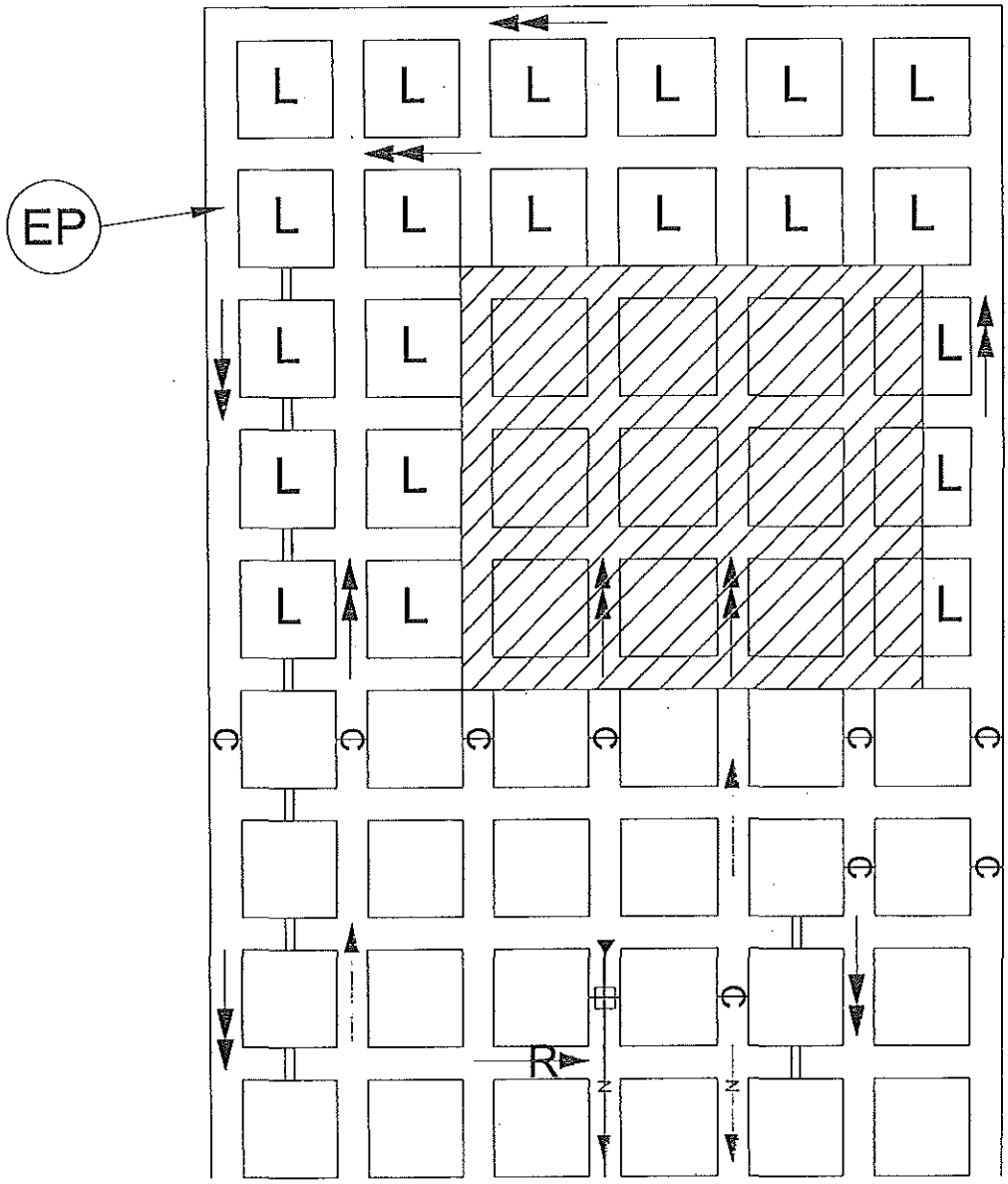
Typical Face Ventilation Plan

Full Pillar Recovery

Initial Panel - Split System

Upper Big Branch Mine

(Mirror Image Can Apply)



Minimum cfm across continuous miner at pillar line = 6,000 cfm

Intake air		Check Curtain	Note: This plan can apply to second mining of more or less entries. Second mining will comply with Approved Ventilation and Roof Control Plan. Returns regulated outby section.
Belt air	R	Regulator	
Return air		Stopping	
Belt Tail piece		Box Check	

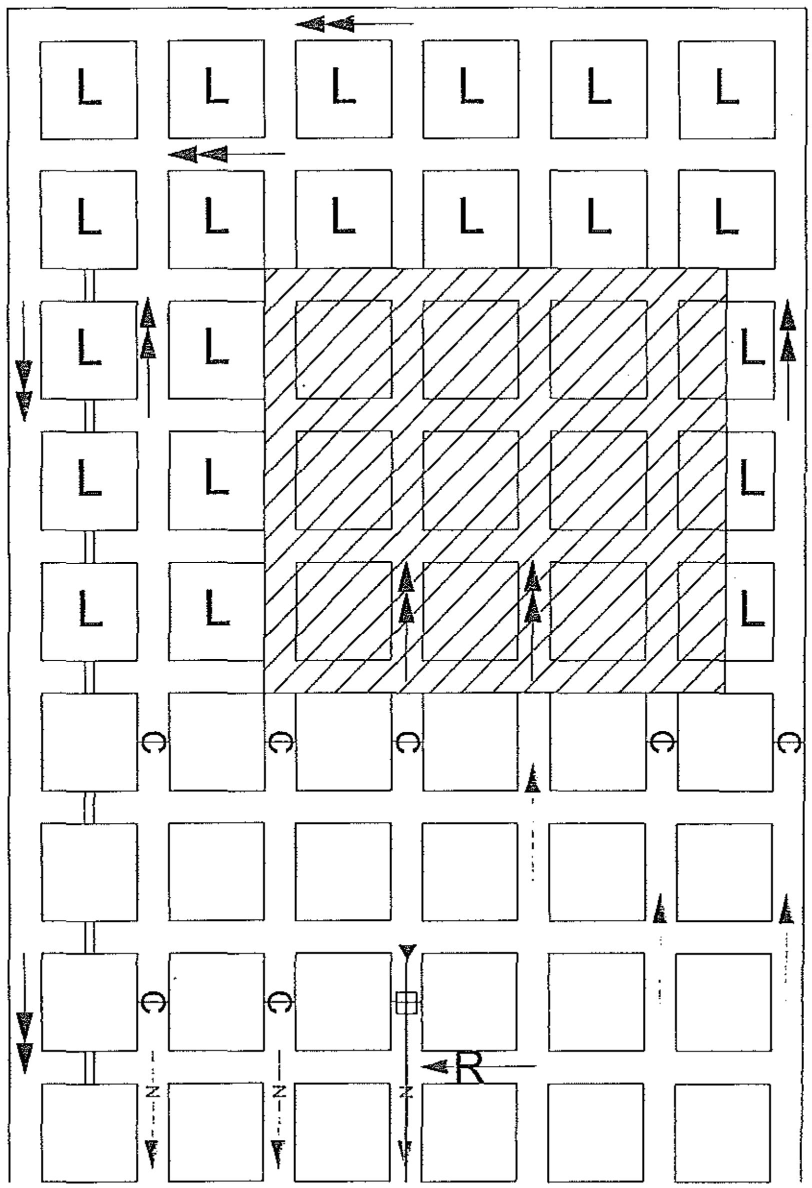
Typical Face Ventilation Plan

Full Pillar Recovery

Initial Panel - Sweep System

Upper Big Branch Mine

(Mirror Image Can Apply)



Minimum cfm across continuous miner at pillar line = 6,000 cfm

Symbol	Meaning	Symbol	Meaning
(arrow)	Intake air	C	Check Curtain
(arrow with N)	Belt air	R	Regulator
(double arrow)	Return air	(lines)	Stopping
(triangle)	Belt Tail piece	(box)	Box Check

Note: This plan can apply to second mining of more or less entries. Second mining will comply with Approved Ventilation and Roof Control Plan. Returns regulated outby section.

APPENDIX AF

METHANE AND DUST CONTROL - SAFETY PRECAUTIONS FROM VENTILATION PLAN