



## QUEENSLAND MINES RESCUE SERVICE

### Medical Guidelines for Service (Black Coal)

The QMRS Medical Guidelines are established to provide guidance to Medical Practitioners in determining the medical suitability of persons for Active Coal Mines Rescue Duties, excluding the following:-

GAG Operator, Inertisation Unit - Coal Board Medical  
Fresh Air Base Controller - Coal Board Medical  
Sub-Station Coordinator - Coal Board Medical  
Technical Support Officer - Coal Board Medical

- ◆ Shift Work
- ◆ Periods of intense physical activity
- ◆ Working in confined spaces and poor visibility
- ◆ Working in conditions of high heat and humidity
- ◆ Requirement to be able to instantly respond to a call at any time
- ◆ Wearing of breathing apparatus
- ◆ Coping with highly stressful situations and trauma (fatalities and serious injuries)

The wearing of self-contained breathing apparatus may impose additional physiological burdens on the respiratory and cardiovascular system. Additionally, the heat load encountered in some training and operational situations will place a further burden on the cardiovascular system. Mines Rescue Personnel will also be required to wear the breathing apparatus on their back for extended periods. Thus this examination should pay particular attention to the respiratory, cardiovascular and musculoskeletal systems. Set out below are the required standards for Mines Rescue Personnel undertaking such training.

The medical standards set out below are intended to ensure that potential Mines Rescue Personnel will be able to satisfy these requirements.

**The frequency of medical assessments will be the coal industry standard (every five (5) years) for Coal Board Medical and for the Mines Rescue Medical every two (2) years up to 45 years of age and every year thereafter or as QMRS may request.**

#### GENERAL

Weight - Because of the requirement for general physical fitness, obesity may preclude entry into the Queensland Mines Rescue Service. Obesity would generally be defined as a body mass index greater than 27.



**Body Mass Index -**

BMI = Height (in m)<sup>2</sup> x Weight (in Kg).

This table has been provided for your assistance.

Height in CM	Weight in KG
170	78
173	81
175	83
178	86
180	87
183	90
185	92
188	95
190	97
193	101

In cases where it is felt that an applicant is outside this range because of well-developed musculature, for example, the following body fat may be applied or a stress test as the doctor may determine.

Males – less than 22% body fat    Females – less than 30% body fat.

Where this maybe the case, the medical examination forms, together with any supporting documentation, should be forwarded to a Queensland Mines Rescue Service Health Advisor (see contact details last page) for final decision.

**VISION**

An applicant’s **unaided vision** must be at least 6/12 in the better eye and 6/18 in the worst eye.

An applicant should have normal colour vision. The Ishihara test has often been found to be too sensitive. Where a red/green deficiency is detected by means of Ishihara plates, then the applicant should be subject to a practical test, such as reading mine plans.

The following conditions would prevent acceptance for mines rescue duties: -

- ◆ Aphakia (bilateral or unilateral)
- ◆ Glaucoma
- ◆ Progressive cataract.

**HEARING**

A bilateral hearing loss of more that 30db at 500, 1000, and 2000 (4000 to be debated) Hz would preclude entry into the QMRS.

**Vestibular Disorders**

Persons with Meniere’s Disease or who are subject to recurrent attacks of vertigo which occur without warning, cannot be permitted to join the Queensland Mines Rescue Service.



## **CARDIOVASCULAR DISEASE**

The work of Mines Rescue Personnel is particularly demanding on the cardiovascular system. The following conditions would preclude entry into the Queensland Mines Rescue Service: -

- ◆ Myocardial infraction and cardiac bypass surgery
- ◆ Evidence of cardiac failure
- ◆ Cardiac valvular disease, unless a Cardiologist is prepared to certify that cardiac function is unimpaired.
- ◆ Hypertension – defined as systolic blood pressure above 140mmHg, or diastolic pressure 100mmHg.
- ◆ Cardiac arrhythmia leading to vasovagal episodes, or syncopal attacks.
- ◆ Medication with Beta-blockers
- ◆ Heart block
- ◆ Aneurysm

The UK Health and Safety Commission requires undergo a “fitness test” which is essentially an exercising ECG (Advisory Code of Practice paras 119-122)

A maximal stress test may be required to be undertaken where risk factors are indicated–

1. Smoking
2. Family history
3. Hyperlipidemia or
4. Raised fasting Glucose (even if normal GTT.)

## **RESPIRATORY SYSTEM**

The following conditions would exclude an applicant from joining the Queensland Mines Rescue Service: -

- ◆ Asthma – requiring regular medication or requiring treatment with steroids. The FEV<sub>1</sub>/FVC ratio must exceed 75%
- ◆ Recent or recurrent pneumothorax
- ◆ Bronchitis
- ◆ Tuberculosis

## **ENDOCRINE**

### **Diabetes**

Diabetes of any form would exclude an applicant from entering the Queensland Mines Rescue Service.

## **RETENTION**

Mines Rescue Personnel who develop diabetes may remain on active duty provided diet or some oral hypoglycaemic agents control it. Insulin dependent diabetics or those taking sulphonylurea drugs are not permitted to be rostered for mines rescue duties.

## **CENTRAL NERVOUS SYSTEM**

The following conditions would exclude an applicant from entering the Queensland Mines Rescue Service: -

- ◆ Epilepsy
- ◆ Stroke/cerebra-vascular disease
- ◆ Transient ischaemic attacks.



Syncope – a single occurrence of little concern, but applicants with severe episodes will not be permitted to join the Queensland Mines Rescue Service until the underlying cause has been discovered and treated. It will then be judged on the basis of the specific diagnosis.

Any other disease, which affects an applicant's ability to maintain coordination and muscular control, will disqualify.

### **GASTRO-INTESTINAL**

The following conditions will prevent entry into the Queensland Mines Rescue Service: -

- ◆ Bowel disease given rise to frequent diarrhoea or bleeding eg. Irritable bowel syndrome, ulcerative colitis.
- ◆ Active peptic ulceration

### **MUSCULO-SKELETAL**

The work of a Mines Rescue Personnel is physically demanding. He/she must be able to undertake heavy physical work and enter confined spaces, often while wearing self contained breathing apparatus. Any condition, which causes fixation or severely limits the movement of back, neck, arms or lower limbs must be carefully evaluated. The following conditions would preclude entry into the Queensland Mines Rescue Service: -

- ◆ Chronic or recurrent back injury
- ◆ Degenerative disease of the joints

### **PSYCHOSOCIAL**

The following conditions would preclude entry into the Queensland Mines Rescue Service: -

- ◆ Alcohol or drug dependence
- ◆ Severe anxiety state
- ◆ Depressive or other psychosis

### **SKIN AND FACIAL HAIR**

Beards, moustaches, acne or any dermatological condition on the face or neck which is so severe as to prevent an effective seal by self contained breathing apparatus, or to impair efficient sweating would exclude a potential applicant from entering the Queensland Mines Rescue Service.

### **PREGNANCY**

While pregnancy is not a bar to joining the Queensland Mines Rescue Service, Rescue Personnel who are more than twenty weeks pregnant are not permitted to be rostered for operational duties, and should not participate in probationary training. Thus an applicant who is pregnant may be accepted for entry, but have her entry into the Queensland Mines Rescue Service deferred until she is able to participate in probationary training<sup>1</sup>.

### **CONCLUSION**

While the standard should, in general, be adhered to, it is impossible to prescribe for all possibilities. A standard cannot hope to be comprehensive, and in the case of other medical conditions not detailed above, they must be judged on their merits, having regard to the likely demands placed on a Mines Rescue Personnel.

Any variation of these standards should be supported by written medical opinion and a specialist referral where appropriate. The Specialist must be aware that the person is an applicant for the Queensland Mines Rescue Service and should state this specifically in his/her opinion. It is not sufficient simply to state that an individual is "fit".



If you have any queries please telephone the Queensland Mines Rescue Service or one of the following Medical Advisors.

CONTACT DETAILS: -

QMRS Nominated Medical Advisor

Dr Graham Rowles  
Town Centre Surgery  
MORANBAH Q 4744  
Ph 07 4941 7268

QMRS State Manager

PO Box 156 Dysart  
45 Garnham Drive  
DYSART Q 4745  
Ph 07 4958 2244

<sup>1</sup>. Occupational Medicine Forum "Performance of Pregnant Fire-fighters" JOM 32:571-572 July 90  
Letter "Pregnant Fire-fighter performance" JOM 33:446-449 April 91