



## Directive

I Peter Herbert, an Inspector appointed under Section 125, of the Coal Mining Safety and Health Act 1999 issue a Directive to reduce risk, pursuant to Section 166 of the Coal Mining Safety and Health Act 1999.

<b>Subject:</b> Electrical Defects	<b>File Number:</b>
<b>Mine Name:</b>	<b>Operator:</b>
<b>Activity:</b> Postal Mine Record Entry	<b>Activity Date:</b> 11/03/2010
<b>Record Date:</b> 11/03/2010	<b>MRE Item No.:</b> 1

### **Title: Electric shocks from Joy 10SC32-56BC shuttle cars**

#### **Directive Given:**

So as to reduce the level of risk to mine workers in the course of their duties, a check is to be made of the installation of the filter circuit on the shuttle car to ensure the installation is correct and the integrity of the circuit verified. Further the maintenance system for this part of the shuttle car is to be reviewed to ensure any failures of the filter circuit are observed as early as possible. A report on the use of this model shuttle car at the mine, the completion of the checks and completion of the review of the maintenance system is to be provided to the Inspectorate by 19 March 2010.

#### **References:**

Section 166

A person to whom a directive is given must comply with the directive as soon as reasonably practicable. Risk to a person resulting from a hazard at the mine must be within acceptable limits at all times.

**Reasonable Time for Compliance - Due Date:** 19/03/2010

**Completed:**                      **Closed by:**                      **on**

**Action Taken by Mine to Comply with Directive:**

#### **Directive -**

If an inspector or inspection officer reasonably believes a risk from coal mining operations may reach an unacceptable level, the inspector or officer may give a directive to any person to take stated corrective or preventative action to prevent the risk reaching an unacceptable level.

The directive may be given orally or by notice.

If the directive is given orally, the person giving the directive must confirm the directive by notice to the person in control of the mine or part of the

mine to affected by the directive and to the relevant site senior executive.  
Failure to comply with subsection 3. does not affect the validity of the directive.

**Method of Giving Directive -**

This directive was given in writing on 11/03/2010 at 01:30 PM.

**Directive Given To -**

This directive is given to the following person/s -

Site Senior Executive

**Method of identification Used -**

In issuing this directive I identiifed myself as a person appointed under Section 125 of the Coal Mining Safety and Health Act 1999.

I will produce my identity card for the other person's inspection at the first reasonable opportunity (it not being practicable to produce or display the identity card at the time of exercising the power).

**Part of mine affected by directive -**

Whole of Mine.

**A copy of the directive was given to -**

A copy of this directive or notice was given to the person in charge of mine or the part of the mine affected by the directive on 11/03/2010 12:00:00 AM at 30/12/1899 01:30:00 PM.

A copy of this directive or notice was given to site senior executive on 11/03/2010 12:00:00 AM at 30/12/1899 01:30:00 PM.

**In giving this directive I believe the safety and health management system for the mine is ineffective.**

The reason for my belief or suspicion is based upon the following -

This belief is based on the details as outlined in paragraphs 3 -5 of my Mine Record Entry hereby attached.

**Peter Herbert:** ..... **Date Issued:** ..... / ..... / .....

**Warning - Failure to comply with this directive is an offence. If you disagree with this directive, you may apply for a review of the directive. A summary of the review provisions is provided below.**

In the past three years there have been instances of reported electric shocks to mine workers whilst in contact with the shuttle cars and whilst the shuttle cars have been in normal operation.

The issue has been identified as the capacitive filter circuit fitted to the shuttle cars. This filter circuit was retrofitted to the shuttle cars as a solution to the interference caused to upstream electrical protection devices.

Initially capacitors were fitted which resulted in electric shocks to person in contact with a shuttle car whilst the pump was being started. Whilst the voltage and current causing this shock could be measured it was shown that the

current was of a level and duration to not have fatal consequences to a person touching the shuttle car. It was also shown that the energy level of any electric arc was such that it was below the ignition levels for methane. To reduce the voltage levels to the frame of the shuttle car when the filter discharged, a resistor was fitted to the circuit. This reduced the voltage to a level where persons in contact with the shuttle car may not feel an electric shock. It did not eliminate the electric shock under normal operation of the shuttle car.

Whilst the use of Australian Standard AS/NZS 60479.1:2002 Effects of current on human beings and livestock – General aspects, Figure 14, gives support to the non fatal effects of ac currents 15Hz to 100Hz under fault conditions, it does not allow acceptance of potential electrical shock currents and voltages during normal operation of a shuttle car. The risk of electrical shock is at an unacceptable level. It is also noted that the mine where the recent electric shocks occurred are unable to provide assurance that there will be no electric shocks under normal operating conditions of the shuttle car.

With any event that results in the failure of this resistor to remain in the circuit the voltage to the shuttle car body is raised to a level where persons will experience an electric shock under normal operation of the shuttle car. Whilst again the above Australian Standard can give guidance on the effects of this shock, the undetected failure of components or the incorrect installation of the system presents an unacceptable level risk to mine workers working on or in contact with such shuttle cars.

## Provisions of the Coal Mining Safety and Health Act 1999 in Relation to Directives

### Directives

**174.(1)** If an inspector, inspection officer, or industry safety and health representative has given a directive, the inspector, officer or representative—

- (a) must enter it in the mine record as soon as reasonably practicable after giving it; and
- (b) must state the reason for the directive in the mine record.

**(2)** A person to whom a directive is given must comply with the directive as soon as reasonably practicable.

Maximum penalty—800 penalty units or 2 years imprisonment.

**(3)** The site senior executive must enter in the mine record the action taken to comply with the directive as soon as practicable after the action is taken.

Maximum penalty—40 penalty units.

**(4)** The site senior executive must make copies of directives available for inspection by coal mine workers.

Maximum penalty—40 penalty units.

**(5)** A directive remains effective until—

- (a) for a directive by an industry safety and health representative—it is withdrawn in writing by the representative or an inspector; or
- (b) for a directive by the chief inspector - it is withdrawn in writing by the chief inspector; or
- (c) for a directive by an inspector other than the chief inspector—it is withdrawn in writing by the inspector or another inspector; or
- (d) for a directive of an inspection officer—it is withdrawn in writing by the inspection officer or an inspector; or
- (e) for a directive by an industry safety and health representative, an inspection officer or an inspector and not otherwise withdrawn—the chief inspector varies or sets aside the directive after reviewing it under subdivision 4; or
- (f) the Industrial Court stays, varies or sets aside the directive.

### ***Subdivision 4—Review of directives***

#### **Application for review**

**175.** A person who is given a directive from an inspector (other than the chief inspector), inspection officer or industry safety and health representative may apply under this division for the directive to be reviewed.

#### **Procedure for review**

**176.(1)** The application must—

- (a) be made in writing to the chief inspector; and
- (b) be supported by enough information to allow the chief inspector to decide the application.

**(2)** The application must be made to the chief inspector within—

- (a) 7 days after the day on which the person received the directive; or
- (b) the longer period, within 2 months after the day, the chief inspector in special circumstances allows.

**(3)** The chief inspector must consider the application within 7 days after receiving it and immediately advise the applicant in writing whether the chief inspector considers the applicant has complied with subsection (1).

**(4)** If the chief inspector does not consider the application is supported by enough information to allow the chief

inspector to decide the application, the chief inspector must advise the applicant what further information the chief inspector requires.

(5) When the chief inspector is satisfied the applicant has complied with subsection (1), the chief inspector must immediately advise the applicant in writing of that fact.

#### **Review of directive**

**177.(1)** The chief inspector must, within 14 days after giving the advice mentioned in section 176(5), review the directive and make a decision (the “**review decision**”)—

(a) to confirm the directive appealed against; or

(b) to vary or set aside the directive appealed against.

(2) The chief inspector may give a directive in substitution for a directive the chief inspector decides to set aside.

(3) Within 7 days after making the review decision, the chief inspector must give notice of the decision to the applicant.

(4) The notice must—

(a) include the reasons for the review decision; and

(b) if the notice does not set aside the directive, tell the applicant of the applicant’s right of appeal against the decision.

(5) If the chief inspector does not—

(a) review the directive within the time allowed under subsection (1); or

(b) having reviewed the directive, advise the applicant of the review decision within the time allowed under subsection (3); the applicant may appeal against the directive under part 14. 22 Part 14 (Appeals)

#### **Stay of operation of directive**

**178.(1)** If a person applies under this division for a directive to be reviewed, the person may immediately apply to the Industrial Court for a stay of the directive.

(2) The court may stay the directive to secure the effectiveness of the review and any later appeal to the court.

(3) A stay—

(a) may be given on conditions the court considers appropriate; and

(b) operates for the period fixed by the court; and

(c) may be revoked or amended by the court.

(4) The period of a stay must not extend past the time when the chief inspector reviews the directive and any later period the court allows the person to enable the person to appeal against the decision.

(5) An application made for a review of a directive affects the directive, or the carrying out of the directive, only if the directive is stayed.

(6) However, a directive under section 167. 23. must not be stayed.

23 Section 167 (Directive to suspend operations for unacceptable level of risk)