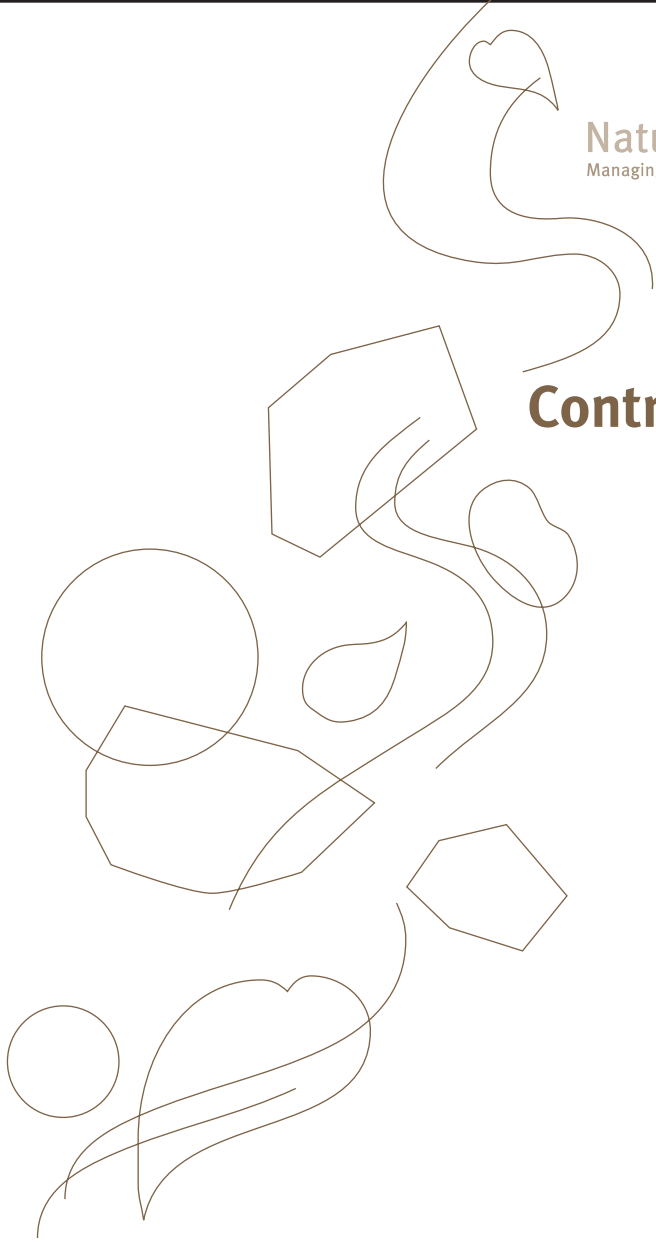




Control of risk management practices

Coal Mining Safety and Health Act 1999

Recognised Standard – 02



This document is issued in accordance with PART 5—RECOGNISED STANDARDS and Section 37(3) of the Coal Mining Safety and Health Act 1999.

“PART 5—RECOGNISED STANDARDS

Purpose of recognised standards

71.A standard may be made for safety and health (a “recognised standard”) stating ways to achieve an acceptable level of risk to persons arising out of coal mining operations.

Recognised standards

72.(1) The Minister may make recognised standards.

(2) The Minister must notify the making of a recognised standard by gazette notice.

(3) The chief executive must keep a copy of each recognised standard and any document applied, adopted or incorporated by the recognised standard available for inspection, without charge, during normal business hours at each department office dealing with safety and health.

(4) The chief executive, on payment by a person of a reasonable fee decided by the chief executive, must give a copy of a recognised standard to the person.

Use of recognised standards in proceedings

73.A recognised standard is admissible in evidence in a proceeding if—

(a) the proceeding relates to a contravention of a safety and health obligation imposed on a person under part 3; and

(b) it is claimed that the person contravened the obligation by failing to achieve an acceptable level of risk; and

(c) the recognised standard is about achieving an acceptable level of risk.

37.(3)...if a recognised standard states a way or ways of achieving an acceptable level of risk, a person discharges the person’s safety and health obligation in relation to the risk only by—

(a) adopting and following a stated way; or

(b) adopting and following another way that achieves a level of risk that is equal to or better than the acceptable level.”

Where a part of a Recognised Standard or other normative document referred to therein conflicts with the Coal Mining Safety and Health Act 1999 or the Coal Mining Safety and Health Regulation 2001, the Act or Regulation take precedence.

This recognised standard is issued under the authority of the Minister for Natural Resources and the Minister for Mines

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ISBN

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**RECOGNISED STANDARD 02
CONTROL OF RISK MANAGEMENT PRACTICES**

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RECOGNISED STANDARD No 02

CONTROL OF FORMAL RISK MANAGEMENT PRACTICES

1. PURPOSE

The purpose of this standard is to describe an auditable practice at mines for formal risk management studies conducted in the development of the mine safety management system.

2. SCOPE

This standard applies to formal risk management activities conducted as part of the development and application of the mine safety and health management system required under the Coal Mines Safety and Health Act 1999. The standard applies to Principal Hazard Management Plans and Standard Operating Procedures

3. APPLICATION FRAMEWORK

This recognised standard should be applied to risk assessments conducted in response to hazards being present at a mine which require the use of risk management activities to take place for the ongoing safe operation of a mine. The process should be utilised for the development of Standard Operating Procedures required under the *Coal Mining Safety and Health Act and Regulation*.

4. TECHNICAL GUIDANCE

The essential features of each formal risk management process conducted within the application framework are;

Documentation.

The information defined below is to be maintained in an auditable form at the mine whilst ever the risk is present at the mine.

A. ESTABLISH THE CONTEXT

a) Mining Environment

A brief description of mine and the physical environment that a mining activity is to take place. This may include geological data, geotechnical data, geographical data, a brief history of similar mining operations in the area and, where relevant, levels of support available from both internal and external providers. It should clearly state the presence of significant hazards identified in mines, which have previously operated, or are continuing to operate, in the geographical area

b) Mining Activity

A description (with diagrams if necessary) of the activity being assessed including, for example, the types of mining machinery and range of mining methods to be used.

c) Persons

A list of all persons contributing to the risk management process together with their organisational roles, experience and role in the process is to be recorded. Persons must be selected in accordance with section 10(1)(a) of the *Coal Mining Safety and Health Regulation 2001*

B. RISK IDENTIFICATION

Identification of Hazards

The technique adopted to identify hazards should be stated:

Relevant data should be recorded including technical data that identifies and quantifies, where possible, the maximum predicted level of hazard present in the workplace, equipment or area under consideration. (e.g. potential presence of explosive gasses and dusts, potential ignition sources, strength of strata or presence of geological structures etc). This information should be provided in a written form and sets one of the critical parameters, which, if exceeded, initiate a review of the risk controls, as soon as practicable. For Principle Hazard Management Plans,, persons providing technical information, should provide and sign off on the identified parameters-

C. RISK ANALYSIS AND EVALUATION

a) Risk Analysis Method

An outline of the method and criteria used to analyse and evaluate the risks should be presented.

b) Assessment of Risks

An outline of the method adopted for assessing the likelihood and consequences of the risks. Two lists should be ranked in a manner which indicate matters in order of priority

- List A - The likelihood of assessed risk occurring and
- List B - The magnitude of the consequences of the risk should it occur

c) Identification of Unacceptable Levels of Risk

Each risk reported to either List A or B is to be evaluated as being either acceptable or unacceptable according to criteria determined at the mine site.

d) Unquantified Hazards

Where data is unable to be substantiated by either scientific or historical means, assumed risk data should be clearly recorded. The assumed figures will need to be confirmed by direct measurement as soon as reasonably practical and if necessary used in a review of the risk assessment .

e) Consensus Matters

All personnel listed in section A(c) above should sign off the final report of the risk assessment. Where consensus is not reached on agreed method to achieve an acceptable level of risk, the concerns of dissenting persons must be recorded in the final report. (Section 10(2)(b) of the *Coal Mining Safety and Health Regulation 2001*)

D. RISK TREATMENT

a) Actions to Reduce Risk

Actions proposed to control the unacceptable levels of risk recorded in List A&B, in order to ensure those risks are brought to acceptable levels at the mine, are to be recorded.

The record will include details of specific controls, equipment, procedures, engineering barriers or other matters to be in place for management of the activities with an unacceptable level of risk.

b) Implementation Plan

A timetable for implementation and completion of all management actions associated in achieving an acceptable level of risk, is to be provided in the report.

c) Persons to be Competent and Accountable

Persons who are identified as being a necessary part of a safety control activities, must be trained and assessed as competent to meet the requirements determined in the risk management process.

NOTE; High-risk activities that are principally controlled by human intervention must address the possibility of human error and where possible, provide appropriate secondary controls

E. MONITOR AND REVIEW

Monitoring of Risk

Mining activities at the mine are to be regularly monitored and evaluated to confirm that the recommended risk control practices are adequate to ensure risks are kept at acceptable levels. Records of the monitoring program are to be kept. In addition, the records must include internal and external auditing of the controls in place for high consequence events.

Where any of the parameters set in the current risk assessment are exceeded, a process for an immediate review of the risk must be clearly defined

The report must state who is to monitor that the risk assessment recommendations are in place.

F. DEFINITIONS

- ❑ **RISK** means the risk of injury or illness to a person arising out of a hazard. Risk is measured in terms of consequences and likelihood.
- ❑ **HAZARD** is the source of potential harm or a situation with a potential to cause injury or illness to a person
- ❑ **CONSEQUENCE** is the outcome of an event or situation expressed qualitatively or quantitatively, being a loss, injury, disadvantage or gain
- ❑ **LIKELIHOOD** is used as a qualitative description of probability and frequency
- ❑ **FREQUENCY** is a measure of likelihood expressed as a number of occurrences of an event in a given time
- ❑ **PROBABILITY** is the likelihood of a specific outcome, measured by the ratio of specific outcomes to the total number of possible outcomes. Probability is expressed as a number between 0 and 1, with 0 indicating an impossible outcome and 1 indicating an outcome is certain
- ❑ **RISK ANALYSIS** is a systematic use of available information to determine how often specific events may occur and the magnitude of their likely consequences
- ❑ **RISK ASSESSMENT** is the process used to determine risk management priorities by evaluating and comparing the level of risk against predetermined standards, target risk levels or other criteria.
- ❑ **RISK MANAGEMENT** is the systematic application of management policies, procedures and practices to the tasks of identifying, analysing, assessing, treating and monitoring risk.

G. REFERENCES

- MDG 1010 Risk Management Handbook for the Mining Industry, May 1997

H. INFORMATIVE STANDARDS

- MNC.G2.A Facilitate the Risk Management Process. Study Guide
- AS/NZS 4360 - Risk Management