



## THE QUARRIES REGULATIONS 1983

DAVID BEATTIE, Governor-General

### ORDER IN COUNCIL

At the Government Buildings at Wellington this 21st day of  
March 1983

Present:

THE RIGHT HON. D. MACINTYRE PRESIDING IN COUNCIL

PURSUANT to the Quarries and Tunnels Act 1982, His Excellency the Governor-General, acting by and with the advice and consent of the Executive Council, hereby makes the following regulations.

#### ANALYSIS

- |  |  |
|--|--|
| <ol style="list-style-type: none"> <li>1. Title and commencement</li> <li>2. Interpretation</li> <li style="padding-left: 2em;"><i>Certificates of Competency</i></li> <li>3. A-grade quarry managers' surface certificates</li> <li>4. B-Grade quarry managers' surface certificates</li> <li>5. Quarry managers' surface permits</li> <li>6. Syllabus for quarry managers' surface certificates and permits</li> <li>7. Quarry shot firers' certificates</li> <li>8. Register of certificates</li> <li>9. Fee for duplicate certificate</li> <li style="padding-left: 2em;"><i>Safety and Protection</i></li> <li>10. Duties of quarry manager</li> <li>11. Duties of persons employed</li> <li>12. Training and supervision</li> <li>13. Precautions against fire</li> <li>14. Lights and lighting</li> <li>15. Protective helmets and other protective equipment</li> <li>16. Safety belts and ropes</li> <li>17. Machinery and plant</li> <li>18. Persons to wear close-fitting garments, etc.</li> </ol> | <ol style="list-style-type: none"> <li>19. Suppression of dust</li> <li>20. Railway sidings</li> <li>21. Rope haulage tramways</li> <li>22. Self-propelled vehicles</li> <li style="padding-left: 2em;"><i>Sanitation, Hygiene, and Amenities</i></li> <li>23. Sanitation and hygiene</li> <li>24. Provision of first aid</li> <li>25. Amenities</li> <li style="padding-left: 2em;"><i>Explosives</i></li> <li>26. New Zealand Standard to be complied with</li> <li>27. Danger to life and property</li> <li>28. Magazines</li> <li>29. Naked lights not allowed in magazines</li> <li>30. Opening of explosives cases</li> <li>31. Quantity of explosives to be taken from magazine</li> <li>32. Explosives to be removed</li> <li>33. Persons allowed to fire shots</li> <li>34. Age limit</li> <li>35. Preparation of capped fuses and primers</li> <li>36. Explosives to be carried in securely covered containers</li> <li>37. Tamping of explosives</li> <li>38. Stemming</li> </ol> |
|--|--|

39. Wrappings to be left on cartridges
40. Diameter of drill holes
41. Charges to be fired when charged
42. Firing warnings
43. Blasting shelters
44. Igniting of safety fuse
45. Shots to be counted
46. Face to be checked before drilling
47. Examination of unexploded holes
48. Holes not to be drilled in butt holes
49. Treatment of misfired charges
50. Bulling charges
51. Shot firing from electric power supply prohibited
52. Electric batteries not to be used for shot firing
53. Use of electric exploder
54. Short circuiting of firing cables
55. Extraneous electricity
56. Tunnel blasts

*Quarry Faces, Benches, and Bench Access*

57. Information to be supplied
58. Quarry faces, benches, etc.
59. Fencing of quarries

*Dredging*

60. Regulations to apply to dredging
61. Design of dredges to be approved, etc.
62. Safety appliances
63. Unsafe dredge
64. Inspection of safety appliances
65. Name of person in charge to be notified
66. Accidents to be reported

*Miscellaneous Provisions*

67. Annual returns
  68. Duty generally
  69. Regulations to be displayed
  70. Revocations
- Schedule

## REGULATIONS

**1. Title and commencement**—(1) These regulations may be cited as the Quarries Regulations 1983.

(2) These regulations shall come into force on the 1st day of April 1983.

**2. Interpretation**—In these regulations, unless the context otherwise requires,—

“The Act” means the Quarries and Tunnels Act 1982:

“Approved” means approved by an Inspector:

“Board” means the Board of Examiners established under section 163 of the Mining Act 1971:

“Inspector” means an Inspector of Quarries:

“Record book” means the record book kept in accordance with regulation 10 of these regulations.

Expressions defined in the Act have the meanings so defined.

### *Certificates of Competency*

**3. A-grade quarry managers' surface certificates**—(1) Every application for an A-grade quarry manager's surface certificate shall be in form 1 set out in the Schedule hereto and shall be accompanied by the fees set out in subclause (2) of this regulation.

(2) The application fee payable for the examination shall be \$10 together with a fee of \$5 for each subject in which the candidate is to sit a written examination. The application fee shall relate to the whole examination and shall be payable once, but the fee of \$5 shall be payable for each written examination and each subsequent examination in the same subject.

(3) The examinations for A-grade quarry managers' surface certificates shall be held at such times and places as may be fixed by the Board.

(4) Every candidate shall, at least 1 month before the date fixed for the examination, make written application to be examined to the Secretary of the Board, Mines Division of the Ministry of Energy, Wellington.

(5) Every candidate shall produce written evidence of his experience in quarrying and of the quarries, tunnels, mines, or coal mines in which he has been employed and the period and nature of employment in each.

(6) The examination shall be written, but the Board may require a candidate to pass an oral examination by the Inspector in the candidate's knowledge of the Act and of these regulations.

(7) A candidate shall not be permitted to present himself for examination without an authority signed by the Secretary of the Board.

(8) Where a special examination is conducted by the Board, the candidate shall be required to meet the cost, and a sum sufficient to cover such cost shall be determined by the Board and be paid to the Secretary of the Board by the candidate before the date of the examination.

(9) For the better conduct of the examinations the Board may appoint supervisors with such functions and powers as the Board thinks fit. Every supervisor so appointed who is not otherwise employed in a department of State shall be paid such fee as may from time to time be authorised by the Minister.

(10) The Secretary of the Board shall keep a register of all certificates issued by the Board.

**4. B-grade quarry managers' surface certificates**—(1) Every application to be examined for a B-grade quarry manager's surface certificate shall be in form 2 set out in the Schedule hereto and shall be accompanied by a fee of \$10.

(2) Every candidate shall produce written evidence of his experience in quarrying and of the quarries, tunnels, mines, or coal mines in which he has been employed and the period and nature of employment in each.

(3) The examination shall be conducted orally and shall be held at such time and place as may be appointed by the Inspector.

**5. Quarry managers' surface permits**—(1) Every application to be examined for a quarry manager's surface permit shall be in form 3 set out in the Schedule hereto and shall be accompanied by a fee of \$10.

(2) Every candidate shall produce written evidence of his experience in the type of quarrying carried out at the quarry in respect of which the permit is sought, and of the quarries in which he has been employed and the period and nature of employment in each.

(3) The examination shall be conducted orally and shall be held at such time and place as may be appointed by the Inspector.

**6. Syllabus for quarry managers' surface certificates and permits**—

(1) The examination for quarry managers' surface certificates shall comprise the following subjects:

Subject I—*Quarrying, Machinery, and General*

(a) *Quarrying*: The design and layout of quarries, including the layout of benches, faces, access roads, drainage, and crushing plant; and the location of stockpiles of crushed rock and the disposal of waste rock. Elementary geology relating to quarry rock types, faults, shears, jointing, bedding, dip, and strike as they may relate to the siting of quarries and the layout of quarry workings and plant, having regard to the safe working of quarries. The methods of working quarry faces, with particular reference to face stability and the safety of persons employed in or about the quarry, and to the duties of the manager in that regard:

(b) *Machinery*: A knowledge of the plant operated in connection with the various kinds of quarrying operations, including plant used to work quarry faces, to transport broken rock, and to operate

crushing and screening plants. A knowledge of the requirements of legislation as to the care, maintenance, and safety precautions to be taken in the operation of such equipment and plant, including the duties of the manager in that regard:

- (c) *General*: Conditions under which provision for first aid is to be provided, and the nature of supplies and equipment to be maintained. A knowledge of the requirements for health and sanitation of the persons employed in or about a quarry, including the provision of meal rooms, ablution facilities, suppression of dust, and the supply of personal safety equipment.

**Subject II—Explosives and Blasting**

- (a) *Explosives*: The classification of all explosives ordinarily used in quarrying operations and the conditions under which each class is best used; the causes of deterioration in explosives and the means of detecting such deterioration; the storage and handling of explosives in magazines; the transport and handling of explosives in quarries; the description of and the handling and storage of detonators, detonating fuse, safety fuse, and ignition devices:

- (b) *Blasting*: The design and calculation of charges and the methods of charging and firing of quarry blasts; methods of initiating detonation of charges; methods of detecting defects in electrical firing apparatus; comparison of the effects of hole distribution; methods of minimising ground vibration, air blast, and fly rock due to blasting; the treatment of misfires; the disposal of deteriorated explosives; and the duties of a quarry manager with regard to the carrying out of blasting operations.

(2) The syllabus for a quarry manager's surface permit shall comprise Subject I as set out in subclause (1) of this regulation, with particular emphasis on face stability in sand, gravel, unconsolidated ground, or underwater excavation, as the case may be, for the particular quarry in respect of which the permit is sought.

**7. Quarry shot firers' certificates**—(1) Every application to be examined for a quarry shot firer's certificate shall be in form 4 set out in the Schedule hereto and shall be accompanied by a fee of \$10 and written evidence as to the applicant's experience in assisting in the preparation, charging, tamping, and firing of explosives.

(2) The examination shall be conducted orally and shall be held at such time and place as may be appointed by the Inspector.

(3) The subjects for examination for a shot firer's certificate shall be the preparation of charges, the charging of holes and firing of blasts, and methods of initiating blasts; and the safety provisions as to the use of explosives contained in the Act and these regulations.

**8. Register of certificates**—The Inspector shall keep a register of all certificates and permits issued by him, in addition to complying with section 21 of the Act.

**9. Fee for duplicate certificate**—The fee payable for the issue of a duplicate certificate of competency under section 20 (2) of the Act or under section 167 (2) of the Mining Act 1971 shall be \$10.

*Safety and Protection*

**10. Duties of quarry manager**—(1) The manager of a quarry shall see that the provisions of the Act and of these regulations are carried out, and shall take all reasonable precautions for the safety and health of workers and persons lawfully in or about the quarry.

(2) The manager, or an approved person appointed by the manager in writing, shall daily, within 2 hours immediately before the commencement of the first working shift of the day in any part of the quarry, inspect every working place and travelling road, and all adjacent places from which danger might arise, and shall forthwith make a true report of the inspection in a record book kept for the purpose at the quarry. The record book shall be accessible to the Inspector and the persons employed in or about the quarry.

(3) The manager, or an approved person appointed by the manager in writing, shall at least once in every 24 hours examine the state of the safety appliances or gear connected with quarrying operations in the quarry, and shall record the examination in the record book.

(4) The manager shall once in each week carefully examine the buildings, machinery, faces, benches, and all working places used in the quarrying operations, and shall forthwith after every such examination record in writing in the record book his opinion as to their condition and safety and as to any alterations or repairs required to ensure greater safety of the persons employed in the working of the quarry. The manager shall then ensure that any such alterations or repairs are carried out.

(5) The manager shall ensure that any misfire, premature explosion, accident, or dangerous occurrence is recorded in the record book.

**11. Duties of persons employed**—(1) All persons employed in or about a quarry shall comply with the provisions of the Act and of these regulations and with such directions concerning safety and discipline as may be given to them by the manager of the quarry.

(2) No person employed in or about a quarry shall, without reasonable cause, do anything likely to endanger any person.

(3) No person employed in or about a quarry shall, without reasonable cause, interfere with or misuse any appliance, apparatus, clothing, convenience, device, equipment, guard, or other thing whatever, provided for securing the health, safety, or welfare of persons employed in or about the quarry. Every person employed in or about a quarry shall, as often as the circumstances for which it is provided arise, use any appliance, apparatus, clothing, convenience, device, equipment, guard, or thing so provided.

(4) Every person employed in or about a quarry who notices anything unsafe or likely to produce danger shall forthwith report it to the manager or person in charge.

(5) Every person shall, before commencing work and during the course of it, and especially after blasting, make a careful examination of his working place and remove any loose rocks, stones, or earth which might be dangerous.

(6) No person employed in a quarry shall throw down rock, stones, earth, or other material which might endanger other persons without giving them warning and seeing that they have retired to a safe place.

(7) No person shall enter or remain in or about a quarry while in a state of intoxication or under the influence of drugs; and no person shall take intoxicating liquor or drugs into or about a quarry except in the case of illness or accident, and then only with the approval of the manager.

**12. Training and supervision**—The occupier of a quarry shall ensure that no person is employed on any quarrying operation in or about the quarry unless—

- (a) The person has sufficient knowledge of and experience in the type of operation being carried out; or
- (b) The person is being adequately supervised and trained by a person with sufficient knowledge of and experience in the type of operation being carried out—

and the person has been adequately instructed as to the dangers likely to arise in connection with that particular quarrying operation and the precautions to be taken against those dangers.

**13. Precautions against fire**—The manager of every quarry shall take adequate precautions against the outbreak of fire, for the adequate warning of employees, and for the prompt suppression of any such outbreak.

**14. Lights and lighting**—Approved lighting shall be provided in all inside working places where natural lighting is inadequate to provide safe working conditions and in all places in the surface workings of a quarry where work is carried out during the hours of darkness.

**15. Protective helmets and other protective equipment**—(1) In every quarry the occupier, or the manager on his behalf, shall cause to be supplied to each employee, and to every person in the quarry, a protective helmet of an approved type; and such helmet shall be worn in the quarry surface workings at all times, and in such other areas of the quarrying operations as may be required by the Inspector.

(2) Every person shall wear protective footwear of an approved type while working on quarrying operations.

(3) If any quarrying operation involves a risk of injury to the eyes from flying particles or fragments, from corrosive or irritant substances, from ultraviolet, infrared, or other harmful radiations, or from any other cause, the occupier, or the manager on his behalf, shall, if the persons employed in the operation are not protected in any other approved way, provide each person so employed with suitable and efficient equipment or appliances for the protection of that person's eyes, and keep such equipment and appliances properly maintained.

(4) If, in the opinion of the Inspector, any noise arising from any process or activity carried out in or about any quarry is likely to cause impairment of hearing of the persons employed therein, the occupier, or the manager on his behalf, shall take all practical steps to prevent those persons from being exposed to that noise.

(5) If, in the opinion of the Inspector, it is not practicable to prevent exposure to the noise by reducing the noise level of the process or activity, the occupier, or the manager on his behalf, shall cause all persons exposed to the noise to be provided with a personal ear protection device of a type approved by the Chief Inspector of Quarries after consultation with the Director-General of Health.

(6) Every safety helmet and other protective equipment used in quarrying operations shall be maintained by its owner in serviceable condition. Any such equipment supplied by the occupier shall be replaced by him if it becomes unserviceable, without cost to the employee using it, unless it became unserviceable as the result of wilful damage by the employee, in which case the employee shall meet the cost of replacement.

**16. Safety belts and ropes**—(1) Every employee working on the face of a quarry at a height greater than 2 metres above the level of the quarry floor or bench floor shall be attached at all times to a properly secured safety rope by means of a safety belt or other approved appliance.

(2) Every employee who descends into any bin, hopper, or stockpile cavity shall be attached at all times to a properly secured safety rope by means of a safety belt or other approved appliance, and shall at all times while he is in that place be attended by a second person in a safe place who shall ensure that the safety rope is properly secured and that there is no unnecessary slack rope.

(3) Every employee shall before commencing work satisfy himself as to the safety of any rope and safety belt or other appliance intended to be used, and shall not use anything that he finds unsafe.

**17. Machinery and plant**—(1) All boilers, compressors, engines, gearing, crushing, and screening plant, and all parts of machinery, used for quarrying operations, shall be kept in a safe condition.

(2) Every flywheel and all exposed or dangerous parts of machinery used in or about a quarry shall be kept securely and safely fenced or guarded by fences or guards of approved design.

(3) All elevated platforms, walkways, and ladder ways shall be provided with adequate handrails and kickboards, unless otherwise approved.

(4) Machinery shall not be cleaned manually while it is in motion, nor oiled manually while it is in motion unless the oiling points are completely guarded from all moving parts.

**18. Persons to wear close-fitting garments, etc.**—(1) All persons whose duty it is to attend to moving machinery in or about a quarry shall wear close-fitting and close-fastened garments which cannot readily be caught by or entangled in the machinery.

(2) No person, unless his hair is cut short or securely fixed and confined close to his head, shall work or be allowed to work in any position in or about a quarry where he is likely to come into direct contact with moving machinery.

**19. Suppression of dust**—(1) Where dust is produced in the course of quarrying operations in or about a quarry or a crushing or screening plant to such an extent that the health of the persons employed therein may be endangered, the occupier or manager shall make provision for preventing or allaying the dust or the danger to persons liable to inhale the dust. No person shall work in, or cause or allow to be worked, any place or any crushing or screening plant until such provision is made and effectively and constantly used.

(2) The provisions so made shall be such as to lay the dust by the use of water delivered from sprays or jets or other effective methods, and shall be approved by the Inspector:

Provided that, if it is not practicable to make such provision to prevent or allay the dust or danger in a working place, the occupier or manager shall provide every person employed in that place with a respirator of an approved type. Every person so supplied with a respirator shall use it constantly while working in the dusty atmosphere.

(3) Every person in a quarry shall comply with the instructions of the manager or the Inspector as to the use of water and the appliances provided in the quarry for the suppression of dust.

(4) If, in the opinion of the Inspector, the dust from the exhaust of a crushing plant dust-extraction system, or from stockpiles, waste dumps, or roadways in or about a quarry, is a nuisance to persons employed in or in the vicinity of the quarry and is detrimental to their health, he shall give notice in writing to that effect; and the manager shall thereupon provide and cause to be constantly used such appliances as will effectively lay the dust.

(5) The water that is used for the purpose of laying dust shall be free from pollution by noxious matter.

**20. Railway sidings**—(1) No person shall pass immediately in front of or between wagons which are being loaded, except the person in charge of the wagons.

(2) Where, during the period between 1 hour after sunset and 1 hour before sunrise, or during foggy weather, shunting or any operations likely to cause danger to persons employed in or about the quarry are carried on, efficient lighting shall be provided either by hand lamps or stationary lights, as the case may require, at all points where necessary for the safety of any such persons.

(3) Materials of any kind shall not be placed near a line of rails in such a manner as to expose persons to risk of injury from traffic by having to pass on foot over the materials or between the materials and the line, and in no case, except with the permission of the Inspector, shall materials be placed within 1.7 m from the centre line of the nearest line of rails.

(4) No person shall cross a line of rails by climbing over or passing underneath a train or wagons thereon where there may be risk of danger from traffic.

(5) Where railway wagons are specially placed so as to afford a thoroughfare, the thoroughfare shall be at least 4.5 m in width.

(6) Where a locomotive is engaged in pushing more than 1 wagon and risk of injury may thereby be caused to persons employed in or about the quarry, a person shall, wherever it is safe and reasonably practicable to do so, accompany or precede the front wagon, or other effective means shall be taken to obviate any such risk.

(7) No person shall place himself upon the buffer of a locomotive or wagon in motion unless there is a secure handhold on it which is kept unobstructed at all times, nor stand on the buffer unless there is also a secure footpace on it.

(8) A locomotive or wagon shall not be moved on a line of rails until warning has been given by the person in charge of it to persons employed in or about the quarry whose safety is likely to be endangered thereby.

(9) Where persons in or about a quarry have to pass on foot or work over or near a line of rails, a locomotive or wagon shall not be moved on the line during the period between 1 hour after sunset and 1 hour before sunrise, or during foggy weather, unless the approaching end is distinguished by a suitable light or, where it is safe and reasonably practicable, the locomotive or wagon is accompanied by a man with a lamp.

(10) Every space between the rails or turnouts and crossings in which the foot of a person passing over the space is liable to be caught shall be kept filled with concrete, asphalt, or wooden blocks.

(11) A structure, or part of a structure, with a height of more than 2.3 m above the rail level shall not be erected or allowed to remain within 1.7 m from the centre line of the nearest line of rails except with the permission of the Inspector.



**21. Rope haulage tramways**—(1) No tramway or aerial incline worked by ropes shall be installed or operated in a quarry without the prior written approval of the Inspector, who shall satisfy himself as to the safety of the design and installation before giving such approval.

(2) The ropes, machinery, appliances, and permanent way of such installations shall be kept in a safe and efficient state of repair.

(3) No person shall remain under the rope or chain of an aerial incline while a wagon or load is in motion in a quarry. While a load is being moved on the landing table no person shall remain immediately beneath it; and no person shall be allowed, without permission from the manager or other official of the quarry, to ascend or descend by means of an aerial incline.

(4) The rails on the tops of all inclines and on all landing tables in a quarry shall be provided with proper stops or other appliances for preventing the wagons from running away.

(5) Only wire ropes shall be used for haulage purposes on self-acting inclines in a quarry. Such ropes shall be approved by the Inspector before installation and shall be subject to such tests at such times during the life of the rope as may be required by the Inspector in the approval given under subclause (1) of this regulation.

(6) Every haulage incline and self-acting incline exceeding 50 m in length in a quarry shall be fitted with bells or other adequate signalling devices using a code of signals approved by the Inspector in the approval given under subclause (1) of this regulation.

(7) On every inclined haulage road in a quarry where mechanical haulage other than endless rope or chain is used, provision shall be made, to the satisfaction of the Inspector, to arrest the runaway trucks before reaching the bottom of the incline, and, where direct haulage is in use, a backstay or trailer shall be attached to each ascending truck or set of trucks.

(8) No person shall ride upon any truck attached to a haulage rope in a quarry without the written permission of the manager.

**22. Self-propelled vehicles**—(1) In this regulation, “vehicle” means a motorcar, truck, bulldozer, scraper loader, front-end loader, face shovel, and any other type of self-propelled unit used in or about a quarry.

(2) A person under the age of 18 years shall not drive or otherwise be in charge of any vehicle in or about a quarry.

(3) A person shall not drive or otherwise be in charge of any vehicle in or about a quarry unless—

(a) He has demonstrated to the manager or to some competent person appointed in writing by the manager, by a thorough practical test, his ability to drive or to have charge of the vehicle; and

(b) He has the manager’s written authority to drive or be in charge of the vehicle.

(4) Every vehicle used in or about a quarry shall be maintained in a safe condition and shall carry a current warrant or certificate of fitness, as the case may be. If such a warrant or certificate is not required under the Transport Act 1962 in respect of any vehicle, that vehicle’s steering, brakes, audible warning device, and (if operated outside daylight hours) headlights and tail-light shall be maintained in a fully operative and safe condition.

(5) At the commencement of each shift the controls and safety attachments of each vehicle shall be examined by the operator, who shall immediately report any defect to the manager.

(6) At least once every week each vehicle shall be examined by a competent person appointed by the manager, and the appointed person shall ensure that the vehicle is in all respects in proper working order and keep a record of the results of his examination.

*Sanitation, Hygiene, and Amenities*

**23. Sanitation and hygiene**—(1) At every quarry a sufficient number of privies and urinals shall be provided for the use of employees and shall be properly maintained and kept in a clean condition to the satisfaction of the Inspector.

(2) At every quarry a supply of potable water, sufficient for the needs of the persons employed, shall be provided. If persons are employed in places remote from the source of water supply, suitable clean containers of potable water shall be provided for their use.

(3) Suitable facilities for washing shall be provided and maintained in a clean and tidy condition to the satisfaction of the Inspector, and those facilities shall be conveniently accessible for the use of persons employed in or about the quarry.

**24. Provision of first aid**—(1) At every quarry there shall be provided, kept in good condition, and ready for immediate use—

(a) A suitably constructed stretcher with a blanket; and

(b) A first-aid box equipped to a standard approved by the Medical Officer of Health.

(2) If the size of the quarry is such that immediate access to the first-aid box is not available, the Inspector may require additional first-aid boxes to be kept at such locations as he may specify.

(3) The manager or some person appointed by him shall at least once every working week personally inspect the first-aid equipment and satisfy himself that it complies with the requirements of this regulation.

(4) A person trained in administering first aid to the injured shall be available to every quarry.

**25. Amenities**—(1) There shall be provided and maintained for the use of persons employed in a quarry adequate and suitable accommodation for clothing not worn during working hours.

(2) Unless otherwise specified by the Inspector, where meals are eaten at a quarry, the occupier shall provide and maintain a suitable room in which meals may be eaten. The room shall be furnished and equipped with—

(a) Seating, a table, and a means for heating water; and

(b) An impervious metal receptacle with a well-fitting cover in which all waste food, paper, and other rubbish shall be placed.

(3) The receptacle shall be emptied once each working day and the contents properly disposed of.

(4) Hand washing facilities shall be made available within a reasonable distance of the meal room.

(5) Any such meal room shall not be used for the storage of material or goods and shall be kept clean and tidy for the purposes for which it is provided.

(6) No person shall wilfully neglect to use the said rubbish receptacle nor wilfully throw food or rubbish about the quarry.

*Explosives*

**26. New Zealand Standard to be complied with**—Except as may be otherwise provided in these regulations, every person carrying out quarrying operations shall comply with New Zealand Standard 4403: 1976, “Explosives Code” in so far as it relates to the use of explosives in or about a quarry.

**27. Danger to life and property**—(1) Blasting operations shall not be conducted in such a manner as will cause danger to life or property.

(2) While blasting operations are being carried out within 90 metres of any road or thoroughfare, such number of persons as may be necessary shall be stationed thereon with warning notices to warn travellers of danger and to prevent access to the danger area.

**28. Magazines**—(1) Detonators shall not be stored in the same magazine as other explosives.

(2) Explosives and detonators shall be stored in magazines licensed under the Explosives Act 1957 by the Chief Inspector of Explosives sited at places approved by him and the Inspector.

(3) A person specially appointed in writing by the manager for the purpose shall be in charge of every magazine, and that person shall be responsible for the safe storage of explosives contained therein, for the distribution of explosives therefrom, and for the keeping of accurate records of stocks and issues in a book provided for the purpose.

(4) Magazines shall be kept clean.

(5) Explosives shall be used in the same order as that in which they were received.

**29. Naked lights not allowed in magazines**—(1) Naked lights shall not be introduced into a magazine or into any working place in a quarry where explosives are temporarily stored. A proper approved lamp shall be provided for use in such places.

(2) No person shall smoke in, or take matches or any other flame-making or spark-making appliance into, any magazine or explosives storeplace.

**30. Opening of explosives cases**—(1) No case or carton containing explosives shall be opened in the storage area of any magazine.

(2) Instruments made solely of wood, brass, or copper shall be used in opening cases or cartons of explosives, and the manager shall provide and keep provided suitable instruments for that purpose.

**31. Quantity of explosives to be taken from magazine**—Explosives shall not be taken from a magazine in quantities exceeding that required for use during 1 shift, and any surplus explosives shall be returned to the magazine at the end of that shift.

**32. Explosives to be removed**—In the event of the closing of any quarry or part of a quarry, the explosives stored therein shall be removed and disposed of as directed by the Inspector and in accordance with the provisions of clause 12.5 of New Zealand Standard 4403: 1976, “Explosives Code”.

**33. Persons allowed to fire shots**—The preparation of charges and the charging, tamping, and firing of all explosive charges in or about a quarry

shall be carried out under the personal supervision of the manager or of a competent person appointed in writing by the manager who shall be the holder of a quarry manager's or quarry shot firer's certificate issued under the Act:

Provided that where more than 1 shift is worked in a quarry, the person so appointed by the manager to be in overall charge shall be the holder of a quarry manager's certificate.

**34. Age limit**—No person under the age of 18 years shall be allowed to handle, charge, or fire explosives, in or about a quarry.

**35. Preparation of capped fuses and primers**—(1) Capped safety fuse shall be prepared by a person authorised in writing by the manager, in an approved place, using suitable approved fuse cutters and crimpers.

(2) Detonators shall not be inserted into the compound of a primer cartridge more than the length of the detonator.

**36. Explosives to be carried in securely covered containers**—Explosives, when taken from a magazine for use in the workings, shall be conveyed direct to the workings in a securely covered case, canister, or other suitable container of an approved type and pattern. Separate containers shall be used for conveying explosives, capped fuse, detonators, and primers.

**37. Tamping of explosives**—(1) The tool used for loading explosives or for tamping material in boreholes shall be a wooden tamping rod without metal parts or a loading device made of an approved substance.

(2) It shall be the duty of the manager or other person in charge of every quarry to keep at all times a sufficient number of suitable rods or loading devices available for use in connection with blasting operations.

**38. Stemming**—(1) Stemming shall be used in blast holes, unless otherwise approved in writing.

(2) When explosives have been tamped into holes and stemming is to be used, the stemming shall also be tamped. Tamping shall commence lightly but may be gradually increased in force, as the stemming is increased, until the hole is filled. Stemming shall be sand or other approved inert material which is to be inserted in the hole after explosives or between decks when deck loading.

**39. Wrappings to be left on cartridges**—Except in the case of free-running explosives or as may be otherwise approved, no person shall remove the wrappers around cartridges of explosives to be used in charging a hole.

**40. Diameter of drill holes**—(1) Every drill hole shall be of such diameter as will allow the charge to be freely inserted to the bottom of the hole without either ramming or removing the wrapper from the cartridge.

(2) The diameter of the drill hole shall be—

(a) At least 6 mm greater than the diameter of the cartridge, where the diameter of the cartridge is less than 35 mm:

(b) At least 10 mm greater than the diameter of the cartridge, where the diameter of the cartridge is 35 mm or more.

**41. Charges to be fired when charged**—Unless otherwise approved in writing under conditions set at the time of approval—

- (a) No greater number of holes shall be charged in any 1 working face than is intended to be fired in 1 blast on the day that the holes are charged; and
- (b) Charged holes not fired or exploded in a blast shall be treated as having misfired.

**42. Firing warnings**—(1) A person intending to fire a blast shall give a complete and definite warning before he fires to all persons in the vicinity who would be likely to receive injury, and the warning shall include information as to the locality of the blast and as to the number of charges to be exploded. In addition, the person intending to fire shall ensure that such persons take proper shelter and shall take proper shelter himself.

(2) In addition to such warnings being given, the person firing shall ensure that all means of ingress to the place where firing is about to take place are securely guarded against traffic by a notice and by persons acting under his instructions.

(3) Before blasting, visual and audible signals to signify “danger, blasting” shall be made, and after blasting is over an “all-clear” signal shall be given. It shall be the duty of the manager to ensure that all persons in or about the quarry are conversant with the signals used.

**43. Blasting shelters**—In all quarries where blasting is carried out, suitable approved shelters or safe places for shelter shall be provided and used by all persons in the quarry while blasting is being carried out.

**44. Igniting of safety fuse**—(1) When igniting more than 1 safety fuse only an approved type of igniter shall be used.

(2) In so lighting fuses, care shall be taken that no portion of the burning igniter falls into any of the holes or upon any of the fuses.

(3) No more than 6 charges shall be ignited each in succession at 1 time by any 1 person. Where the number of charges exceeds 6, electrical firing apparatus or an approved ignition device shall be used.

(4) Where a shot hole is being bulled, the fuse shall not be less in length than the depth of the shot hole, and in any other case where a fuse is used for firing a shot, the fuse shall not be less than 1 metre in length:

Provided that where use is made of an approved ignition device whereby a number of holes are fired at the same time, the fuses in individual holes shall not be less than 0.6 metres in length while the fuse which initiates ignition shall not be less than 1.2 metres in length.

**45. Shots to be counted**—(1) When charges of explosives are being fired by safety fuse at any 1 time in a working place, the number of shots exploding shall be counted, and if there is any doubt as to the number of shots which exploded a misfire shall be deemed to have taken place.

(2) Where 2 or more parties working near one another intend to fire they shall arrange the order of their firing in such a way as to avoid confusion in counting the explosions in each place.

**46. Face to be checked before drilling**—Drilling shall not be carried out on any face until the face has been checked, butt holes plugged, and the face examined for misfires.

**47. Examination of unexploded holes**—(1) If portion of a drill hole remains after firing in any working place, a misfire shall be deemed to have taken place unless it can be clearly seen by a competent person that no explosive remains in the hole after it has been washed out.

(2) Subclause (1) of this regulation shall apply to butt holes wherever they are found.

**48. Holes not to be drilled in butt holes**—(1) A hole shall not be drilled in, or within 150 mm of, the butt or remaining portion of a hole in which a charge of explosives has been previously fired.

(2) All butts shall be plugged with wooden plugs before drilling commences.

**49. Treatment of misfired charges**—(1) A charge that has misfired shall not be approached until 30 minutes has elapsed after the time of lighting the safety fuse or, if fired electrically, shall not be approached until 5 minutes has elapsed after firing and the conducting wires have first been disconnected and shorted.

(2) When holes are known to have misfired, a barricade or other obstruction with a danger notice shall be placed so as to notify the fact of the misfire, and if a misfire occurs at a change of shift the oncoming shift shall be advised.

(3) When a charge of ammonium nitrate/fuel oil mixture has misfired an attempt may be made to wash out the mixture in addition to any stemming down to the primer. The mixture shall be collected for safe disposal. The washing, reloading, and firing shall then follow the requirements of subclause (5) of this regulation.

(4) The stemming of a charge of gunpowder that has misfired may be withdrawn with a copper pricker and the charge reprimed and fired.

(5) A charge of any other compound which has misfired shall not be withdrawn but, if the charge is bottom primed, the stemming shall be carefully removed by the use of water passed through a copper, plastic, or rubber hose to the outer end of the charge and a sufficient charge or charges shall be inserted and fired for the purpose of exploding the original charge until it can be seen by a competent person, after the hole has been washed out, that no explosive remains. A thorough search shall be made for unexploded charges in the resulting rock pile.

(6) Subject to subclause (7) of this regulation, where it is not possible to remove a misfire by refiring, a relieving hole shall be drilled as nearly parallel as possible with the original hole in such a manner as will prevent it meeting the misfired hole. The relieving hole shall then be charged and fired.

(7) In carrying out the measures set out in subclause (6) of this regulation, the following provisions shall be complied with:

- (a) The collar of the misfired hole shall be effectively blocked by the insertion of a wooden plug, or shall be otherwise clearly marked;
- (b) Where the misfired hole is 50 mm or less in diameter and less than 3 m in length, the relieving hole shall not be drilled closer than 600 mm to the nearest point of the misfired hole;
- (c) With larger and longer holes the distance between the misfired hole and the relieving hole shall be increased as circumstances allow, having regard to the diameter and length of the misfired hole;

- (d) When an electric detonator is in the misfired hole, the detonator wires shall be first short circuited and then tied to some object to aid in the recovery of the detonator after the relieving hole has been fired.
- (8) Before any misfire is fired such special precautions as may be necessary, having regard to the burden on the misfired hole, shall be taken to guard against fly rock.
- (9) All explosives recovered from misfired holes shall be collected and disposed of in an approved manner.

**50. Bulling charges**—Where a bulling charge has been fired in a hole, subsequent charges or the main charge shall not be loaded until a sufficient quantity of water to fill the bulled chamber has been poured in or, as an alternative, the hole has been allowed to stand unloaded after bulling for at least 2 hours and a copper rod has been inserted in the hole for at least 5 minutes and found to be nowhere hot to the touch.

**51. Shot firing from electric power supply prohibited**—Electricity from power or lighting circuits shall not be used for firing explosive charges in or about a quarry.

**52. Electric batteries not to be used for shot firing**—A primary or secondary electric battery shall not be used for shot firing in or about a quarry.

**53. Use of electric exploder**—(1) When an exploder is used, the exploder, shot firing cable, wires, and detonators shall be suitable for the conditions under which blasting is to be carried out.

(2) The exploder shall be in the sole charge of the shot firer and shall be fitted with a handle or key which shall be detached when not required for firing and shall not in any circumstances pass from the personal custody of the shot firer while he is on duty:

Provided that a pocket-sized exploder without a detachable handle or key may be used if, while it is not in use, it is kept on the shot firer's person and does not in any circumstances pass from his personal custody while he is on duty.

(3) The exploder shall not be connected to the shot-firing cable until all other steps preparatory to the firing of the shots have been completed and all persons have gone to a place of safety.

(4) Immediately after the firing of the shot, the firing cable shall be disconnected from the exploder and shorted, and the handle or key, or pocket-sized exploder, shall be removed to the personal custody of the shot firer.

(5) The exploder shall be tested at frequent intervals by means of a blasting rheostat and detonator or by some other approved method. When cables and electric detonators to be used are to be tested, they shall be tested separately by an approved galvanometer or some other approved method. Detonators, when being tested, shall be suitably covered to protect the person conducting the test.

(6) Before the final connection to the exploder is made the circuit shall be tested for continuity from a safe place.

(7) During the charging operations, all electric power circuits leading to the point at which the exploder is to be used shall be isolated.

**54. Short circuiting of firing cables**—The firing cables leading to the shots to be fired shall be short circuited while the leads from the detonators are being connected to each other and to the firing cables. The short circuit shall not be removed until all persons have retreated from the working place, and it shall be so located that a premature explosion would be harmless to the men and the person opening the short circuit. The short circuit shall be replaced immediately after the cables have been disconnected.

**55. Extraneous electricity**—(1) During an electrical storm or in any other circumstances when lightning discharges may occur, no work in connection with the firing of electrically initiated charges shall be carried out in or about a quarry, and all persons shall be withdrawn to a safe place.

(2) The provisions of clause 11 of New Zealand Standard 4403:1976, "Explosive Code" relating to electrical storms, static electricity, and stray electric currents from transmission and distribution lines, radios, television, and radar transmitters shall be complied with in or about a quarry.

**56. Tunnel blasts**—(1) The provisions of this regulation shall apply only to tunnels or chambers driven to hold a charge of explosives to be used for the purpose of blasting down material at the surface of a quarry.

(2) Where it is intended to use more than 45 kg of explosives in 1 blast in any tunnel or chamber, the manager of the quarry shall cause a detailed theodolite survey of the tunnel or chamber to be made by a registered surveyor or a registered civil engineer. A plan of the tunnel or chamber, based on the survey (drawn to a scale of not less than 1:500), together with particulars of the kind, quantity, and position of the explosive charge or charges intended to be used, the proposed method of detonation of the charge or charges, the proposed method of testing the electrical circuit, and the provisions made for the safety of workmen during the testing of the circuit and during the firing of the charge, shall be delivered to the Inspector at least 14 days before the tunnel or chamber is intended to be charged.

(3) A tunnel or chamber shall not be so charged unless—

(a) The plan and particulars delivered to the Inspector pursuant to subclause (2) of this regulation have been approved by him in writing; and

(b) The tunnel or chamber has been inspected and approved in writing by the Inspector or by some person appointed in writing by him for that purpose who holds a general authority from the Chief Inspector of Quarries pursuant to subclause (4) of this regulation.

(4) For the purposes of subclause (3) (b) of this regulation, the Chief Inspector of Quarries may grant a written general authority to any person who in his opinion is experienced in the use of explosives in blasting and experienced in the working of quarries to so inspect and approve tunnels and chambers. Any such authority may be revoked by the Chief Inspector of Quarries at any time.

(5) Neither the manager, foreman, or other person for the time being in charge of any quarry, nor any other person whatever, shall charge or permit to be charged any tunnel or chamber with more than 45 kg of explosives otherwise than in accordance with the terms of the written approvals granted under subclause (3) of this regulation.



(6) The occupier of every quarry shall keep at the occupier's office at or nearest to the quarry a plan of the quarry (drawn to a scale of not less than 1:1000) showing the position, as determined by a detailed theodolite survey, of every tunnel or chamber in which a charge of more than 45 kg of explosives has been fired, together with a record of the quantity and kind of explosive used and the date of firing of the charge. Every such plan and record shall be produced to the Inspector on request.

*Quarry Faces, Benches, and Bench Access*

**57. Information to be supplied**—In addition to complying with section 32 of the Act, before the opening of a new quarry, the occupier shall provide the Inspector with—

- (a) Unless otherwise required by the Inspector, a plan drawn to a scale of not less than 1:1000 showing the proposed location of the quarry faces, waste rock disposal areas, bench access roads, crushing plant, and other quarry buildings in relation to the boundaries of the quarry;
- (b) A brief written description of the quarrying method to be adopted and the plant to be used in the quarrying operation; and
- (c) An environmental impact assessment on a form to be supplied by the Inspector.

**58. Quarry faces, benches, etc.**—(1) The working of the face, sides, tops, or overburden of a quarry shall be carried out in such a manner as will prevent danger from falls of ground.

(2) The overburden or tops of a quarry, and all loose ground or material, shall be cleared far enough back from the edge of the quarry to prevent danger to the persons employed.

(3) Unless otherwise approved by the Inspector in writing, the height of any quarry face shall not exceed—

- (a) 15 metres for competent rock; or
- (b) 3.5 metres for sand or unconsolidated ground.

(4) The Inspector shall not, under subclause (3) of this regulation, approve a face height of more than 30 metres without the prior approval of the Chief Inspector of Quarries. The Chief Inspector shall not give his approval unless a registered engineer experienced in rock and soil slope stability has reported in writing that he has carried out investigation and design work, including observation during excavation, and that the proposed face height is safe. The investigation and report shall be commissioned by the occupier of the quarry at his expense.

(5) The manager shall ensure that all stockpiles are kept in a safe condition.

(6) When a quarry is worked in benches, every bench shall—

- (a) Be so designed that no water drainage is discharged over a lower face; and
- (b) Where work is carried out using self-propelled vehicles or plant, have a width sufficient to operate such vehicles or plant safely.

(7) No bench in a quarry shall have a width less than half the height of the face above or less than 3.5 metres, whichever is the greater, unless otherwise approved in writing.

(8) The outer edge of every bench upon which self-propelled vehicles are used shall be clearly marked in an approved manner.

(9) Secure means of access shall be provided by which persons can go to and from every working place on benches.

(10) All vehicle access roads within a quarry shall be so constructed and maintained that the width and surface of the carriageways are safe for the purpose for which they are to be used. Where access roads to benches are used to transport the quarried product by vehicle down a gradient, then the maximum gradient shall be 1 in 10, unless otherwise approved by the Inspector in writing, and in no case shall such access road to a bench exceed a gradient of 1 in 5.

(11) The outer edge of bench access roads shall be clearly marked and protected in an approved manner. There shall be a clearance of not less than 1 metre between such markings or protection and the outer track of the carriageway.

**59. Fencing of quarries**—Unless otherwise approved by the Inspector, the boundaries of every quarry shall be securely fenced, including a gate that can be locked to prevent unauthorised entry to the quarry. The top of the quarry, if dangerous, shall also be securely fenced.

### *Dredging*

**60. Regulations to apply to dredging**—Except as may be otherwise provided in regulations 61 to 66 of these regulations, these regulations, so far as they are applicable and with the necessary modifications, shall apply in respect of dredging operations.

**61. Design of dredges to be approved, etc.**—(1) Before any dredge intended to be used in dredging operations is constructed, the owner shall supply the Inspector with plans of the dredge together with a report by a naval architect or an engineer qualified in the design of dredges as to the safety and stability of the dredge. Construction of the dredge shall not be commenced until the plans have been approved by the Inspector.

(2) Before any dredging operation is commenced, the owner of any dredge intended to be used in the operation (including any dredge the plans of which have been approved under subclause (1) of this regulation) shall supply the Inspector with plans of the dredge together with a report by a naval architect or an engineer qualified in the design of dredges as to the safety and stability of the dredge. Dredging operations shall not be commenced until the plans have been approved by the Inspector.

**62. Safety appliances**—(1) Except as may be otherwise authorised in writing by the Inspector, every dredge used for dredging operations shall be kept provided with approved safety appliances as follows:

- (a) A lifebuoy, a light line not less than 15 metres in length, and a boathook, near the bow of the dredge on the port side;
- (b) A lifebuoy, a light line not less than 15 metres in length, and a boathook, near the bow of the dredge on the starboard side;
- (c) A lifebuoy, a light line not less than 15 metres in length, and a boathook, near the stern of the dredge on the port side;
- (d) A lifebuoy, a light line not less than 15 metres in length, and a boathook, near the stern of the dredge on the starboard side;
- (e) A boat containing a light line not less than 15 metres in length and a boathook and equipped ready for use with oars and rowlocks, or some other approved method of propulsion;
- (f) A looped wire line securely fastened around the outside of the pontoons not more than 150 mm above the waterline:

(g) An adequate supply of life jackets.

(2) If the Inspector notifies the owner or person in charge of the dredge that the stream in which the dredge is being constructed or worked is deep or swift flowing, then, in addition to the appliances referred to in subclause (1) of this regulation, the dredge shall be kept provided with not less than 2 boats inclusive of the boat required to be kept under subclause (1)(e) of this regulation, and each of those boats shall be kept equipped ready for use and continuously furnished with a lifebuoy, a boathook, and a light line not less than 15 metres in length.

(3) Every member of a dredge crew when employed in boat work or in outboard work on the dredge shall wear an approved life jacket.

(4) All safety appliances shall be kept in conspicuous places within easy reach, and when damaged or lost, shall be immediately replaced.

(5) The well hole of every dredge shall be fenced or covered over as far as is reasonably practicable, or, where such fencing or covering is not practicable, a moveable gangway not less than 750 mm wide and fitted with a substantial handrail at each side shall be provided and used by persons for crossing the well hole.

(6) No person shall step on the buckets or chain when they are in motion.

(7) On any dredge which is not entirely covered in, the sides of the uncovered portion of the hull shall be fitted with stanchions not more than 2.5 metres apart, and also with 2 substantial handrails or tightly stretched wires or chains, the lower rail, wire, or chain being not more than 250 mm above the deck. Such equipment may be moved for the purpose of taking fuel and material on board the dredge, but shall be kept in position at all other times.

(8) Every dredge working close to a bank shall be provided with a gangway not less than 750 mm wide and of sufficient length to reach from the bow of the dredge to the bank or from the stern of the dredge to the tailings dump, as the Inspector may direct; and the gangway shall be provided with a substantial handrail at each side and be secured to the deck of the dredge.

(9) The freeboard between the deck of the dredge and the surface of the water shall at no time be less than the Inspector directs.

(10) While men are engaged on a dredge during the period between sunset and sunrise the dredge decks, walkways, machinery, belts, and shafting, and the working face, shall be kept illuminated to the satisfaction of the Inspector, and all plant, cables, lamps, and appliances provided for that purpose shall be maintained in an efficient and safe condition to his satisfaction.

(11) Unless exemption is granted by the Inspector, the head and side lines of every dredge shall each have free and unobstructed play between the anchor and the dredge, and it shall be the duty of the owner and person in charge of every dredge, and of every person in charge of or giving orders or directions relating to the working thereof, to remove all obstacles likely to impede the free play of the head lines or to elevate the head lines over such obstacles.

(12) While a dredge is operating no work shall be allowed in the vicinity of any head lines or within the danger zone thereof, being the triangle formed by the head and the traverse of the dredge across the face.

(13) Warning notices shall be posted in a conspicuous position in all cases where head or side lines cross a path or other thoroughfare.

(14) Every anchor for a head line or side line shall be of adequate strength.

**63. Unsafe dredge**—(1) If the Inspector is of the opinion that a dredge is unsafe and should be condemned or be suspended from working, he shall by notice in writing addressed to the owner or person in charge of the dredge at the time, and delivered to the dredge, require all workmen to leave the dredge (except such workmen as are required for the necessary work to make the dredge safe) and for the dredge to cease working.

(2) Dredging operations shall not be resumed until the Inspector has certified in writing under his hand that the dredge has been made safe.

**64. Inspection of safety appliances**—(1) The person in charge of every dredge, or some other approved person appointed by him for the purpose, shall at least once in every 24 hours examine the condition of all safety appliances and of the pontoons; and the person in charge shall once in each week carefully examine the buildings, pontoons, safety appliances, and machinery used in the working of the dredge. Forthwith after every examination made under this subclause, the person who made the examination shall record in writing, in a book to be kept for that purpose, his opinion as to the condition and safety of the things examined and as to any alterations or repairs required to ensure greater safety to the persons employed in working the dredge.

(2) Such book shall, on demand, be open to the inspection and perusal of any Inspector or Inspector of Machinery, and all safety appliances and machinery found to be unsafe by any such Inspector shall forthwith be removed or made safe to his satisfaction.

(3) Such book, or a copy thereof, and a copy of the Act and of these regulations, shall be kept at the office of the dredge, or, if there is not an office, at some convenient covered place on the dredge; and any Inspector and any person employed on the dredge may at all reasonable times inspect the said book or copies and take copies of or extracts from them.

**65. Name of person in charge to be notified**—The owner of every dredge shall from time to time notify the Inspector, in writing, of the name of the person in charge of and employed on the dredge, and of that person's qualifications; and shall at all times cause the name of the person in charge to be kept posted in some conspicuous place on the dredge.

**66. Accidents to be reported**—Every person in charge of a dredge shall forthwith report in writing to the Inspector any accident or serious leak connected with the pontoon of the dredge, and every case of the dredge sinking.

#### *Miscellaneous Provisions*

**67. Annual returns**—The annual return required to be furnished under section 35 of the Act shall be in such form as may be prescribed or provided by the Deputy Secretary.

**68. Duty generally**—(1) Whenever these regulations require that any equipment shall be provided, or that any act, matter, or thing shall be done or shall not be done in or about a quarry, it shall be the duty of the occupier and the manager to provide any such equipment or to do or cause to be done or to refrain from doing and as far as possible to prevent any other person from doing any such act, matter, or thing, as the case may be.

(2) Whenever in these regulations an obligation is expressly or by implication cast upon any employee or any other person to do or refrain from doing any act, matter, or thing in or about a quarry it shall be the duty of any such employee or other person to do or refrain from doing that act, matter, or thing, as the case may require.

**69. Regulations to be displayed**—(1) A copy of these regulations and of any amendments thereof shall at all times be posted in a conspicuous place at the quarry to which all persons employed at the quarry have access.

(2) It shall be the duty of the manager to see that all copies are at all times so posted and kept in a legible condition and available for inspection at any reasonable time.

**70. Revocations**—The following regulations are hereby revoked:

(a) The Quarries Regulations 1959\*:

(b) The Quarries Regulations 1959, Amendment No. 1†.

\*S.R. 1959/4  
†S.R. 1977/44

---

SCHEDULE

Form 1

Reg. 3

APPLICATION TO BE EXAMINED FOR A-GRADE QUARRY  
MANAGER'S SURFACE CERTIFICATE

(Quarries and Tunnels Act 1982)

The Secretary,  
Board of Examiners,  
Mines Division,  
Ministry of Energy,  
Wellington.

I, [Full name, address, and occupation] hereby apply to be examined for an A-grade quarry manager's surface certificate and enclose the fee\* of \$..... and the written evidence referred to in the Schedule hereto.

I hereby declare that—

1. My practical experience in the underground workings of a quarry, tunnel, mine, or coal mine is as set out in the Schedule hereto.

or

1. I am the holder of a mine manager's certificate under the Mining Act 1971 or the Coal Mines Act 1979.

2. My date of birth is .....

SCHEDULE

PARTICULARS OF EMPLOYMENT AND NATURE OF EVIDENCE

†Names and Localities of Quarries, Tunnels, Mines, or Coal Mines (Specify Each)	Name of Employer	Period of Employment		Nature of Employment	Nature of Written Evidence Enclosed
		From	To		

.....  
Signature of Applicant

Date: .....

\*The fee is \$10 plus \$5 for each subject in which the applicant is to sit a written examination.

†Applicants should give particulars of every quarry, tunnel, mine, or coal mine in which they have been employed.

—

SCHEDULE—continued

Reg. 4

Form 2

APPLICATION TO BE EXAMINED FOR B-GRADE QUARRY MANAGER'S SURFACE CERTIFICATE

(Quarries and Tunnels Act 1982)

The Inspector of Quarries,

.....

I, [Full name, address, and occupation] hereby apply to be examined for a B-grade quarry manager's surface certificate and enclose the fee of \$10 and the written evidence referred to in the Schedule hereto.

I hereby declare that—

1. My practical experience in the underground workings of a quarry, tunnel, mine, or coal mine is as set out in the Schedule hereto.

or

1. I am the holder of a mine manager's certificate under the Mining Act 1971 or the Coal Mines Act 1979.

2. My date of birth is .....

SCHEDULE

PARTICULARS OF EMPLOYMENT AND NATURE OF EVIDENCE

*Names and Localities of Quarries, Tunnels, Mines, or Coal Mines (Specify Each)	Name of Employer	Period of Employment		Nature of Employment	Nature of Written Evidence Enclosed
		From	To		

.....  
Signature of Applicant

Date: .....

\*Applicants should give particulars of every quarry, tunnel, mine, or coal mine in which they have been employed.

SCHEDULE—continued

Form 3

Reg. 5

APPLICATION TO BE EXAMINED FOR A QUARRY  
MANAGER'S SURFACE PERMIT

(Quarries and Tunnels Act 1982)

The Inspector of Quarries,  
.....

I, [Full name, address, and occupation] hereby apply to be examined for a quarry manager's surface permit and enclose the fee of \$10 and the written evidence referred to in the Schedule hereto.

I hereby declare that—

- 1. The quarry or quarrying operation for which I seek the permit is .....
- 2. My experience in the type of work involved in the above quarry or quarrying operation is as set out in the Schedule hereto.
- 3. The above quarry or quarrying operation is one in which explosives are not used.
- 4. My date of birth is .....

SCHEDULE

PARTICULARS OF EXPERIENCE AND NATURE OF EVIDENCE

*Name and Locality of Quarry or Surface Mine (Specify Each)	Name of Employer	Period of Employment		Nature of Quarrying or Mining Operation and of Employment	Nature of Written Evidence Enclosed
		From	To		

.....  
Signature of Applicant

Date: .....

\*Applicants should give particulars of every quarry or surface mine in which they have had experience in the type of work involved in the quarry or quarrying operation for which the permit is sought.





SCHEDULE—continued

Reg. 7

Form 4

APPLICATION TO BE EXAMINED FOR QUARRY SHOT FIRER'S CERTIFICATE

(Quarries and Tunnels Act 1982)

The Inspector of Quarries,  
.....

I, [Full name, address, and occupation] hereby apply to be examined for a quarry shot firer's certificate and enclose the fee of \$10 and the written evidence referred to in the Schedule hereto.

I hereby declare that—

- 1. My experience in assisting in the preparation, charging, tamping, and firing of explosives is as set out in the Schedule hereto.
- 2. My date of birth is .....

SCHEDULE

PARTICULARS OF EXPERIENCE AND NATURE OF EVIDENCE

*Name and Locality of Quarry, Mine, Tunnel, or Other Place (Specify Each)	Name of Employer	Period of Employment		Nature of Experience With Explosives	Nature of Written Evidence Enclosed
		From	To		

.....  
Signature of Applicant

Date: .....

\*Applicants should give particulars of every quarry, mine, tunnel, or other place in which they have had experience with explosives.

P. G. MILLEN,  
Clerk of the Executive Council.

\_\_\_\_\_

## EXPLANATORY NOTE

*This note is not part of the regulations, but is intended to indicate their general effect.*

These regulations replace the safety provisions of the Quarries Act 1944 and the Quarries Regulations 1959 so far as they relate to the safe working of surface quarries. (Safety provisions relating to tunnels are contained in separate regulations.)

Previously, the safety provisions were divided between rules in the Quarries Act 1944 and the regulations under that Act. The new regulations have been compiled to bring together all matters related to the safe operation of surface quarries and to present related matters of safety in order.

The various parts of the regulations are as follows:

*Certificates of Competency*

Regulations 3 to 9 provide for the granting of quarry managers' surface certificates and permits and quarry shot firers' certificates and related matters.

*Safety and Protection*

Regulations 10 to 22 cover matters which generally either do not come under a specific heading or should be particularly emphasised.

*Sanitation, Hygiene, and Amenities*

Regulations 23 to 25 cover matters of health and the provision of suitable meal places.

*Explosives*

Regulations 26 to 36 cover the storage and use of explosives in quarries. Changes have been made, in particular, to the requirements covering the dealing with misfired holes in line with recognised modern practice and present day explosives.

*Quarry Faces, Benches, and Bench Access*

Regulations 37 to 59 provide for the safe working of quarry faces and benches.

*Dredging*

Regulations 60 to 66 cover the operation of dredges and mainly re-enact regulations 178 to 182 of the Mining (Safety) Regulations 1973, which have been revoked.

*Miscellaneous Provisions*

Regulations 67 to 70 are miscellaneous provisions.

---

Issued under the authority of the Regulations Act 1936.

Date of notification in *Gazette*: 24 March 1983.

These regulations are administered in the Ministry of Energy.