SECTION VI

2015

Preshift

RULES

2015 PRESHIFT CONTEST RULES

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RULES GOVERNING 2015 PRESHIFT CONTEST
AND INTERPRETATIONS OF DISCOUNT CARDS

1. Contestant must be a bona fide employee of a mining company or contractor and be certified as a mine foreman or examiner**.** Proof of certification must be presented at time of registration. Card, certificate, etc. will be accepted. If such proof is not provided prior to the contest, the participant will not be allowed to compete.
2. Judges will be employees of the Mine Safety and Health Administration (MSHA) and other assisting State Agencies.
3. Contestant must bring safety cap, safety boots, mining belt with identification tag, check-in tag, MSHA approved cap light, SCSR (may use training model, M20 or out of service SCSR as long as the contestant informs the judges of the specific defect[s]), anemometer, watch (with second hand or equivalent), an MSHA approved device to detect explosive and dangerous gases and/or deficiencies of oxygen, a device for testing the roof, distance/area measuring devices, blank index cards (recommend at least 50, may be numbered) for placing dates, times and initials and writing instruments for recording their work. If a contestant cannot provide an SCSR due to air travel restrictions, you should notify the registrar upon sending the registration form and an SCSR will be provided. Contestant may bring personal items to the field provided the items do not contain prohibited information. Prohibited information means, but is not limited to, rules, calculating charts (i.e. ventilation formulas), and personal ("reminder") notes.
4. A contest point system has been established. Failure to find/correct deficiencies or hazards, if necessary, failure of the contestant to verbally identify work, tests, or action being taken to the judge or failure to report on the record page will be assessed discounts. The accumulation of discounts will establish the contestants ranking in the contest. Three scoring segments will be used during the contest: written examination, underground, and the preshift record page.
5. Preshift contestants shall be notified by posting when they may review the discounts and have the right to appeal in writing to the Chief Judge. Within one hour of posting, the contestant shall report to the designated location and may be accompanied by the trainer. Contestants will have 20 minutes to review and prepare any written protests. The Chief Judge will have final decision on all appeals.
6. All contestants will take a written examination. The examination will consist of 10 multiple choice questions with three choices (with not more than two consecutive blanks), taken from the published statements of fact. Contestants

will have 15 minutes to complete the written examination. One point will be discounted for each incorrect statement. Answers will not be intentionally misspelled. "None of the above" shall not be used as one of the choices.

7. A fireboss station will be provided. Two stopwatches or one clock and a stopwatch will be at the station. The contestant will start one, and a stopwatch will be started and carried by a Judge. The contestant(**s**) will be allowed to position their equipment at the fireboss station. When the contestant arrives at the field the blank map, a written statement and mine plans and notes made by the contestant required for working the problem will be returned to the contestant. Upon receipt of these materials the contestant must start the clock within 2 minutes.

8. A maximum working time of 30 minutes will be in effect for the underground portion of the contest. The contestant will be notified when there is one minute left to complete the problem.

9. The portion of the mine to be examined will be addressed in a briefing prior to working the problem.

10. If during the problem, date, time and initials need to be posted, the information shall be written on an index card and the card placed on the mine floor at the required location. The contestant's personal watch time will be the time used on the card.

11. The contestant's personal watch time will be the time used on the preshift record for time of examination.

12. Placards, objects, mine plans and/or maps will be used to indicate equipment, conditions or potential hazards. The lettering on the placards will be at least one-inch in height. Contestants will not remove any items or placards unless specifically addressed in the problem. For contest purposes only, all violations of 30 CFR, Part 75 will be considered a hazard.

13. During the working of the problem, contestants shall correct conditions or hazards, where means or materials have been provided. Where conditions can be corrected by physically moving an item or ventilation device, such action need not be indicated on an index card. Where conditions are not corrected, danger signs will be shown on index cards and placed on the mine floor. If multiple hazardous conditions exist in one area or entry, a separate danger card must be placed on the mine floor for each hazard. EXAMPLE OF DANGER SIGNS

DANGER UNSAFE ROOF 01/06/2015 10:00 a.m. REH	DANGER UNSAFE RIB 01/06/2015 10:15 a.m. REH

14. The contestant will be provided linear feet, width and height, or area dimensions, where air measurements are required during the working of the

problem. Air measurements will be simulated, using the traverse method, for a minimum of 60-seconds. Calculators or similar devices will be allowed. Only whole numbers will be required to be stated in the preshift record.

15. Once the underground segment is completed, the contestant shall exit the mine, check out, stop the clock, and will be escorted to the assigned area to fill out a preshift record page. Contestant will not be allowed to reenter the mine after stopping the clock. Contestant will have 20-minutes to complete the preshift record. Upon completion of the record, the contestant will turn-in the preshift record page and the section working map. Discounts will be assessed for each item not recorded within the allotted time.

16. In the event an unforeseen problem arises, the time clock will be stopped, and the contestant will be removed from the field and taken to a neutral area. Following correction, the contestant will be returned to the field to complete the problem, and the time clock will be restarted. The field judges, prior to the completion of the problem, will adjust any discrepancies in the working time. At the completion of the problem the contestant will be notified of any corrective actions concerning the working time.

17. Each Contestant must be under guard, in a designated location before the start of the contest. Contestants must remain continuously under guard until time to work the problem. Prior to going out to the field to work the problem, contestant will be moved into a staging area and given a blank map, a written statement and mine plans required for working the problem. The contestant will be given 10 minutes to review the material and make any notes they deem necessary. At the end of 10 minutes the blank map, written statement and mine plans and notes will be collected by a contest official. The blank map, written statement, notes and mine plans will be returned to the contestant when they arrive to start the problem. Contestants that have performed will not be permitted to return to the isolation area or to communicate with any contestant awaiting their turn to perform.

18. No unauthorized person(s) will be allowed in the isolation area or on the contest field without permission from the Chief Judge.

19. Discounts will be assessed if the preshift record page is not legible to the judges.

20. In the event of a tie, underground discounts will be the first tie breaker, preshift record will be the second, written examination will be the third, and the elapsed working time will be the fourth tie breaker.

21. All discounts assessed to the contestant will be concurred by the two Field Judges.

22. Judges should not talk with contestants during the working of the problem, other than to convey required information.

23. Immediately after briefing, no communication between contestant and any outside party will be allowed. Contestants receiving contest information after entering the isolation area will be disqualified.

24. Contestant shall not take any cell phones, computers, pagers etc. into the isolation area. Contestant may take reference material into the isolation area but cannot be used in the staging area. The contestant may not use any of this reference material when working the problem or taking a written exam. Contestants will not carry personal notebooks into the contest area.

25. All gas detecting instruments used or taken into the mine must be examined in the presence of the judges at the fireboss station after starting the clock. (Gas detecting instruments will be left on during the working of the problem.) If an instrument fails during the examination and the contestant takes corrective action with a backup instrument that has been examined in the presence of the judges, no discount will be assessed.

    Prior to or during the Preshift contest, each contestant's gas detecting instrument(s) may be required to be placed in a known methane/air concentration to verify the instrument(s) is not defective. The instrument must be calibrated and ready for use at the start of preshift lock-up. Each contestant shall bring to the Preshift Contest Lock-up a calibration assembly cap (sensor adapter) and known mixture of gas designed for their gas detecting instrument(s) for testing purposes.

    For example: The detector must read within 10% of the methane mixture; within 5% of the carbon monoxide mixture; and within 0.5% of the oxygen mixture provided.

	Known Mixture	**Detector Readout**
Methane	2.5%	2.3% to 2.7%
Carbon Monoxide	100 PPM	95 PPM to 105 PPM
Oxygen	19.0%	18.5% to 19.5 %

    If an instrument fails any part of the test the contestant will receive a 2 point discount under Rule 19. If a spare detector is used and works properly, the discount will not apply. Contestants using a detector that was discounted under Rule 19 would not be discounted for gas test during the preshift contest.

26. Persons wishing to photograph or video tape the contest must receive permission from the Chief Judge.

INTERPRETATION OF THE FIELD SCORECARD

1. Failure to check in after starting the clock (2) and check out prior to stopping the clock (2).____ Maximum of 4

   Contestant must start the time clock before commencing any work other than reviewing the materials provided by the judges.

2. Failure to have required equipment _____ 2

   Required equipment is safety cap, safety boots, mining belt with ID tag, check-in tag, cap light, SCSR, anemometer, watch (with second hand or equivalent) and a MSHA approved device to detect explosive and dangerous gases and/or deficiencies of oxygen, a device for testing the roof, distance/area measuring devices, blank index cards (recommend at least 50, may be numbered) for placing dates, times and initials and writing instruments for recording their work. Contestant shall have required equipment prior to leaving isolation area. A discount will be assessed for each omitted item.

3. Failure to visually examine self-contained self-rescuer prior to entering the mine _____2

4. Failure to place date, time, and initials at required locations _____2 (each location)

   Date, time and initials are to be placed where methane tests are required and on danger signs.

   Date means correct month, day, and year.

   Where hazard(s) are found and gas tests are required at the same location, only one date, time and initial is required.

5. Failure to make necessary gas tests where required. ____5

   Methane and oxygen deficiency tests shall be taken:

   A. In all roadways, travelways, and track haulageways where persons are required to work or travel.

   B. In all working places on the section and at areas where mechanized mining equipment is being installed or removed.

   C. In areas where persons are scheduled to work, prior to the preshift examination.

   D. At faces or last row of permanent roof support in rooms driven over 20-feet off intake air courses.

   E. At seals along intake air courses.

F. At underground electrical installations, except; small hand held portable pumps, permissible pumps and associated permissible switchgear, and submersible pumps.

G. Immediately inby approaches to worked-out areas along intake air courses, and at high spots where methane is likely to accumulate, and equipment will be operated in the area during the shift.

H. In all accessible face areas, at the face or last row of permanent roof support.

I. Where the ventilation has been changed to remove excess methane (1% or greater) and/or oxygen deficiency (less than 19.5%), the examiner shall retest at the location of all placards where the gases were encountered during the initial examination.

If a placard is not present where a gas test is required the reading shall be 0.0% CH4 and 20.9% O2.

6. Improper procedure when testing with gas detectors, testers, and indicators _____2 (Maximum 4 discounts at each location)

A proper test for methane and oxygen deficiency shall require the following action by the examiner:

METHANE - Detector shall be held at eye level or higher OXYGEN DEFICIENCY - Detector shall be held at waist level or below

The contestant will verbally identify each test to the judge(s).

7. Failure to determine correct section ventilation and proper direction of the ventilating current _____10 (Each Location)

Failure to determine by air measurement, the direction and volume of the ventilating air current. Failure to determine correct direction of air current at regulators. Less than 9,000 cubic feet per minute (cfm) measured in the last open crosscut, or the intake end of a pillar line will be considered a hazard, unless otherwise stated in the written problem or other written instructions. Failure to assure section ventilation is maintained as required by the approved ventilation plan.

8. Improper procedure when taking an air measurement _____2(Each Location)

Failure to traverse the entry/crosscut perpendicular to the ventilating current.
Failure to measure the air current for 60-seconds.
Failure to measure height and width of area.

9. Not taking the required air measurement in the proper location prior to stopping the clock. (regulation) ____5

The person conducting the preshift examination shall determine the volume of air entering each of the following areas if anyone is scheduled to work in the areas during the oncoming shift:

A. In the last open crosscut of each set of entries or rooms on each working section and areas where mechanized mining equipment is being installed or removed. The last open crosscut is the crosscut in the line of pillars containing the permanent stoppings that separate the intake air courses and the return air courses.

B. On each longwall or shortwall in the intake entry or entries at the intake end of the longwall or shortwall face immediately outby the face and the velocity of air at each end of the face at the locations specified in the approved ventilation plan.

C. At the intake end of any pillar line –

1. If a single split of air is used, in the intake entry furthest from the return air course, immediately outby the first open crosscut outby the line of pillars being mined; or

2. If a split system is used, in the intake entries of each split immediately inby the split point.

10. Improper procedure when examining and testing the mine roof _____ 2 (Each Location)

Failure to visually examine the mine roof. A discount will be assessed where the contestant fails to verbally state his/her visual examination of the mine roof at least one time in each entry.

11. Failure to identify verbally, placing a danger sign or correcting a hazardous condition_____ 10 (Each Occurrence)

Discount will be assessed if contestant fails to identify hazardous conditions intended to be part of the problem.

12. Failure to correct hazardous conditions _____10 each omission

Hazardous conditions must be corrected by the contestant during the examination when means or materials are available. However, preshift examiners are not required to install any roof support. If means or materials are not available, dangering off a hazardous condition will be considered acceptable corrective action.

13. Traveling at more than walking speed _____ 5

Concurrence by two (2) judges required.

14. Contestants equipment not maintained in operable condition, each infraction ____2

Would include cap lamp, methane detector/oxygen indicator and anemometer. Discount will be assessed if gas detection instrument fails during the working of the problem and no other instrument is provided. Concurrence by two (2) judges required.

15. Any act by the examiner, which may result in an explosion of an explosive air/gas mixture _____30 (Each Occurrence)

    A. Changing conditions of the ventilation in such a manner that an explosive mixture is moved over an ignition source.

    B. Encountering an explosive air/gas mixture in a face, or other area, and failing to take proper corrective actions.

    An explosive mixture will be present when the methane is between five and fifteen percent inclusively and the oxygen is 12.1 percent or greater. Both methane and oxygen concentrations will be shown on the placards.

16. Any act by the examiner, which may endanger himself/herself or others _____20 (Each Occurrence)

    A. Entering or remaining in an area known to contain an irrespirable atmosphere. Atmospheres containing less than 19.5 percent oxygen are irrespirable. Concentrations must be shown on the placard.

    B. Encountering an adverse roof condition and failing to take adequate protective actions.

    C. Traveling under unsupported or unsafe roof. (Self-explanatory.)

    D. Traveling through water over knee deep. (For contest only)

    E. Entering or remaining in smoke.

    F. Crossing or working on belts in motion.

17. Contestant not following the written instructions for working the problem _____15 (Each Occurrence)

18. Failure to examine all accessible areas that can be safely traveled_____5 (Each location) (Maximum 20 points)

19. Failure to comply with general rules not covered in the discount sheet_____2

INTERPRETATION OF THE PRESHIFT RECORD

1. Preshift record page not legible ____ 2

   Discount assessed to each illegible article; two judges must concur, not to exceed 30.

2. Failure to record location of examination _____2 (Each omission)
3. Failure to record hazardous conditions _____2 (Each omission)
4. Failure to record action taken to correct hazardous conditions _____ 2 (Each omission)
5. Failure to record date and time of examination _____1
6. Failure to record results of air measurements _____ 1 (Each omission)
7. Failure to record results of methane (CH_4) examinations _____1 (Each omission)
8. Failure to certify by signature _____1
9. Failure to date entry of signature _____1
10. If a contestant fails to take a gas test or air reading during the working of the problem and enters a reading in the preshift record _____ 5 (Each occurrence)

STATEMENTS OF FACT
PRESHIFT CONTEST

1. A preshift examiner must be certified or registered in the State in which the coal mine is located. (Mine Act 1977, Sect. 318(a))
2. Preshift examinations must be conducted within 3 hours preceding the beginning of any 8-hour interval during which any person is scheduled to work or travel underground. (30 CFR 75.360(a)(1))
3. The lower explosive limit for methane is 5 volume percent. (MSHA3028 p.2-15, 2-47 & 2-55)
4. Air being used to ventilate areas where persons work or travel shall contain at least 19.5 percent oxygen. (30 CFR 75.321(a)(1))
5. Ventilation is utilized to dilute, render harmless and carry away flammable, explosive, noxious, and harmful gases, dusts, smoke, and fumes. (30 CFR 75.325, 330(b)(1))
6. When taking a reading with an anemometer, a commonly used method is to traverse the airway. (MSHA 3028 p. 3-17)
7. Low barometric pressures may cause methane to migrate outward from pillared areas into active workings. (MSHA 3028 p. 2-5)
8. About 21 percent of normal air is oxygen. (MSHA 3028 p. 2-13 & 2-51)
9. Where the mining height permits and the visual examination does not disclose a hazardous condition, sound and vibration tests, or other equivalent tests, shall be made where supports are to be installed. (30 CFR 75.211(b))
10. Methane is lighter than air. (MSHA 3028 p. 2-6 & 2-16)
11. To test for methane, use a methane detector or chemical analysis. (MSHA 3028 p, 2-16, 2-49 & 2-55)
12. Low voltage up to and including 660 volts, medium voltage 661 volts to 1,000 volts; and high voltage means more than 1,000 volts. (30 CFR 75.2 Definitions.)
13. The upper explosive limit for methane is 15 volume percent. (MSHA 3028 p. 2-15, 2-47 & 2-55)
14. Methane detectors should be calibrated with a known methane-air mixture at least once every 31 days. (30 CFR 75.320 (a))
15. Each underground coal mine operator shall ensure that at least 2 miners in each working section on each production shift are proficient in the use of all fire suppression equipment available on such working section, and know the location of such fire suppression equipment. (30 CFR 75.1503(a))
16. Carbon monoxide has no taste or odor. (MSHA 3028 p. 3-8)

17. Tests for methane concentration should be made at least 12 inches from the roof, face, ribs, and floor. (30 CFR 75.323(a))

18. The end of permanent roof support shall be posted with a readily visible warning, or a physical barrier shall be installed to impede travel beyond permanent support. (30 CFR 75.208)

19. Roof support materials, sequence of roof support installation and spacing, are stated in the Approved Roof Control Plan. (30 CFR 75.221)

20. All electric face equipment taken into or used inby the last open crosscut shall be permissible. (30 CFR 75.503)

21. Escapeways shall be clearly marked to show the route and direction of travel to the surface. (30 CFR 75.380(d)(2))

22. No person other than certified examiners may enter or remain in any underground area unless a preshift examination has been completed for the established 8-hour interval. (30 CFR 75.360(a)(1))

23. Ventilation controls are used underground to properly distribute air to all sections of the mine. (MSHA 3028 p. 3-8)

24. Tests for oxygen deficiency shall be made by a qualified person with MSHA approved oxygen detectors maintained in permissible and proper operating condition. (30 CFR 75.320(b))

25. The maximum 8 hour exposure level for carbon monoxide is 50 ppm. (MSHA 3028 p. 2-9)

26. The minimum last open crosscut air requirements also applies to sections which are not operating but are capable of producing coal by simply energizing the equipment on the section. (30 CFR 75.325(b))

27. Lubricating oil and grease kept underground shall be stored in fireproof, closed metal containers. (30 CFR 75.1104)

28. The results of the preshift examination must be recorded in a book, provided for that purpose on the surface, before any persons other than the certified persons may enter any underground areas. (30 CFR 75.360(g))

29. All fire suppression devices shall be visually inspected at least once each week by a person qualified to make such inspections. (30 CFR 75.1107-16(a))

30. Preshift examinations are made by persons designated by the operator. (30 CFR 75.360(a)(1))

31. A bar for taking down loose material shall be available in the working place or on all face equipment except haulage equipment. (30 CFR 75.211(d))

32. The operator must establish 8-hour intervals of time subject to the required preshift examinations. (30 CFR 75.360(a)(1))

33. In exhausting face ventilation systems, a mean entry velocity of at least 60 feet per minute will reach each working face where coal is being cut mined or loaded. (30 CFR 75.326)

34. Test holes, spaced at intervals specified in the roof control plan, shall be drilled to a depth at least 12 inches above the anchorage horizon of mechanically anchored tensioned roof bolts being used. (30 CFR 75.204(f)(2))

35. Before implementing an approved revision to a roof control plan, all persons who are affected by the revision shall be instructed in its provisions. (30 CFR 75.220(d))

36. A minimum quantity of 3,000 cubic feet per minute shall reach each working face where coal is being cut, mined, drilled for blasting, or loaded. (30 CFR 75.325(a)(1))

37. Self-contained self-rescuers are used to protect the wearer from the effects of irrespirable atmosphere.

38. The quantity of air reaching the last open crosscut of each set of entries or rooms on each working section and the quantity of air reaching the intake end of a pillar line shall be at least 9,000 cubic feet per minute unless a greater quantity is required to be specified in the approved ventilation plan. (30 CFR 75.325(b))

39. Rock dust applications to the roof, ribs, and floor shall be maintained to within 40 feet of the working face, except in those areas where the dust is too wet or too high in incombustible content. (30 CFR 75.402)

40. The results of preshift examinations may be called out to a responsible person on the surface, or carried to the surface by the examiner. (30 CFR 75.360).

41. Oxygen detectors shall be calibrated at the start of each shift that the detectors will be used. (30 CFR 75.320(b))

42. Chemical extinguishers shall be examined every 6 months and the date of the examination shall be written on a permanent tag attached to the extinguisher. (30 CFR 75.1100-3)

43. Conveyor belts used to transport persons during the oncoming shift must be examined during the preshift examination. (30 CFR 75.360(b)(2))

44. High spots where methane is likely to accumulate, over haulageways where equipment will travel must be examined during the preshift examination. (30 CFR 75.360(b)(8))

45. Any area of the mine where a hazardous condition is observed shall be posted with a conspicuous danger sign where anyone entering the area would pass. (30 CFR 75.363(a))

46. Methane tests and the examiner's certification with date, time and initials, shall be made at seals located along intake air courses that ventilate working sections where anyone is scheduled to work during the oncoming shift. (30 CFR 75.360)

47. A visual examination of the roof, face and ribs shall be made immediately before any work is started in an area and thereafter as conditions warrant. (30 CFR 75.211(a))

48. Low barometric pressures may cause seals to leak the sealed atmosphere outward into adjacent airways. (Miner's Circular 36, Bureau of Mines, 1948)

49. Regulators are used in mine ventilation to regulate airflow to meet the individual needs of each air split. (MSHA 3028 p. 3-12)

50. A sightline or other method of directional control shall be used to maintain the projected direction of mining in entries, rooms, crosscuts and pillar splits. (30 CFR 75.203(b))

51. The operator must maintain a 300 foot diameter barrier around oil and gas wells, unless a lesser barrier consistent with State laws and regulations is approved. (30 CFR 75.1700)

52. Persons underground shall use only permissible electric lamps approved by MSHA. (30 CFR 75.1703)

53. A supply of first aid equipment shall be maintained in each working section not more than 500 feet outby the active working face or faces. (30 CFR 75.1713-7 (a) (3)

54. After each time a self-rescue device is worn or carried, the device shall be inspected for damage and for the integrity of its seal by a trained person. (30 CFR 1714-3(b)

55. If a mantrip or mobile equipment is used to enter or exit a mine it must have one additional, one hour SCSR, for each person who uses that transportation. (30 CFR 75. 1714-4(b)

56. Damaged rollers or other damaged belt conveyor components, which pose a fire hazard must be immediately repaired or replaced. (30 CFR 75.1731(a)

57. The mine emergency evacuation and firefighting program is required to instruct all miners in the use, care and maintenance of self-rescue devices. (30 CFR 75.1502(c)(2)

58. The mine emergency evacuation and firefighting program requires a review of the mine map, the escapeway system, and location of refuge alternatives. (30 CFR 75.1502(c)(8)

59. Prior to assuming duties on a section or outby work location, a foreman shall travel both escapeways in their entirety. (30 CFR 75.1504(a)(2)

60. Each quarterly evacuation training and drill shall include recognizing when the SCSR is not functioning properly and demonstrating how to initiate and reinitiate the starting sequence. (30 CFR 75.1504(b)(2)(i)

61. An escapeway map shall show the designated escapeway from the working section or the miner's work station to the surface or the exits at the bottom of the shaft or slope, refuge alternatives, and SCSR storage locations. (30 CFR 75 1505(a)

62. The escapeway map shall be posted or readily accessible for all miners at the following locations; in the working section, where mechanized mining equipment is being installed or removed, at the refuge alternative and at a surface location of the mine where miners congregate. (30 CFR 75.1505(a)

63. Refuge alternatives shall be located within 1,000 feet from the nearest working face and from the locations where mechanized mining equipment is being installed or removed. (30 CFR 75.1506(c)(1)

64. At all times, the site and area around the refuge alternative shall be kept clear of machinery, materials and obstructions. (30 CFR 75.1506(g)

65. Telephones or equivalent two way communication facilities shall be located not more than 500 feet outby the last open crosscut and not more than 800 feet from the farthest point of penetration of the working places on a working section. (30 CFR 75.1600-2(a)

66. Belt conveyors that do not transport men should have start and stop controls installed at intervals not to exceed 1,000 feet. (30 CFR 75.1403-5(h)

67. Track haulage roads should have a continuous clearance on one side of at least 24 inches from the farthest projection of normal traffic. (30 CFR 75.1403-8(d)

68. The clearance space on all track haulage roads should be kept free of loose rock, supplies and other loose materials. (30 CFR 75.1403-8(d)

69. Off track haulage roadways should be maintained as free as practicable from bottom irregularities, debris, and wet or muddy conditions. (39 CFR 75.1403-10(i)

70. Only permissible explosives, approved sheathed explosive units, and permissible blasting units shall be used underground. (30 CFR 75.1310(a)

71. All underground explosives magazines shall be located at least 25 feet from roadways and any source of electric current. (30 CFR 75.1312(e)(1)

72. The map required by 75.1200 shall be kept up to date by temporary notations. (30 CFR 75.1202)

73. Temporary notations shall include Permanent ventilation controls constructed or removed, such as seals, overcasts, undercasts, regulators, and permanent stoppings, and the direction of air currents. (30 CFR 75.1202-1(b)(3)

74. Main mine fans shall be equipped with an automatic device that gives a signal when the fan slows or stops. (30 CFR 75.310(a)(3)

75. Each main mine fan shall be examined for proper operation by a trained person designated by the operator once each day unless a fan monitoring system is used. (30 CFR 75.312(a)

76. The daily main mine fan examination is not required on any day when no one, including certified persons, goes underground. However, the main mine fan examination shall be completed prior to anyone entering the mine. (30 CFR 75.312(a))

77. Permissible flame safety lamps may only be used as a supplementary testing device. (30 CFR 75.320(d)

78. When 1 percent or more methane is present in a working place or intake air course, except for intrinsically safe atmospheric monitoring system (AMS), electrically powered equipment in the affected area shall be deenergized, other mechanized equipment shall be shut off. (30 CFR 75.323(a)(i)

79. When 1 percent or more methane is present in a working place or intake air course, changes or adjustments shall be made at once to the ventilation system to reduce the concentration of methane to less than 1 percent. (30 CFR 75.323(a)(ii)

80. When 1 percent or more methane is present in a working place or intake air course, no other work shall be permitted in the affected area until the methane concentration is less than 1 percent. (30 CFR 75.323(a)(iii)

81. When auxiliary fans and tubing are used for face ventilation, each auxiliary fan shall be deenergized or shut off when no one is present on the working section. (30CFR 75.331(a)(3)

82. When an auxiliary fan is stopped, line brattice or other face ventilation control devices shall be used to maintain ventilation to the working places. (30 CFR 75.331(d)

83. When two or more sets of mining equipment are simultaneously engaged in cutting, mining, or loading coal or rock from working places within the same working section, each set of mining equipment shall be on a separate split of intake air. (30 CFR 75.332(a)(2)

84. The atmosphere in the sealed area is considered inert when the oxygen concentration is less than 10 percent or the methane concentration is less than 3 percent or more than 20.0 percent. (30 CFR 75.336(b)(1)

85. Welding, cutting and soldering with an arc or flame are prohibited within 150 feet of a seal. (30 CFR 75.337(f)

86. The person conducting the preshift examination shall examine for hazardous conditions, test for methane and oxygen deficiencies, and determine if the air is moving in its proper direction. (30 CFR 75.360(b)

87. The last open crosscut is the crosscut in the line of pillars containing the permanent stoppings that separate the intake air courses and the return air courses. (30 CFR 75.360(c) (1)

88. The approved ventilation plan and any revisions shall be posted on the mine bulletin board within 1 working day following notification of approval. (30 CFR 75.370(f)(3)

89. The mine ventilation plan shall show the location where the air quantity ventilating the working place must be greater than 3,000 cubic feet per minute when coal is being cut, mined, drilled for blasting or loaded. (30 CFR 75. 371(g)

90. The mine ventilation plan shall show the quantity of air required in the last open crosscut if greater than 9,000 cubic feet per minute. (30 CFR 75.371(m)

91. The mine ventilation map shall show the direction of air flow in all underground areas of the mine. (30 CFR 75.372 (b)(9)

92. The mine ventilation map shall show the location of all escapeways and refuge alternatives. (30 CFR 75.372 (b)(11)

93. The directional lifeline shall be equipped with one directional indicator cone securely attached to the lifeline, signifying the route of escape, placed at intervals not exceeding 100 feet. (30 CFR 75.380(d)(7)(v)

94. The directional lifeline shall be equipped with two securely attached cones, installed consecutively with the tapered section pointing inby, to signify an attached branch line. (30 CFR 75.380(d)(7)(vii)

95. Boreholes shall be drilled in each working place when the working place approaches to within 200 feet of any mine workings of an adjacent mine located in the same coal bed unless the mine working have been preshifted. (30 CFR 75. 388(a) (3)

96. Where rock dust is to be applied it shall be maintained in such quantities that the incombustible content shall be not less than 80 per centum.

97. All electrical connections or splices shall be mechanically and electrically efficient and suitable connectors shall be used. (30 CFR 75.514)

98. Power wires and cables, except trolley wires and trolley feeder wires, and bare signal wires shall be insulated adequately and fully protected. (30 CFR 75.517)

99. All underground high-voltage transmission cables shall be guarded where men regularly work or pass under them unless they are 6 ½ feet or more above the floor or rail. (30 CFR 75.807)

100. Circuit breakers shall be marked for identification. (30 CFR 75.904)