



**QUEENSLAND DEPARTMENT OF MINES AND ENERGY
SAFETY AND HEALTH DIVISION**

**GUIDELINES FOR THE DETERMINATION
OF
MINES RESCUE CAPABILITY**

Date of Revision	Revision No	Document Name	Page No
2 nd November 1998	7	G:\Safety_and_Health\TECHSERV\Files 2000\legislat\rec stands\QMRS Guidelines.doc	1 of 17

GUIDELINES FOR THE DETERMINATION OF MINES RESCUE CAPABILITY

INTRODUCTION :

The determination of an underground coal mines Mines Rescue Capability is an essential element of its mandatory Emergency Evacuation Management Plan.

This guideline is issued to assist operations in establishing an effective and efficient capability and to provide information on the necessary protocols for contractual support needed and the performance criteria against which this capability will be measured.

Should you require further information on the use or application of this document, please contact any regional office of this department, or your mines Inspector.

Signed

Brian Lyne
Chief Inspector of Coal Mines

3rd December 1998

Date of Revision	Revision No	Document Name	Page No
2 nd November 1998	7	G:\Safety_and_Health\TECHSERV\Files 2000\legislat\rec stands\QMRS Guidelines.doc	2 of 17

GUIDELINES FOR THE DETERMINATION OF MINES RESCUE CAPABILITY

TABLE OF CONTENTS

SUBJECT	PAGE NO	
Introduction	2	
Purpose	4	
Scope	4	
Framework	4	
Definitions	4	
Overview	5	
Mine Site Performance Criteria	6	
Performance Criteria for Accredited Corporation	7	
Hazard Definition	8	
Resource Requirements	8	
Appendix	9	
TABLE I	SYSTEM INTEGRATION	10
TABLE II	HAZARD MATRIX	11
TABLE III	FLOW CHART	12
TABLE IV	EQUIPMENT REQUIREMENTS	13
TABLE V	INFRASTRUCTURE REQUIREMENTS	14
TABLE VI	TRAINING AND RETRAINING	15
TABLE VII	SUPPORT SERVICES	16
TABLE VIII	CONTRACTUAL SUMMATIVE	17

Date of Revision	Revision No	Document Name	Page No
2 nd November 1998	7	G:\Safety_and_Health\TECHSERV\Files 2000\legislat\rec stands\QMRS Guidelines.doc	3 of 17

GUIDELINES FOR THE DETERMINATION OF MINES RESCUE CAPABILITY

PURPOSE :

The purpose of this document is to provide a systematic approach to the determination of

1. The Mines Rescue requirements and needs of an enterprise
2. The Mines Rescue capability of that enterprise, and
3. The Contractual Arrangements with Outside Service Providers necessary to meet those requirements

SCOPE :

These guidelines provide a process to determine the levels of support and resources required to maintain an effective mines rescue capability at every underground coal mine in Queensland.

Once determined, the responsibility to provide these support and resource requirements are to be subject to contractual arrangements between the enterprise and appropriate external service providers.

FRAMEWORK :

The information obtained at each enterprise from this guideline, will form the basis for the Department of Mines and Energy auditing of the mines rescue capability of that enterprise.

Further however, a summative document will be produced from the information gathered through the use of these guidelines at ALL enterprises.

This summative document will form the basis for Department Of Mines And Energy auditing of externally contracted service providers on their ability to meet their contractual obligations.

The result of the Department Of Mines And Energy third party audit on the Queensland Mines Rescue Service will form the basis for the determination of this Service's ability to meet the *Mandatory Performance Criteria*.

DEFINITIONS :

Mines Rescue Capability : Without limiting the generality of rescue operations, mines rescue capabilities will be primarily concerned with the escape of persons through irrespirable atmospheres.

Self Escape : All persons are provided with the training and equipment so as to be capable of evacuating the mine without the need of external assistance

Aided Escape or Assisted Rescue : Some or all personnel may not be able to self escape and require external assistance to be evacuated from the mine.

Date of Revision	Revision No	Document Name	Page No
2 nd November 1998	7	G:\Safety_and_Health\TECHSERV\Files 2000\legislat\rec stands\QMRS Guidelines.doc	4 of 17

GUIDELINES FOR THE DETERMINATION OF MINES RESCUE CAPABILITY

OVERVIEW :

All mines in Queensland are required to develop and implement a Safety Management System which details the procedures and processes in place to effectively manage and control the hazards to the safety and health of persons at the mine.

Principal Hazard Management Plans are integrated elements of the overall Safety Management System.

An Emergency Evacuation Plan, incorporating both Self Escape and Assisted Rescue procedures, is one of the mandatory Principal Hazard Management Plans to be contained within a Safety Management System.

Table I shows an overview of how a mine's Emergency Evacuation Plan and the consequent Mines Rescue Capability integrate into overall Safety Management Systems.

Correct use of risk management techniques will accurately determine the hazards at an enterprise that may involve irrespirable atmospheres. Coupled with the mine site Principal Hazard Management Plans, every circumstance that may involve irrespirable atmospheres and the need for a mines rescue capability should be identified.

Such identification will lead to the development of an appropriate Emergency Evacuation Plan that will enable **ALL** personnel to escape **ANY** irrespirable atmosphere hazard whether on the **surface or in underground** workings.

The resources and support requirements to effectively implement any of these procedures is then to be determined.

Once determined, supply and responsibility for these resources and support requirements must be allocated to either the mine itself or contracted to one or more external suppliers.

Supply of any resource or support service not SPECIFICALLY allocated to a contracted external supplier shall, by default, be the responsibility of the mine.

Once in place, the Safety Management System then administers the commissioning, evaluating, training, auditing, reviewing, corrective/preventative actions, work controlling, record keeping etc that is needed to maintain the ongoing effectiveness and appropriateness of the Emergency Evacuation Plan and the Mines Rescue Capability of the enterprise.

Date of Revision	Revision No	Document Name	Page No
2 nd November 1998	7	G:\Safety_and_Health\TECHSERV\Files 2000\legislat\rec stands\QMRS Guidelines.doc	5 of 17

GUIDELINES FOR THE DETERMINATION OF MINES RESCUE CAPABILITY

MINES SITE PERFORMANCE CRITERIA:

All emergency response strategies, including mines rescue services, must be capable of being implemented whenever persons are underground.

As a minimum, the greater of :-

- ◆ 5% of the total workforce of the mine (including underground, surface and permanent contractors employed at the mine); or
- ◆ 5 persons from the workforce at the mine; or
- ◆ an equivalent number of persons external to the mine, secured under an arrangement agreed to in writing by the Regional Inspector

must be currently accredited in the wearing of Self Contained Breathing Apparatus and emergency rescue procedures to a standard recognised by a corporation accredited to provide mines rescue services.

The aided rescue component of the Emergency Evacuation Plan must detail both initial and ongoing response strategies including Mutual Assistance Programs and provision for maintenance of mines rescue equipment

Provision of infrastructure to enable the effective use of emergency inertisation equipment.

Periodic exercises to demonstrate the effectiveness of the Emergency Evacuation Management Plan to respond to any potential emergency at the mine

Date of Revision	Revision No	Document Name	Page No
2 nd November 1998	7	G:\Safety_and_Health\TECHSERV\Files 2000\legislat\rec stands\QMRS Guidelines.doc	6 of 17

GUIDELINES FOR THE DETERMINATION OF MINES RESCUE CAPABILITY

NOTICE UNDER THE *COAL MINING ACT 1925*

PERFORMANCE CRITERIA FOR THE PROVISION OF MINES RESCUE SERVICES BY AN ACCREDITED CORPORATION:

Any corporation accredited to provide Mines Rescue Services must meet the performance criteria set out below:

1. Enter into a written arrangement, called a Mines Rescue Agreement, with each underground coal mine owner to assist the owner provide a mines rescue capability for the mine.
2. The corporation must, at all times, remain capable of meeting its obligations detailed in each Mines Rescue Agreement.
3. Conduct annual exercises to demonstrate the Corporation's ability to effectively meet its obligations under Mines Rescue Agreements.
4. Provide appropriate training programs to meet the requirements specified in the Mines Rescue Agreement.
5. Provide adequate resources for training and re-training the total number of persons specified in the Mines Rescue Agreements
6. Ensure mines rescue equipment, provided in fulfillment of a Mines Rescue Agreement, is (as a minimum) maintained, tested and certified to any specification set by its manufacturer.
7. Provide a means to facilitate mutual assistance between mines during an emergency.
8. Maintain an operational mine inertisation capability.
9. Report annually, or upon request, to the Minister as required by Section 103P of the *Coal Mining Act 1925*.

As provided for in section 103O of the *Coal Mining Act 1925*, the aforementioned performance criteria has been fixed.

TOM GILMORE
Minister for Mines and Energy
10 December, 1997

Gov. Gaz., 12th December, 1997, No. 91, page 1622

Date of Revision	Revision No	Document Name	Page No
2 nd November 1998	7	G:\Safety_and_Health\TECHSERV\Files 2000\legislat\rec stands\QMRS Guidelines.doc	7 of 17

GUIDELINES FOR THE DETERMINATION OF MINES RESCUE CAPABILITY

HAZARD DEFINITION :

In order for any Emergency to be declared and any subsequent Emergency Evacuation to be initiated, clear definitions of what circumstances constitute an Emergency should be developed and regularly reviewed.

Equally importantly, an Emergency cannot be declared terminated until those same circumstances no longer prevail.

Table II illustrates one matrix that may be used in identifying the circumstances and impacts to be considered when evaluating whether a hazard may lead to an Emergency being declared and the subsequent need for and level of a mines rescue capability,

RESOURCE REQUIREMENTS :

Table III illustrates a generic flow chart of the processes involved from detection and emergency initiation through to incident control, evacuation (involving either self escape or assisted rescue), emergency termination and debriefing.

The subsequent tables are to list material resources, support services and equipment requirements by

- **Table IV** Equipment
- **Table V** Infrastructure
- **Table VI** Training and Retraining
- **Table VII** Support Services
- **Table VIII** Summative

Following careful and detailed completion of this document, Contractual Arrangements may be finalised between the enterprise and any stated external service provider.

N.B. Entering contractual arrangements for the provision of an effective mines rescue capability is mandatory under current Queensland legislation.

Date of Revision	Revision No	Document Name	Page No
2 nd November 1998	7	G:\Safety_and_Health\TECHSERV\Files 2000\legislat\rec stands\QMRS Guidelines.doc	8 of 17

GUIDELINES FOR THE DETERMINATION OF MINES RESCUE CAPABILITY

APPENDIX

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Date of Revision	Revision No	Document Name	Page No
2 nd November 1998	7	G:\Safety_and_Health\TECHSERV\Files 2000\legislat\rec stands\QMRS Guidelines.doc	9 of 17