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CS ENERGY PROCEDURE

SERIOUS INJURY AND FATALITY PROCEDURE

CS-OHS-77

Responsible Officer: Regional Health and Safety Specialist
Responsible Manager: Head of Health and Safety
Responsible Executive: Executive General Manager Plant Operations

DOCUMENT HISTORY

Key Changes	Prepared By	Checked By	Approved By	Date
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CONTENTS

DOCUMENT HISTORY	1
1 PURPOSE	3
2 SCOPE	3
3 BACKGROUND	3
3.1 SIF Prevention Strategy	3
4 REQUIREMENTS	4
4.1 General	4
4.2 Leadership	4
4.3 Critical Control Verifications (CCV)	4
4.4 CCV Non-Conformance	4
4.5 Critical Control Event (CCE)	4
4.6 Management Review	5
4.7 Training Requirements	5
4.8 Work Environment	5
5 DEFINITIONS	5
6 REFERENCES	6
7 RECORDS MANAGEMENT	6

1 PURPOSE

The purpose of this procedure is to provide guidance on the prevention of serious injury and fatality (SIF) risks within the Critical Risk Program.

2 SCOPE

This procedure applies to all controlled activities by CS Energy including contract works.

3 BACKGROUND

3.1 SIF Prevention Strategy

CS Energy is committed to the prevention of all injuries however industry experience suggests that there is a need to establish some specific focus in the prevention of the mechanisms that lead to serious injuries and fatalities. Not all events have a potential to lead to a SIF and the absence of injuries is not predictive of an absence of future SIF events.

The strategy for reducing SIF events includes the identification of fatal risks, identification of critical controls, monitoring of those controls and review of “precursors” or event data.

Research of industry data indicates approximately five percent of classifiable injuries and near hit events that occur in industry have the potential to lead to a SIF.

The SIF prevention process does not exclude current injury prevention programs in place at CS Energy, but rather provides increased clarity and focus to one part of the broader management of injuries. Refer to the diagram below:

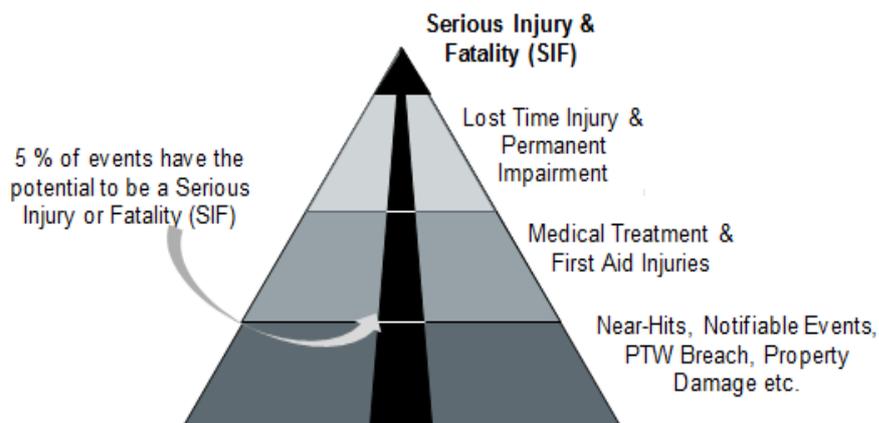


Figure 1 Safety Pyramid – Focus on Prevention of Serious Injury or Fatality.

4 REQUIREMENTS

4.1 General

No work relating to a SIF shall be conducted without application of all applicable critical controls.

Work must cease when a critical control is not in place and not recommence until all critical controls are in place.

SIF events are identified through annual review of incident experience as a part of operational risk register reviews.

Identified SIF events shall be subject to regular Bowtie analysis to develop and review critical controls.

All SIF events shall have a critical control checklist developed and included in the inspection system.

SIF events will be subject to annual review which will include nominated SIF risk owners. The aim of this review is to review performance, identify opportunities to systematically reduce risk.

Verifications for critical controls will be conducted as required by senior management and the results of verifications reported to CS Energy management monthly.

4.2 Leadership

The Executive Leadership Team provides management and governance of the SIF process, ensuring its implementation.

Site General Manager is to ensure verification of critical controls occurs at a reasonable frequency by frontline leadership and management representatives.

4.3 Critical Control Verifications (CCV)

CCVs shall be provided for each identified SIF risk. It is a simple field check that is intended to establish critical control status and reinforce critical controls.

All Managers are responsible for ensuring they regularly review SIF indicators and manage the risks associated with SIF.

CCV data can be captured using the LEAD application. This enables real time data analysis of the effectiveness of a critical control.

4.4 CCV Non-Conformance

If during the CCV it becomes evident that critical controls are not present or are not appropriate to manage the exposure to a SIF risk, the work activity is to cease immediately, and the area made safe. **Failure of a critical control during a verification does not trigger full investigation unless the risk of the failure is significant i.e. workers were exposed to imminent danger of serious injury.**

4.5 Critical Control Event (CCE)

A CCE is an event that relates to a SIF hazard AND where one or more designed critical controls failed, irrespective of exposure. The intent of recording these events is to monitor the status of critical controls rather than estimate the probability of an event using exposure.

CCEs shall be monitored within the existing reporting systems and shall be investigated according to current CS Energy procedures. CCEs shall be reported and monitored monthly by the Health and Safety function.

4.6 Management Review

To ensure continued reduction of risk and ongoing management of SIF risks, a combination of lead and lag performance indicators are to be monitored and reported monthly.

An annual review facilitated by the site Health and Safety Business Partner is to include:

- Formal trending of lead and lag KPIs;
- Identification of any new SIF risks or major changes that could impact the SIF risk profile;
- Completion and implementation status of identified SIF actions;
- New developments in technology that have the potential to reduce SIF risk.

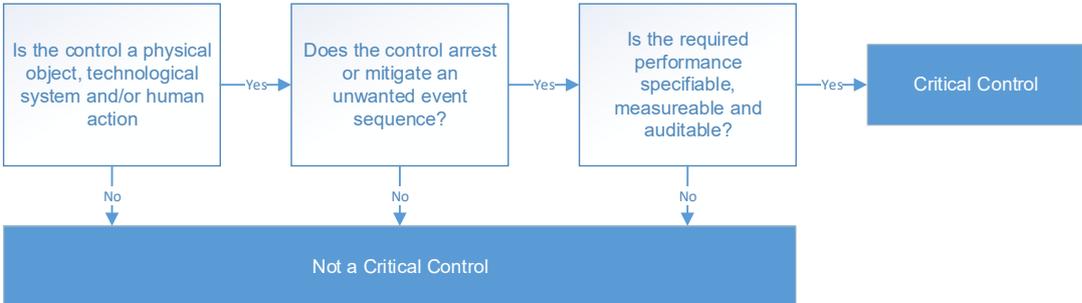
4.7 Training Requirements

All workers will be trained in the SIF prevention processes.

4.8 Work Environment

Work areas shall have clear signage indicating potential SIF exposures in the workplace as per the SIF signage specification.

5 DEFINITIONS

Term	Definition
Serious Injury and Fatal Risk (SIF)	A risk that has the potential to result in a serious injury or fatality, ranked severe or catastrophic as per the CS Energy Risk Matrix. The plausible worst case scenario causing serious injury or death assuming controls are not in place or are ineffective.
Control	An act, object (engineered) or system (combination of act and object) intended to prevent or mitigate an unwanted event (<i>ICMM Guideline 2015</i>).
Critical Control	<p>A control that is crucial to preventing the event or mitigating the consequences of a SIF event (<i>ICMM Guideline 2015</i>).</p> <p>The absence or failure of a critical control would significantly increase the risk despite the existence of the other controls. In addition, a control that prevents more than one unwanted event or mitigates more than one consequence is normally classified as critical.</p>  <pre> graph LR Q1[Is the control a physical object, technological system and/or human action?] -- Yes --> Q2[Does the control arrest or mitigate an unwanted event sequence?] Q1 -- No --> NCC[Not a Critical Control] Q2 -- Yes --> Q3[Is the required performance specifiable, measureable and auditable?] Q2 -- No --> NCC Q3 -- Yes --> CC[Critical Control] Q3 -- No --> NCC </pre>
Critical Control Verification (CCV)	A systematic and proactive approach to auditing and reviewing critical controls.

Term	Definition
Critical Control Event (CCE)	<p>A Critical Control Event is an event that relates to a SIF hazard and one or more critical controls were absent or failed. Consideration of a critical control event does include exposure, as the intent is to monitor the effectiveness of critical control only (not potential outcome). Examples below:</p> <ul style="list-style-type: none"> • Falling object lands in an area that is not considered accessible – CCE because object fell without any controls in place. • PTW incorrectly signed – Not CCE as this is an administrative omission not relating to execution of controls • Object fell into barricaded area that was intended to prevent access – CCE as falling object protection at work level not effective. • Worker wearing electrical gloves inadvertently contacted live low voltage cable due to incorrect isolation – CCE as isolation control was not effective.

6 REFERENCES

Reference No	Reference Title	Author

7 RECORDS MANAGEMENT

In order to maintain continual improvement, suitability, safety and effectiveness of the organisation, CS Energy's registered documents will be reviewed on a two-yearly basis or at intervals specified by legislative or regulatory requirements. Review of controlled documents should occur where it has been identified that there are changes in technology, legislation, standards, regulation or where experience identifies the need for alteration to the content. Registered documents should also be reviewed following an incident, change management process, modification or where directed as part of a risk assessment process. A 'review' can simply mean that it has been identified, confirmed and appropriately recorded that no changes are required and that the existing process remains the same.

CS Energy must ensure that records are retained according to accountability, legal, administrative, financial, commercial and operational requirements and expectations. In compliance with records retention and disposal, all documentation created in relation to CS Energy business must be retained in line with minimum retention periods as detailed in legal retention and disposal schedules.