

# Fatality Prevention Guideline

## I PURPOSE AND SCOPE

The purpose of this document is to define specific activities that drive operations to identify tasks and exposures with fatal risk potential, and to ensure that the risk control measures applied to those tasks/exposures are proactive, reliable, and sustained. The document also defines training requirements for leadership and the workforce.

## 2 DEFINITIONS

**Pure Risk:** The risk score calculated by multiplying the probability of an incident by potential consequence, without considering the controls that are in place.

**Residual Risk:** The risk score considering the controls that are in place.

**Critical Controls:** Risk control measures that an operation relies upon to reduce an unacceptably high Pure Risk to a tolerable level. For example, an effective guard might be used as a critical control to reduce the Pure Risk of working near the tail pulley of a conveyor belt to a tolerable Residual Risk.

**Significant Risk:** For the purpose of this guideline are:

- Operation Significant Risks - An operation's elevated "pure risks" that if not effectively controlled have the potential to lead to catastrophic outcomes. (If critical controls fail or are not effectively maintained, personnel are exposed to high potential for a fatal injury.)
- "Global Significant Risks" - A listing of common tasks/exposures across a corporation or other grouping of operations in which there is consensus of high pure risks. For example, direct dumping waste or ore over high dumps is widely recognized as having a high risk of fatal injury if critical controls (adequate berms, inspection for tension cracks, water management, etc.) are not maintained.

## 3 REQUIREMENTS

### Planning

Fatality Prevention elements include:

- Active support from senior management
- A process for Hazard Identification, Risk Assessment, and Determination of Controls (HIRADC)
- Field level auditing for verification of Critical Controls associated with Significant Risks
- Communications
- Management Review

## **Active Support from Senior Management**

Senior management at a corporation's highest levels must actively support the fatality prevention initiative. This includes setting specific expectations for senior leadership, and following up regularly to ensure that those expectations are being met.

## **HIRADC**

Each operation is responsible for continuously improving its HIRADC processes for significant risks. Each site department will determine which of the risks in their department are significant.

Risk reduction strategies should emphasize the hierarchy of controls, which establishes the following priority:

- 1** Elimination of hazards
- 2** Substitution for lesser hazard
- 3** Engineering improvements, such as guarding, automation, interlocks, and similar
- 4** Administrative efforts, such as limiting exposure time, providing training and managing behavior
- 5** Personal protective equipment

While each of these risk reduction strategies can be effective, the top items in the hierarchy rely less on human behavior and, if managed properly, are less prone to failure. Continuous improvement efforts should be focused on reducing the dependency on human behavior for the control of significant risks.

## **Incident Investigation and Follow Up**

Each incident shall be analyzed to determine if it had the potential to be a fatal event. When an incident, including a near miss, is determined to be a potentially fatal event (PFE), the operation will respond as if a fatality actually occurred.

Details of the incident, including basic causes and action plans, should be shared across the company. Senior leadership must ensure that action plans are proactive and implemented in a timely manner.

## **Training and Competency Verification**

Fatality Prevention Training shall be provided to supervisors and project managers and they should demonstrate that they are competent in fatality prevention techniques. These techniques include:

- 1** the identification of fatal risks in their work area;
- 2** the use of the hierarchy of controls;
- 3** assessing and developing employee competencies; and
- 4** methods for verifying the effectiveness of control.

Annual training should be conducted for all personnel on the fatality prevention initiative and on site-specific programs addressing fatality prevention. These should include:

- The operation's commitment to fatality prevention
- Driving a sense of vulnerability: "It can happen here, it can happen today, it can happen to me" – if we don't manage fatal risk proactively.
- Hierarchy of controls - the need to use proactive controls and remove the human element from Significant Risk tasks and exposures whenever feasible

### **Auditing**

Operations should develop a fatality prevention assessment process that includes internal field level auditing to verify that the Critical Controls used to manage Significant Risks are implemented and effective in the field over a long period of time. The frequency of assessments needed depends on the effectiveness of the control strategy. Controls that rely on behaviors (use of PPE, following a procedure, reading a sign, etc.) are less reliable and should be audited more frequently than those that rely on engineering upgrades.

### **Examples:**

- a** Formal audits of waste dumps & stockpiles are conducted once per shift due to the risk level and heavy reliance on behaviors. The daily audit process should be reviewed annually.
- b** A critical interlock for an automated system might be audited much less frequently (e.g. semi-annual PM).

Sites shall ensure that persons conducting fatality prevention audits are competent to perform the assigned task.

Sites shall verify that they have responded appropriately to Potential Fatal Event communications received. An appropriate response includes:

- A review to determine if identical or similar risks exist at the site
- An evaluation of control effectiveness if an identical or similar risk exists
- The development and completion of preventive actions

### **Management Review**

Site senior leadership is responsible for reviewing the results of internal Significant Risk/ Critical Control audits. The review shall substantiate that the internal audits completed verification of the following:

- Employees are properly trained;
- Supervisors can carry out their responsibilities;

**Management Review (Cont.)**

- Procedures are clearly understood;
- Procedures are sufficiently simplified;
- Employees can identify red flags in the tasks they perform and;
- The hierarchy of controls is used for continuous improvements in risk management.

**Preventive and corrective actions should be implemented for deficiencies discovered.**