STATE OF OKLAHOMA

1st Session of the 56th Legislature (2017)

SENATE BILL 370 By: Allen

AS INTRODUCED

An Act relating to mining; amending 45 O.S. 2011, Sections 753 and 911, which relate to rules and regulations for explosives; defining terms; exempting certain persons from act; updating references; adding rules and procedures related to the use of explosives in mines; and providing an effective date.

BE IT ENACTED BY THE PEOPLE OF THE STATE OF OKLAHOMA:

SECTION 1. AMENDATORY 45 O.S. 2011, Section 753, is amended to read as follows:

Section 753. A. The operator shall insure that explosives are used only in accordance with existing state and federal law and the regulations promulgated by the Department, which shall require:

1. Adequate advance written notice to local governments and residents who might be affected by the use of such explosives by publication of the planned blasting schedule in a newspaper of general circulation in the locality, and by mailing a copy of the proposed blasting schedule to every resident living within one-half (1/2) mile of the proposed blasting site and by providing daily notice to resident/occupiers in such areas prior to any blasting;

2. Maintaining for a period of at least three (3) years and making available for public inspection upon request a log detailing the location of the blasts, the pattern and depth of the drill holes, the amount of explosives used per hole, and the order and length of delay in the blasts;

3. Limiting the type of explosives and detonating equipment, the size, the timing and frequency of blasts based upon the physical conditions of the site so as to prevent injury to persons, damage to public and private property outside the permit area, adverse impacts on any underground mine, and change in the course, channel, or availability of ground or surface water outside the permit area;

4. All blasting operations be conducted by trained and competent persons as certified by the Department; ~~and~~

5. Upon the request of a resident or owner of a man-made dwelling or structure within one-half (1/2) mile of any portion of the permitted area the applicant or permittee shall conduct a pre-blasting survey of such structures and submit the survey to the Department and a copy to the resident or owner making the request. The area of the survey shall be decided by the Department; and

6. For the purposes of this section:

a. "loaded hole" is defined as one that contains explosives or blasting agents with a primer where the hole has been tamped with a short length of connecting

device sticking out but does not have a firing device connected,

b. "charged hole" is defined as one that contains explosives or blasting agents with a primer where the hole has been tamped with a short length of connecting device sticking out and it does have a firing device connected,

c. "blasting site" is defined as the area within fifty (50) feet of explosives, blasting agents or detonators, and

d. "blasting area" is defined as the area where flying rock may be considered dangerous, which shall be determined by the operator.

B. Rules and procedures as follows shall be complied with in the use of explosives, with the exception of persons with a valid coal permit:

1. Persons who use explosives, blasting agents or detonators shall be certified by the Oklahoma Mining Commission. Such persons shall understand the hazards involved, and trainees shall do such work only under the supervision of and in the immediate presence of certified persons;

2. Blasting operations shall be under the direct control of certified persons designated by the operator for that purpose;

3. Damaged or deteriorated explosives, blasting agents and detonators shall be disposed of in a safe manner;

4. Holes to be blasted shall be charged as near to blasting time as practical;

5. No person shall smoke within fifty (50) feet of explosives, blasting agents or detonators;

6. Only wooden or other nonsparking devices shall be used to punch holes in explosives cartridges;

7. Tamping poles shall be blunt and squared at one end and made of wood or other nonsparking material;

8. No tamping shall be done directly on primer cartridges;

9. During charging and firing, only the work activities association with the explosives operation will be permitted in the blasting area, as defined in subparagraph d of paragraph 6 of subsection A of this section;

10. Unused explosives and detonators shall be moved to a safe location as soon as charging operations are completed;

11. Approaches to areas in which charged holes are awaiting firing shall be guarded, or barricaded and posted, or flagged, against unauthorized entry.

12. When a blast is about to be fired, ample warning shall be given to allow all persons to retreat to a safe place. Each mine shall have a definite plan of warning signals that can be clearly seen or heard by anyone in the blasting area. The operator shall

inform all employees at the local mine as to the established procedure;

13. Enclosed blasting shelters constructed of strong materials shall be provided to protect all persons endangered by flying rock from blasting;

14. When safety fuse has been used, persons shall not return to misfired holes for at least thirty (30) minutes;

15. When electric blasting caps have been used, persons shall not return to misfired holes for at least fifteen (15) minutes. Leading wires from the power source must be disconnected before persons can be allowed to return to the blasting sites;

16. Blasted materials shall be examined for undetonated explosives after each blast and undetonated explosives found shall be disposed of safely;

17. Misfires shall be reported to the proper supervisor and shall be disposed of safely before any other work is performed in the blasting area;

18. Blast holes in "hot-hole" areas and holes that have been sprung shall not be charged before tests have been made to insure that the heat has been dissipated to a safe level;

19. If explosives are suspected of burning in a hole, all persons in the endangered area shall move to a safe location until the danger has passed;

20. Holes shall not be drilled where there is danger of intersecting a charge or misfired hole;

21. Fuses and igniters shall be stored in a cool, dry place away from oils or grease;

22. Fuses shall not be kinked, bent sharply or handled roughly;

23. Fuses shall be cut and capped in safe, dry locations posted with "No Smoking" signs;

24. Blasting caps shall be crimped to fuses only with devices designed for that specific purpose;

25. Fuses of less than forty-eight (48) inches in length shall not be used for any purpose;

26. At least two (2) persons shall be present when lighting fuses, and no person shall light more than fifteen (15) individual fuses. If more than fifteen (15) holes per person are to be fired, igniter cord and connectors or electric blasting shall be used;

27. A safe interval of time shall be allowed to light a round and evacuate the blasting area;

28. Fuses shall be ignited with hot-wire lighters, lead spitters, igniter cord or other such devices designed for this purpose;

29. Fuses shall not be ignited before the primer and the entire charge are securely in place;

30. Electric detonators of different brands shall not be used in the same round;

31. Electric detonators shall remain shunted until they are being wired into the blasting circuit. Lead lines and wired rounds shall be kept shunted until immediately before blasting;

32. Completely wired rounds shall be tested with a blasting galvanometer before connections are made to the blasting line;

33. Lead wires and blasting lines shall not be strung across power conductors, pipelines or within twenty (20) feet of bare power lines. They shall be protected from sources of static or other electrical contact;

34. Permanent blasting lines shall be properly supported, insulated and kept in good repair;

35. Charging shall be stopped immediately when the presence of static electricity or stray current is detected; the condition shall be corrected before charging is resumed;

36. Charging of holes shall be suspended and the persons withdrawn to a safe location upon the approach of an electrical storm;

37. Safety switches and blasting switches shall be labeled, encased in boxes and arranged so that the covers of the boxes cannot be closed with the switches in closed position;

38. Blasting switches shall be locked in the open position except when closed to fire the blast. Lead wires shall not be connected to the blasting switch until the shot is ready to be fired;

39. The key to a blasting switch shall be entrusted only to the person designated to fire blasts;

40. Electric circuits from the blasting switches to the blast area shall not be grounded;

41. At least a five-foot air gap shall be provided between the blasting circuit and the power circuit;

42. Where electric blasting is to be performed, electric circuits to equipment within twenty-five (25) feet of a hole that is to be charged with an electric blasting cap shall be de-energized before electric detonators are brought into the immediate area, or the electric equipment shall be moved out of the immediate area;

43. Power sources shall be suitable for the number of electric detonators to be fired and for the type of circuits used;

44. When instantaneous blasting is performed, the double-trunkline or loop system shall be used in detonating-cord blasting;

45. When instantaneous blasting is performed, trunklines in multiple-row blasting shall make one (1) or more complete loops with crossties between loops at intervals of not over two hundred (200) feet;

46. All detonating-cord knots shall be tight and all connections shall be kept at right angles to the trunklines;

47. Delay connectors for firing detonating cord shall be treated and handled with the same safety precautions as blasting caps and electric detonators; and

48. Detonating-cord shall not be kinked, bent or otherwise handled in such a manner that the train of detonation may be interrupted.

SECTION 2. AMENDATORY 45 O.S. 2011, Section 911, is amended to read as follows:

Section 911. A. Rules and procedures as follows shall be complied with for storage of explosives:

1. Detonators and other cap-sensitive high explosives shall be stored in magazines provided for that purpose. Blasting agents may be stored in van-type trailers, provided they are well-ventilated, kept clean and free of extraneous material that could create a fire hazard;

2. Separate magazines shall be provided for the storage of detonators and for explosives;

3. Detonators shall not be stored in the same magazine with explosives or blasting agents;

4. Blasting agents, safety fuse or detonating cord may be stored with explosives, but blasting agents must be kept physically separated from the fuse, detonating cord and explosives;

5. Magazines shall be:

a. located in accordance with the current American Table of Distances for Storage of Explosives,

b. detached structures located away from power lines, fuel storage area and other possible sources of fire,

c. constructed substantially of noncombustible material or covered with fire-resistant material,

d. reasonably bullet-resistant,

e. electrically bonded and grounded if constructed of metal,

f. made of nonsparking materials on the inside, including floors,

g. provided with adequate and effectively screened ventilation openings near the floor and ceiling,

h. kept securely locked when unattended,

i. posted with suitable danger signs so located that a bullet passing through the face of a sign will not strike the magazine,

j. used exclusively for storage of blasting agents, explosives, or detonators and kept free of all extraneous materials,

k. kept clean and dry in the interior, and in good repair, and

l. unheated, unless heated in a manner that does not create a fire or explosion hazard. Electrical heating devices shall not be used inside a magazine;

6. Only permissible lights, worn or carried, shall be used inside magazines;

7. Areas surrounding magazines not less than twenty-five (25) feet in all directions shall be kept free of rubbish and other combustibles;

8. Smoking and open flames shall not be permitted within twenty-five (25) feet of explosives and detonator storage magazines;

9. Cases of explosives shall be stored in such a manner as to assure the use of the oldest stock first;

10. Ammonium nitrate fuel oil mixtures shall be physically separated from dynamite stored in the same magazine and in such a manner that oil does not contaminate the dynamite; and

11. Cases of explosives shall not be stored on case ends or sides nor in stacks over six (6) feet high.

B. Rules and procedures as follows shall be complied with in the transportation of explosives:

1. Explosives and detonators shall be transported in separate vehicles unless separated by four (4) inches of hardwood or the equivalent;

2. Self-propelled vehicles used to transport explosives or detonators shall be equipped with suitable fire extinguishers and marked with proper warning signs;

3. When vehicles containing explosives or detonators are parked, the brakes shall be set, the motive power shut off when not in use, and if parked on an incline, the vehicle shall be blocked securely against rolling;

4. Vehicles containing explosives or detonators shall not be left unattended except in blasting areas where loading or charging is in progress;

5. Vehicles containing explosives or detonators shall not be taken to a repair garage or shop for any purpose;

6. Vehicles used to transport explosives or detonators shall be maintained in good condition and shall be operated at a safe speed and in accordance with recognized safe operating practices;

7. Vehicles used to transport explosives other than Ammonium Nitrate Fuel Oil (ANFO) mixtures shall have substantially constructed bodies, no sparking metal exposed in the cargo space, and the explosives shall not be piled higher than the side or end enclosures;

8. Explosives shall be transported at times and over routes that endanger a minimum number of persons;

9. Other materials or supplies shall not be placed on or in the cargo space of a conveyance containing explosives or detonators;

10. No person shall smoke while transporting or handling explosives or detonators;

11. Only the necessary attendants shall ride on or in vehicles containing explosives or detonators;

12. Explosives shall be transported promptly without undue delays in transit;

13. Nonconductive containers with tight-fitting covers shall be used to transport or carry capped fuses and electric detonators to blasting sites; and

14. Substantial nonconductive closed containers shall be used to carry explosives to blasting sites.

C. Rules and procedures as follows shall be complied with in the use of explosives, with the exception of persons with a valid coal permit:

1. Persons who use explosives, blasting agents or detonators shall be certified by the ~~State Mining Board~~ Oklahoma Mining Commission. Such persons shall understand the hazards involved, and trainees shall do such work only under the supervision of and in the immediate presence of certified persons;

2. Blasting operations shall be under the direct control of certified persons designated by the operator for that purpose;

3. Damaged or deteriorated explosives, blasting agents and detonators shall be disposed of in a safe manner;

4. Holes to be blasted shall be charged as near to blasting time as practical, and such holes shall be blasted as soon as practical after charging has been completed;

5. No person shall smoke within fifty (50) feet of explosives, blasting agents or detonators;

6. Explosives and blasting agents shall be kept separated from detonators until charging of holes is started;

7. Primers shall be made up at the time of charging and as close to the blasting site as conditions allow;

8. Only wooden or other nonsparking devices shall be used to punch holes in explosives cartridges;

9. Tamping poles shall be blunt and squared at one end and made of wood or other nonsparking material;

10. No tamping shall be done directly on primer cartridges;

11. Unused explosives and detonators shall be moved to a safe location as soon as charging operations are completed;

12. Approaches to areas in which charged holes are awaiting firing shall be guarded, or barricaded and posted, or flagged, against unauthorized entry. If blasting is done after dark, red flashing lights shall be used at the approaches to the blasting area;

13. When a blast is about to be fired, ample warning shall be given to allow all persons to retreat to a safe place. Each mine shall have a definite plan of warning signals that can be clearly seen or heard by anyone in the blasting area. The operator shall inform all employees at the local mine as to the established procedure;

14. Enclosed blasting shelters constructed of strong materials shall be provided to protect all persons endangered by flying rock from blasting;

15. When safety fuse has been used, persons shall not return to misfired holes for at least thirty (30) minutes;

16. When electric blasting caps have been used, persons shall not return to misfired holes for at least fifteen (15) minutes. Leading wires from the power source must be disconnected before persons can be allowed to return to the blasting sites;

17. Blasted materials shall be examined for undetonated explosives after each blast and undetonated explosives found shall be disposed of safely;

18. Misfires shall be reported to the proper supervisor and shall be disposed of safely before any other work is performed in the blasting area;

19. Blast holes in "hot-hole" areas and holes that have been sprung shall not be charged before tests have been made to insure that the heat has been dissipated to a safe level;

20. If explosives are suspected of burning in a hole, all persons in the endangered area shall move to a safe location until the danger has passed;

21. Holes shall not be drilled where there is danger of intersecting a charge or misfired hole;

22. Fuses and igniters shall be stored in a cool, dry place away from oils or grease;

23. Fuses shall not be kinked, bent sharply or handled roughly;

24. Fuses shall be cut and capped in safe, dry locations posted with "No Smoking" signs;

25. Blasting caps shall be crimped to fuses only with devices designed for that specific purpose;

26. Fuses of less than forty-eight (48) inches in length shall not be used for any purpose;

27. At least two (2) persons shall be present when lighting fuses, and no person shall light more than fifteen (15) individual fuses. If more than fifteen (15) holes per person are to be fired, igniter cord and connectors or electric blasting shall be used;

28. A safe interval of time shall be allowed to light a round and evacuate the blasting area;

29. Fuses shall be ignited with hot-wire lighters, lead spitters, igniter cord or other such devices designed for this purpose;

30. Fuses shall not be ignited before the primer and the entire charge are securely in place;

31. Electric detonators of different brands shall not be used in the same round;

32. Electric detonators shall remain shunted until they are being wired into the blasting circuit. Lead lines and wired rounds shall be kept shunted until immediately before blasting;

33. Completely wired rounds shall be tested with a blasting galvanometer before connections are made to the blasting line;

34. Lead wires and blasting lines shall not be strung across power conductors, pipelines or within twenty (20) feet of bare power lines. They shall be protected from sources of static or other electrical contact;

35. Permanent blasting lines shall be properly supported, insulated and kept in good repair;

36. Charging shall be stopped immediately when the presence of static electricity or stray current is detected; the condition shall be corrected before charging is resumed;

37. Charging of holes shall be suspended and the persons withdrawn to a safe location upon the approach of an electrical storm;

38. Safety switches and blasting switches shall be labeled, encased in boxes and arranged so that the covers of the boxes cannot be closed with the switches in closed position;

39. Blasting switches shall be locked in the open position except when closed to fire the blast. Lead wires shall not be connected to the blasting switch until the shot is ready to be fired;

40. The key to a blasting switch shall be entrusted only to the person designated to fire blasts;

41. Electric circuits from the blasting switches to the blast area shall not be grounded;

42. At least a five-foot air gap shall be provided between the blasting circuit and the power circuit;

43. Where electric blasting is to be performed, electric circuits to equipment within twenty-five (25) feet of a hole that is to be charged with an electric blasting cap shall be de-energized before electric detonators are brought into the immediate area, or the electric equipment shall be moved out of the immediate area;

44. Power sources shall be suitable for the number of electric detonators to be fired and for the type of circuits used;

45. When instantaneous blasting is performed, the double-trunkline or loop system shall be used in detonating-cord blasting;

46. When instantaneous blasting is performed, trunklines in multiple-row blasting shall make one (1) or more complete loops with crossties between loops at intervals of not over two hundred (200) feet;

47. All detonating-cord knots shall be tight and all connections shall be kept at right angles to the trunklines;

48. Delay connectors for firing detonating-cord shall be treated and handled with the same safety precautions as blasting caps and electric detonators; and

49. Detonating-cord shall not be kinked, bent or otherwise handled in such a manner that the train of detonation may be interrupted.

D. Rules and procedures as follows shall be complied with in dealing with sensitized ammonium nitrate blasting agents:

1. When sensitized ammonium nitrate mixtures and blasting agents are used, the same precautions shall be taken as for high explosives;

2. Adequate priming shall be employed to guard against misfires, increased toxic fumes and poor performance;

3. Where pneumatic loading is employed, before any type of blasting operation using blasting agents is put into effect, an evaluation of the potential hazard of static electricity shall be made. Adequate steps, including the grounding of the conductive parts of pneumatic loading equipment, shall be taken to eliminate the hazard of static electricity before blasting agent preparation is commenced;

4. Pneumatic loading equipment shall not be grounded to water lines, air lines, rails or other permanent electrical grounding systems;

5. Hoses used in connection with pneumatic loading machines shall be of the semiconductive type having a total resistance low enough to permit the dissipation of static electricity and high enough to limit the flow of stray electric currents to a safe level. Wire-countered hose shall not be used because of the potential hazard from stray electric currents; and

6. Plastic tubes shall not be used to protect pneumatically loaded blasting agent charges against water unless a positive grounding system is provided to drain electrostatic charges from the holes.

SECTION 3. This act shall become effective November 1, 2017.

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