2.—(1) This Order may be cited as the Ironstone Restoration Fund (Contributions) (Rate of Interest) Order, 1959.

(2) The Ironstone Restoration Fund (Contributions) (Rate of Interest) Order, 1958(a), is hereby revoked.

(3) The Interpretation Act, 1889(b), shall apply to the interpretation of this Order as it applies to the interpretation of an Act of Parliament.

3. This Order shall come into force on the first day of April, 1959.

Dated this twenty-third day of March, 1959.

R. Brooman-White,
Martin Redmayne,
Two of the Lords Commissioners of
Her Majesty's Treasury.

EXPLANATORY NOTE

(This Note is not part of the Order, but is intended to indicate its general purport.)

Under the Mineral Workings Act, 1951, operators of certain ironstone mines have to pay a contribution to the Ironstone Fund within one month of the end of each financial year. Section 4 (3) provides that under-payments or over-payments should be recoverable by or from the Minister with interest at such rate as may from time to time be determined by the Treasury.

By this Order the Treasury now determine that the rate should be reduced from six per cent. per annum (which has been in force since 1st April, 1958 (S.I. 1958/544)) to five per cent. per annum.

SAFETY HEALTH AND WELFARE (QUARRIES)

1959 No. 2259

The Quarries (Explosives) Regulations, 1959

Made - - - -	*23rd December,* 1959
Laid before Parliament	*5th January,* 1960
Coming into Operation	*1st February,* 1960

ARRANGEMENT OF REGULATIONS

PART	I	General	Regs. 1 to 4
PART	II	Appointment and qualification of shot firers	Reg. 5
PART	III	Storage, issue and conveyance of explosives and detonators	Regs. 6 to 19
PART	IV	Equipment, apparatus and material for firing shots	Regs. 20 to 23
PART	V	Shot firing—general	Regs. 24 to 37
PART	VI	Shot firing—additional provisions otherwise than for heading blasting	Regs. 38 to 48
PART	VII	Shot firing—additional provisions for heading blasting	Regs. 49 to 57
PART	VIII	Miss-fires	Regs. 58 to 64

(a) S.I. 1958/544 (1958 I, p. 1512). (b) 52 & 53 Vict. c. 63.

The Minister of Power in pursuance of the powers conferred upon him by sections one hundred and forty-one, one hundred and forty-three and one hundred and fourteen of the Mines and Quarries Act, 1954(a), (hereinafter referred to as " the Act ") and of all other powers him enabling hereby orders that the following regulations shall have effect :—

PART I

GENERAL

Commencement and citation

1. These regulations shall come into operation on the first day of February, nineteen hundred and sixty, and may be cited as the Quarries (Explosives) Regulations, 1959.

Interpretation

2.—(1) In these regulations the following expressions have the meanings hereby respectively assigned to them, that is to say—

" the Act " means the Mines and Quarries Act, 1954 ;

" appropriate person " has the meaning assigned thereto in the Quarries (General) Regulations, 1956(b) ;

" detonating fuse " means fuse consisting of high explosive enclosed in a waterproof covering made of textile impregnated or coated with a plastic composition ;

" detonator " includes safety fuse capped with a detonator ;

" explosive " does not include a detonator ;

" explosives store " has the meaning assigned thereto in regulation six ;

" heading " means a tunnel or other excavation (not being merely a shot hole) made in a face or side of a quarry for the purpose of a heading blast ;

" heading blast " means a shot fired in a heading otherwise than for the purpose of or in connection with the making of that heading ;

" the Minister " means the Minister of Power ;

" miss-fire " includes partial miss-fire ;

" safety fuse " means fuse consisting of gun powder or any other substance which burns at a regular rate, enclosed in a suitable covering and of such a quality that the rate of burning does not vary more than ten seconds above or below the rate of ninety seconds for each three feet of fuse ;

" shot " means an explosion of explosives ;

" shot firer " has the meaning assigned thereto in regulation five ;

" shot firing rules " has the meaning assigned thereto in regulation thirty ; and

" shot hole " does not include a heading.

(2) In these regulations any reference to the use of explosive includes the charging of a shot hole or heading (as the case may be) therewith.

(3) Expressions to which meanings are assigned by the Act or by these regulations shall (unless the contrary intention appears) have the same meanings in any document issued under the provisions of these regulations.

(4) The Interpretation Act, 1889(c), shall apply to the interpretation of these regulations as it applies to the interpretation of an Act of Parliament.

Exemption

3. An inspector may by notice served on the appropriate person exempt any quarry or any part thereof, or any thing or class of things thereat, from

(a) 2 & 3 Eliz. 2. c. 70. (b) S.I. 1956/1780 (1956 I, p. 1427). (c) 52 & 53 Vict. c. 63.

the application of any provision of these regulations if he is satisfied that the safety of persons employed at the quarry will not be prejudiced in consequence of the granting of the exemption.

Revocations

4. The following special regulations and special rules are hereby revoked—

(*a*) all special regulations made by the Minister in pursuance of sections one hundred and forty-one and one hundred and fourteen of the Act, being special regulations making provision with respect to the supply, storage or use at particular quarries of blasting materials or devices ; and

(*b*) all special rules relating to the use of explosives at quarries, being special rules established at particular quarries under the Metalliferous Mines Regulation Act, 1872(a), (as applied to quarries by the Quarries Act, 1894(b)) as having effect by virtue of subsection (2) of section one hundred and ninety-one of the Act.

PART II

APPOINTMENT AND QUALIFICATION OF SHOT FIRERS

5.—(1) No person shall fire a shot at any quarry other than a competent person appointed to be a shot firer at that quarry by the appropriate person (any person so appointed being, in these regulations, referred to as a " shot firer ").

(2) No person shall be qualified to be appointed or to be a shot firer unless he has attained the age of twenty-one years :

Provided that this paragraph shall not apply to any person appointed as a shot firer in pursuance of any special regulations or special rules revoked by regulation four of these regulations.

PART III

STORAGE, ISSUE AND CONVEYANCE OF EXPLOSIVES AND DETONATORS

6. The appropriate person shall not permit any explosive, detonator or fuse to be stored at a quarry except in a place appointed by him for the purpose (in these regulations referred to as an " explosives store "), and shall take such steps as may be necessary to secure that any explosives store is at all times kept clean and free from grit.

7. In the case of every quarry in which explosives are used, the appropriate person shall appoint such number of competent persons and make such arrangements as to secure that a competent person is in charge of each explosives store whenever explosives or detonators are taken into the store or are to be issued thereat.

8. The appropriate person shall ensure that any detonator in an explosives store at a quarry is at all times kept separate from any explosive therein.

9. No person shall cap safety fuse with a detonator at any place at a quarry except at a suitable place under shelter appointed for the purpose by the appropriate person.

10.—(1) No person shall attach any detonator to any fuse at a quarry other than a shot firer or a competent person who has attained the age of twenty-one years and has been appointed for the purpose by the appropriate person.

(2) No detonator shall be crimped to any fuse at a quarry otherwise than by means of crimpers made for the purpose and provided by the owner of the quarry.

(a) 35 & 36 Vict. c. 77. (b) 57 & 58 Vict. c. 42.

11. No person shall take into or use at a quarry any explosive or detonator not provided by the owner of the quarry.

Control of issue of detonators

12. All detonators at an explosives store at a quarry shall, except during a shift for which the appropriate person has appointed a competent person to have charge of that store, be in the sole charge of the appropriate person.

13. No person shall be in possession of any detonator at any place at a quarry other than an explosives store except a shot firer to whom the detonator has been issued for use or a person authorised by the appropriate person so to be and save as aforesaid no person shall issue or take any detonator from such a store.

Conveyance and care of detonators

14. No person shall carry any detonator at a quarry (otherwise than within an explosives store) except in a securely locked detonator case used solely for that purpose and provided by the owner of the quarry :

Provided that nothing in this regulation shall prevent a primer cartridge fitted with a detonator being taken in a case, bag or canister for carrying explosives to a place where it is intended to fire a shot being a case, bag or canister complying with the requirements of paragraph (1) of regulation seventeen.

15. In the case of every quarry in which detonators are used, the appropriate person shall ensure that no detonator case is issued for use in the quarry unless it is so constructed and maintained that when the case is closed it is impossible for any detonator or the leads of any detonator contained in the case to touch any metal part thereof which is exposed outside the case or is in contact with any other metal part so exposed.

16.—(1) Any shot firer to whom a detonator case has been issued at any quarry shall—

(*a*) ensure that, apart from any check sheet for recording shots fired by him, nothing except detonators is in it;

(*b*) ensure that at any time at which it is not on his person it is in a safe place and, unless he remains in the immediate vicinity, in a securely locked box;

(*c*) if at the end of his period of duty it contains any detonator, return it to an explosives store; and

(*d*) retain the key of the case in his own possession throughout the period during which he is on duty.

(2) No shot firer shall at any quarry remove a detonator from a detonator case (except within an explosives store or a place appointed under regulation nine) unless it is required immediately for use.

Conveyance and care of explosives

17.—(1) Except when within an explosives store or a place appointed under regulation nine, no person at a quarry shall carry any explosive (other than detonating fuse) otherwise than in a closed case, bag or canister so constructed and maintained as to prevent any escape or leakage of the explosive and danger from sparks. The appropriate person shall make and secure the efficient carrying out of arrangements to ensure that all such cases, bags and canisters in use at the quarry are kept clean and free from grit.

(2) Except in pursuance of the proviso to regulation fourteen no person shall put anything other than explosives into a case, bag or canister provided for the purpose of carrying explosives at a quarry.

(3) Every person having any case, bag or canister of explosives in his possession or control at a quarry shall ensure that it is not deposited at any time elsewhere than in a place of safety, and in particular if at the end of his period of duty the case, bag or canister contains any explosive shall return it to an explosives store.

(4) No person shall (except within an explosives store or a place appointed under regulation nine) take any explosive from any case, bag or canister provided for the purpose of carrying explosives at a quarry unless the shot firer concerned requires the explosive immediately for charging a shot hole or a heading or for firing a shot.

18. No person shall at any quarry take any explosive or detonator into any room or compartment containing machinery, into any messroom, workroom, recreation room or other place where persons congregate or into any place in which there is a fire, an electric heating apparatus or a heating apparatus comprising a flame.

Use of naked light near explosives or detonators

19. No person at any quarry shall smoke, or take or ignite any naked light, within twenty feet of any explosive, detonator or explosives store, and no person shall take any explosive or detonator within twenty feet of a naked light:

Provided that nothing in this regulation shall prevent the use of a naked light by a shot firer for firing a shot.

PART IV

EQUIPMENT, APPARATUS, AND MATERIAL FOR FIRING SHOTS

20.—(1) No shot firer shall fire a shot at a quarry by means of electric shot firing apparatus, cable or fuse (as the case may be) not provided for that purpose by the owner of the quarry.

(2) No person shall take into or use at a quarry any fuse other than safety fuse or detonating fuse:

Provided that this paragraph shall not apply to any fuse approved by the Minister under regulation forty-seven.

21. A shot firer who is in charge of any electric shot firing apparatus at any quarry—

(*a*) shall retain any removable handle or key in his own possession throughout the period while he is on duty;

(*b*) shall not place any removable handle or key in position in the apparatus until he is about to fire a shot; and

(*c*) shall remove any removable handle or key from the apparatus immediately after firing each shot.

22. If any electric shot firing apparatus at a quarry appears to be defective or fails to fire any shot or fails to fire all or any of the shots in a properly connected round at one operation, the shot firer in charge of it shall not use it further but shall report the circumstances to the person under whose immediate charge he works or to the appropriate person.

Misuse of equipment

23. No person other than a competent person authorised by the appropriate person to do so shall open any electric shot firing apparatus at any quarry, and no person shall tamper with any such apparatus thereat.

PART V

SHOT FIRING—GENERAL

24. No shot firer shall fire any shot at a quarry unless he has satisfied himself that the charge is so placed as to be safe for the firing of a shot.

25. No shot firer shall at any quarry use a delay detonator unless a number indicating the period of delay is clearly marked on the detonator or on a lead of that detonator.

26. No person shall at any quarry pull out any detonator lead or fuse from any charged shot hole or heading.

Firing shots electrically

27.—(1) No shot firer shall fire a shot electrically at a quarry unless the shot firing cable is of sufficient length to enable him to do so from a place of safety.

(2) No person other than a shot firer who is about to fire a shot shall at a quarry couple any shot firing cable to any detonator or to shot firing apparatus.

(3) No shot firer shall at a quarry couple a shot firing cable to shot firing apparatus for the purpose of firing a shot unless the cable has already been coupled by him to the detonator or detonator circuit.

(4) No shot firer shall fire any round of shots connected in series at a quarry by means of electric shot firing apparatus unless he has tested the circuit for continuity by means of a suitable testing device and has found it to be satisfactory. A shot firer shall not make any such test unless all persons in the vicinity have withdrawn to a place of safety and he himself has taken proper shelter.

Firing shots under water

28. Where for the purpose of getting mineral from under water in any quarry a shot is to be fired under the water, the appropriate person shall make and secure the efficient carrying out of arrangements to ensure that no such shot is fired unless—

(*a*) the charge is of a water resistant type and protected as far as possible from becoming wet; and

(*b*) in the event of a miss-fire the charge can be readily recovered.

Prohibited and permitted periods for shot firing

29.—(1) No shot firer shall fire any shot at a quarry during any period between one hour after sunset and one hour before sunrise.

(2) Without prejudice to the generality of paragraph (1) of this regulation, no shot firer shall fire any shot at a quarry otherwise than during any period or periods determined by the appropriate person and specified in a notice kept posted thereat. The appropriate person shall ensure that a copy of any such notice is provided in the covered accommodation at the quarry provided in pursuance of section one hundred and thirty-five of the Act and that a copy thereof is supplied to each shot firer.

Shot firing rules

30.—(1) For the purpose of securing the safety of all persons at any quarry when shot firing is being carried on therein the appropriate person shall make rules (in these regulations referred to as "shot firing rules") allotting to competent persons, and specifying, the duties to be performed by them on any occasion on which shot firing is about to be or is being carried on in the quarry, and in particular, but without prejudice to the generality of the foregoing words, the rules shall—

(*a*) specify a suitable system to secure by means of the posting of notices or sentries or otherwise the giving of adequate warning that shot firing is about to commence to all persons within, near or approaching the danger zone determined by the shot firer in pursuance of regulation thirty-one;

(*b*) specify a suitable system to secure the giving of adequate signals for the purpose of notifying persons employed at the quarry that shot firing has for the time being ended.

(2) It shall be the duty of the appropriate person at a quarry who has made shot firing rules to secure that the provisions of those rules are executed and enforced.

(3) A shot firing rule which is inconsistent with the provisions of any regulation shall, to the extent of the inconsistency, be of no effect.

(4) If an inspector is of opinion with respect to any shot firing rules that provision ought to be made for any matter for which provision is not for the time being made by such rules or that different provision ought to be made by such rules for any matter for which provision is for the time being made by such rules, he may serve on the appropriate person a notice stating that he is of that opinion, specifying the matter for which, in his opinion, provision or, as the case may be, different provision ought to be made as aforesaid and the nature of the provision that, in his opinion, ought to be made, and requiring the appropriate person to amend the rules accordingly and any such notice shall, if it so specified therein, become operative forthwith.

(5) The provisions of Part XV of the Act with respect to references upon notices served by inspectors shall apply to a notice served under the last preceding paragraph and the relevant ground of objection to such a notice shall be that the provisions contained in the rules are adequate to secure the safety of all persons at the quarry when shot firing is being carried on therein.

(6) Without prejudice to the generality of the provisions of section one hundred and thirty-five of the Act, a copy of any shot firing rules for the time being in force shall be kept at the office at the quarry, and a copy of the rules shall be supplied to every shot firer and to every person to whom any duty has been allotted by the said rules.

Warning and shelter

31. Any shot firer who is about to carry out any shot firing at a quarry shall, before shot firing is for the time being commenced, determine the danger zone likely to be created thereby and ensure that—

(*a*) the warning required by the relevant shot firing rules in pursuance of sub-paragraph (*a*) of paragraph (1) of regulation thirty has been given; and

(*b*) no person is in the said danger zone unless he has taken proper shelter:

Provided that nothing in this regulation shall prevent the shot firer and any person assisting him from remaining in the said danger zone for the purpose of lighting a fuse.

32. Any shot firer who has for the time being finished shot firing at a quarry shall take such steps as may be necessary to secure that the signals required to be given by the relevant shot firing rules in pursuance of sub-paragraph (*b*) of paragraph (1) of regulation thirty are given.

33. No person who has been posted as a sentry at a quarry in pursuance of a provision of shot firing rules shall leave the place where he was posted until the signals mentioned in the last preceding regulation have been given or he has been directed so to do by the person who posted him.

34. No person employed at a quarry shall pass a sentry who has forbidden him to do so.

35. At every quarry the appropriate person shall take such steps as may be necessary to secure that sufficient and suitable shelters are provided for the use of the persons employed thereat who are within the danger zone likely to be created when shots are fired thereat.

Precautions after shot firing

36. After the firing of every shot at a quarry, the shot firer who fired it or a competent person authorised for the purpose by the appropriate person shall—

(*a*) ascertain by personal examination whether it is safe for ordinary working to be resumed in each working place affected by that shot and ensure that any necessary action is taken to make each such place safe for such working;

(*b*) in the course of his examination examine for any miss-fires, for any sockets in the face, for any explosive remaining in any such socket and, if he has reason to think that any shot may not have completely exploded, for any unexploded part of the charge in the material brought down; and

(*c*) if any unexploded part of the charge is found, (if he is a shot firer) either explode it by means of a primer cartridge or carefully remove it with a suitable tool made wholly of wood, or, (if he is not a shot firer) forthwith report the circumstances to the shot firer concerned who shall thereupon take steps in accordance with the provisions of this paragraph as if he himself had found the said unexploded part.

37. No person shall at a quarry introduce any drill or other tool made wholly or partly of metal into, or into the socket of, any shot hole in which a shot has been fired except in accordance with a scheme in force in pursuance of regulation sixty-four.

PART VI

SHOT FIRING—ADDITIONAL PROVISIONS OTHERWISE THAN FOR HEADING BLASTING

Application of Part VI

38. This Part of these regulations shall not apply with respect to any heading blast at a quarry.

Drilling, cleaning and charging shot holes

39.—(1) No person shall at any quarry charge a shot hole with any cartridge the diameter of which is not at least one eighth of an inch less than the diameter of that shot hole.

(2) No person shall at any quarry—

(*a*) for the purpose of charging or stemming any shot hole; or

(*b*) for the purpose of testing any shot hole in which there is explosive;

use any tool in the shot hole other than a tool made wholly of wood or any other tool of a type approved for the purpose by the Minister:

Provided that if the depth of the shot hole exceeds nine feet the tool may be made of wood with joints made of any suitable non-ferrous material, being a tool so constructed that any such non-ferrous material does not project beyond the level of the sides of the tool and cannot come into contact with any explosive in the shot hole.

40. No person shall at any quarry begin to charge any shot hole unless it is cleaned out.

41. No person shall at any quarry charge a shot hole of a depth exceeding nine feet with any explosive other than explosive in the form of a cartridge or in a container, except if the back of that shot hole is lower than the mouth.

42. No shot firer shall at any quarry permit more than one case or canister of any one type of explosive or of any one size of cartridge to be open at each shot hole at any one time for the charging of that shot hole.

43. No explosive shall be violently or forcibly pressed into a shot hole.

44. No person shall charge with gunpowder any shot hole in which a shot has previously been fired by means of safety fuse.

45. No person shall at any quarry charge a shot hole in which a shot has previously been fired unless the hole has been so treated as to ensure that it is cool and that any burning material therein is extinguished and there has elapsed since the firing of that shot—

(*a*) where the hole is to be charged with gunpowder, two hours;

(*b*) in any other case, thirty minutes.

46. No shot firer shall at any quarry fire any shot (whether or not in conjunction with detonating fuse) otherwise than by means of electric shot firing apparatus designed for the purpose or by means of safety fuse.

47. Except where means approved by the Minister of firing a round of shots by means of safety fuse is used, no shot firer shall at any quarry attempt to fire more than six shots at one time by means of such fuse.

48. Where any shot is to be fired at any quarry the shot firer shall ensure that all surplus explosives and detonators are removed from the vicinity of the shot hole before an attempt is made to fire a shot.

PART VII

SHOT FIRING—ADDITIONAL PROVISIONS FOR HEADING BLASTING

Charging of headings and heading blasts

49. The appropriate person shall make and secure the efficient carrying out of arrangements to ensure that no explosive or detonator is placed in a heading at a quarry for the purpose of a heading blast unless every shot fired for the purpose of or in connection with the making of that heading has previously been fired.

50. No shot firer shall fire a shot other than a heading blast in any heading at a quarry in which any explosive or detonator has been placed for the purpose of a heading blast.

51. No lamp or light, other than a portable electric battery lamp or torch, shall be taken into or used in any heading at a quarry in which any explosive or detonator has been placed for the purpose of a heading blast.

52. In every case in which a heading at a quarry is charged with any gunpowder or any loose grain explosive for the purpose of a heading blast, no person shall be in that heading while it is being or after it has been so charged unless he is, throughout the period during which he is therein, wearing footwear having soles made wholly of rubber.

53.—(1) No person shall in the course of charging or stemming a heading at a quarry for the purpose of a heading blast use any tool, apparatus or appliance made wholly or partly of iron or steel, except where the charge has been stemmed by stemming which—

(*a*) consists of sand in sand bags, clay or turf; and

(*b*) is not less than one foot thick between any point at which the tool, apparatus or appliance can be applied and any part of the charge.

(2) Nothing in the last preceding paragraph shall be construed as preventing the use in any heading at a quarry of any vehicle made wholly or partly of iron or steel, being a vehicle suitable, and used, for transporting materials, explosives or detonators in the heading.

54. Any person laying any detonating fuse in a heading at a quarry for the purpose of the firing of a heading blast shall ensure that the fuse is adequately protected from any damage which might be caused thereto in the course of the charging or stemming of that heading.

55. No shot firer shall fire any heading blast otherwise than by means of double core detonating fuse, that is to say detonating fuse having two cores of high explosive throughout its length, each core being separately enclosed.

56. The appropriate person shall make and secure the efficient carrying out of arrangements to ensure that in any case in which the operation of charging a heading at a quarry with any explosive has been commenced, a watchman is continuously in attendance in that heading or at or within sight of the entrance thereof until that operation has been completed, the heading has been stemmed and any surplus explosives and detonators removed from the heading and from the vicinity of the entrance thereto.

57. The appropriate person shall make and secure the efficient carrying out of arrangements to ensure that there shall be kept at the office at every quarry an accurate plan of every heading at that quarry, showing the position, shape and dimensions thereof and indicating the amount and location of any explosives or detonators for the time being therein. Every such plan shall be preserved until the expiration of one year after the date upon which the heading to which it relates ceases to exist.

PART VIII

MISS-FIRES

58.—(1) A shot shall be treated as a miss-fire if it fails to explode, in the case of a shot being fired at a quarry (whether or not in conjunction with detonating fuse)—

(*a*) by safety fuse, after the shot firer has withdrawn after once lighting or attempting to light the safety fuse or any other material or apparatus approved by the Minister for firing shots by safety fuse; or

(*b*) electrically, and either as a single shot or in a round, after the shot firer, having attempted unsuccessfully to fire the shot, has followed the procedure described in paragraph (2) of this regulation.

(2) The said procedure is that the shot firer shall—

(*a*) disconnect from the shot firing apparatus any removable handle or key and the shot firing cable;

(*b*) after waiting five minutes, examine the cable and connections for any defect, and remedy any defect so found; and

(*c*) make a further attempt to fire the shot.

59.—(1) Any person drilling a shot hole at a quarry near a miss-fire shall ensure that the hole is drilled in such manner as to avoid touching or otherwise affecting any unexploded detonator or charge of the miss-fire.

(2) If any miss-fire contains a detonator, the leads or fuse thereof shall be attached by a string to the shot firing cable, or to some distinctive marker.

60. Whenever any miss-fire at a quarry has been or may have been dislodged by the firing of another shot a search shall be made, by or under the supervision of the shot firer or a competent person authorised for the purpose by the appropriate person, for the detonator (if any) and the charge of the miss-fire before any person resumes work and before any further shot is fired at or near that place.

General precautions

61. In the event of a miss-fire at a quarry, no person shall approach the shot hole or place where the charge was placed (as the case may be) until, if the shot is being fired (whether or not in conjunction with detonating fuse)—

(*a*) by safety fuse, there have elapsed, from the lighting of the safety fuse or the attempt to light it, not less than thirty minutes; or

(*b*) electrically, the shot firer has disconnected any removable handle or key and the shot firing cable from the shot firing apparatus, and there have elapsed, from the last attempt to fire the shot, not less than five minutes.

62. In the event of a miss-fire at a quarry, the shot firer concerned shall forthwith give, or cause to be given, warning of the miss-fire to all persons approaching or likely to approach the shot hole or place where the charge was placed (as the case may be) and notice thereof to the person under whose immediate charge he works.

63. In the event of a miss-fire at a quarry, the shot firer concerned shall—

(*a*) if he leaves the place where the miss-fire occurred before the completion of the appropriate procedure specified in any scheme in force in pursuance of regulation sixty-four, ensure that sufficient danger notices are erected to warn any person approaching the place; and

(*b*) record the fact of the miss-fire in a book provided for the purpose by the owner of the quarry.

Scheme for remedial action

64.—(1) At every quarry the appropriate person shall ensure that there is at all times in force thereat a scheme specifying the procedure to be followed in the event of a miss-fire and in the event of an unsatisfactory result of a test made in pursuance of paragraph (4) of regulation twenty-seven, and that scheme shall contain provisions for securing the safety of all persons in the vicinity.

(2) At every quarry the appropriate person shall ensure that a copy of the scheme is provided thereat in the covered accommodation provided in pursuance of section one hundred and thirty-five of the Act and that a copy thereof is supplied to each shot firer employed at the quarry.

(3) If an inspector is of opinion with respect to the scheme that the provisions contained therein are not adequate to ensure the taking of proper remedial action in the event of a miss-fire or an unsatisfactory result of a test made in pursuance of paragraph (4) of regulation twenty-seven, or to ensure the taking of proper safety precautions, he may serve on the appropriate person a notice stating that he is of that opinion, specifying the

nature of the provision which in his opinion ought to be made and requiring the appropriate person to amend the scheme accordingly and any such notice shall, if it is so specified therein, become operative forthwith.

(4) The provisions of Part XV of the Act with respect to references upon notices served by inspectors shall apply to a notice served under the last preceding paragraph and the relevant ground of objection to such a notice shall be that the provisions contained in the relevant scheme are adequate to ensure the taking of proper remedial action or the taking of proper safety precautions (as the case may be).

Dated this twenty-third day of December, nineteen hundred and fifty-nine.

Richard Wood,
Minister of Power.

EXPLANATORY NOTE

(This note is not part of the regulations, but is intended to indicate their general purport.)

These regulations made by the Minister of Power under the Mines and Quarries Act, 1954, apply to quarries.

Part II of the regulations prohibits the firing of shots except by competent persons, appointed for the purpose by the manager. Such persons must not be under the age of 21 except where they were appointed shot firers under special regulations or special rules revoked by these regulations.

Under Part III explosives, detonators and fuse must be stored at an explosives store, and provision is made for the issue thereof. Part III also provides for the control of the issue of detonators, and the conveyance and care of explosives and detonators.

Part IV relates to the provision, use and care of equipment, apparatus and material for firing shots. Defective electric shot firing apparatus must be dealt with as provided in regulation 22, and the misuse of shot firing apparatus is prohibited by regulation 23.

Part V regulates the firing of shots generally and in particular deals with the firing of shots electrically (reg. 27) and under water (reg. 28). Provision is made (reg. 30) for requiring the appropriate person at a quarry to make shot firing rules allotting duties to competent persons to be performed when shot firing is being carried on. Regulation 31 relates to the giving of warning and taking of shelter, and regulation 32 provides for the taking of appropriate precautions after the firing of any shot to ensure that working may be resumed safely.

Part VI contains additional provisions (applicable except in the case of heading blasting) relating to the drilling, cleaning and charging of shot holes, and the methods whereby shots may be fired. Part VII makes provision for similar matters in relation to heading blasting.

Miss-fires are dealt with in Part VIII. Regulation 58 lays down when a shot is to be treated as a miss-fire, and regulation 61 specifies the general precautions to be taken in the event of a miss-fire. There must, under regulation 64, at all times be in force a scheme specifying the procedure to be followed after any miss-fire.

An inspector is empowered (reg. 3) to exempt any quarry or part of a quarry or any thing at a quarry from the application of any provision of the

regulations, if he is satisfied that the safety of persons employed at the quarry will not be prejudiced thereby.

These regulations revoke—

(*a*) all special regulations, made under the 1954 Act and in force at certain individual quarries, relating to the supply, storage or use of blasting materials or devices; and

(*b*) all special rules relating to the use of explosives established at particular quarries under the Metalliferous Mines Regulation Act, 1872, (as applied to quarries by the Quarries Act, 1894) and continued in force as regulations by the 1954 Act.

ACCIDENTS AND DISEASES, NOTIFICATION

1959 No. 2117

The Mines (Notification of Dangerous Occurrences) Order, 1959

Made - - - -	11*th December*, 1959
Laid before Parliament	18*th December*, 1959
Coming into Operation	1*st January*, 1960

Whereas the Minister of Power is of opinion that the special classes of occurrences at mines which are hereinafter specified are of so dangerous a nature as to render it expedient that notice should be given under section one hundred and sixteen of the Mines and Quarries Act, 1954(**a**), in every case thereof:

Now, therefore, the Minister in pursuance of the powers conferred upon him by subsection (1) of section one hundred and seventeen and section one hundred and seventy-three of the said Act, and of all other powers him enabling, hereby orders as follows:—

1. This order shall come into operation on the first day of January, nineteen hundred and sixty, and may be cited as the Mines (Notification of Dangerous Occurrences) Order, 1959.

2.—(1) In this order the following expressions have the meanings hereby respectively assigned to them, that is to say—

"the Act" means the Mines and Quarries Act, 1954;

"auxiliary fan" means a fan used or intended to be used below ground wholly or mainly for ventilating a heading, drift or blind end.

(2) The Interpretation Act, 1889(**b**), shall apply to the interpretation of this order as it applies to the interpretation of an Act of Parliament, and as if this order and the orders hereby revoked were Acts of Parliament.

3. The provisions of the said section one hundred and sixteen of the Act are hereby extended to occurrences at a mine of each of the following special classes (whether death or serious bodily injury is thereby caused or not), that is to say occurrences in which—

(*a*) any gas, other than gas in a safety lamp, or dust is ignited below ground;

(a) 2 & 3 Eliz. 2. c. 70. (b) 52 & 53 Vict. c. 63.