Serious Incident and Fatality (SIF) Prevention Model

TOOLS FOR STEP 3: CHECK

Analyze and Verify the Effectiveness of Critical Controls

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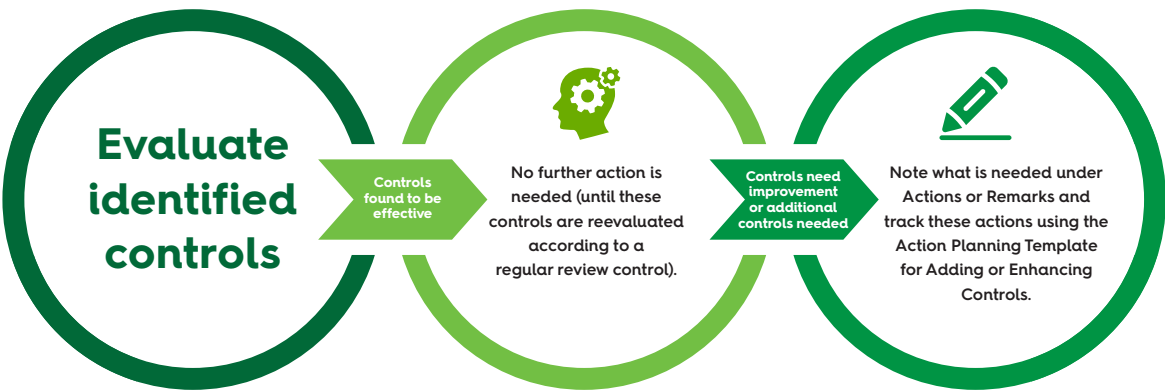National Safety Council

Table of Contents

Check Tool 1:
Critical Controls for SIF Prevention Matrix

Guidance: List the controls in the appropriate box on the matrix, considering the type of control (based on the Hierarchy of Controls) and the purpose of the control. Identify whether it is a **New** or **Existing** control and whether it has been **Verified** as suitable and effective.

As additional guidance, use the **Control Analysis and Verification Table** : *(Page 5)*.

Evaluate identified controls

Controls found to be effective

No further action is needed (until these controls are reevaluated according to a regular review control).

Controls need improvement or additional controls needed

Note what is needed under Actions or Remarks and track these actions using the Action Planning Template for Adding or Enhancing Controls.

NOTE: After completing the **Critical Controls for SIF Prevention Matrix,** consider what additional controls or improvements could make the system more robust. Keep the following points in mind:

» Even though the table lists the top left as being the most effective controls, it does not mean the bottom right is not important.

» A robust risk controls system will have a range of measures in place across the entire matrix. A wide range of critical controls is necessary to best reduce or prevent exposure to hazardous situations.

It is not required to have a control (or multiple controls) in every box to have a robust control system.

Controls Analysis and Verification Table

Use the following considerations when verifying that controls are in place and that they are suitable and effective in mitigating risk. This is not an exhaustive list and should only be used as an aid during control analysis and verification.

CONTROL TYPE	EXAMPLES	CONSIDERATIONS WHEN VERIFYING CONTROL
Engineering Controls	· Mechanical Ventilation · Machine Guarding · Electrical/Mechanical Interlocks · Photo Eye/Light Curtain · Drone/Robotic/Wearable Technology · Physical Barriers	· List of all electrical interlocks to check · Mechanical guarding is secure and requires tool to remove · Barriers are appropriate for hazard they are protecting against · Use of technology is appropriate for working environment · Use of technology does not add undue additional risk
Administrative Controls	· Training · Policy/Procedure · Pre-Task Inspection · Peer Review	· Method to track training requirements by job title/position · Method to validate training effectiveness (competency tests, etc.) · Method to validate procedure in the field · Pre-task Inspection covers all critical safety elements
PPE	· Selected based on hazard and exposure potential · Examples include protection for hearing, respiratory, eye, face, hands, body, and feet	· Comply with PPE manufacturer's recommendation for inspecting and replacing PPE · Ensure variety of PPE size and fit to accommodate entire workforce · Validate that PPE is being used as intended
Management Oversight	· Ensuring controls are followed · Conducting field "spot checks" · Engagement with workers on safety concerns	· Method to document and communicate results of "safety walks" or leadership engagements in the field · Continuous sharing of lessons learned throughout the work activity · Follow up with worker on actions taken on safety concerns
Cultural	· Stop work authority and actual use · Near-miss reporting systems · Peer-to-peer safety coaching	· Cross-training employees to recognize hazards outside their work area

Critical Controls for SIF Prevention Matrix

MOST EFFECTIVE

Prevent exposure to the hazard

Elimination of the Hazard	Substitution to Lessen the Hazard	Engineering Controls	Administrative Controls	Personal Protective Equipment
CONTROL: NEW EXISTING VERIFIED? YES NO ACTIONS OR REMARKS:	**CONTROL:** NEW EXISTING VERIFIED? YES NO ACTIONS OR REMARKS:	**CONTROL:** NEW EXISTING VERIFIED? YES NO ACTIONS OR REMARKS:	**CONTROL:** NEW EXISTING VERIFIED? YES NO ACTIONS OR REMARKS:	**CONTROL:** NEW EXISTING VERIFIED? YES NO ACTIONS OR REMARKS:
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LEAST EFFECTIVE

Reduce the impact of exposure to the hazard

Check Tool 2:
Action Planning Template for Adding or Enhancing Controls

Guidance: Use the following **Action Planning Template** to track corrective or preventative actions related to the implementation of additional controls or enhancements to existing controls.

1

CORRECTIVE OR PREVENTATIVE ACTION		OWNER	
DUE DATE	STATUS	ADDITIONAL RESOURCES NEEDED / COMMENTS	
START DATE			

2

CORRECTIVE OR PREVENTATIVE ACTION		OWNER	
DUE DATE	STATUS	ADDITIONAL RESOURCES NEEDED / COMMENTS	
START DATE			

3

CORRECTIVE OR PREVENTATIVE ACTION		OWNER	
DUE DATE	STATUS	ADDITIONAL RESOURCES NEEDED / COMMENTS	
START DATE			

4

CORRECTIVE OR PREVENTATIVE ACTION		OWNER	
DUE DATE	STATUS	ADDITIONAL RESOURCES NEEDED / COMMENTS	
START DATE			

5

CORRECTIVE OR PREVENTATIVE ACTION		OWNER	
DUE DATE	STATUS	ADDITIONAL RESOURCES NEEDED / COMMENTS	
START DATE			

7

CORRECTIVE OR PREVENTATIVE ACTION	OWNER

DUE DATE	STATUS	ADDITIONAL RESOURCES NEEDED / COMMENTS
	🟩	
START DATE	🟨	
	🟥	

10

CORRECTIVE OR PREVENTATIVE ACTION	OWNER

DUE DATE	STATUS	ADDITIONAL RESOURCES NEEDED / COMMENTS
	🟩	
START DATE	🟨	
	🟥	

8

CORRECTIVE OR PREVENTATIVE ACTION	OWNER

DUE DATE	STATUS	ADDITIONAL RESOURCES NEEDED / COMMENTS
	🟩	
START DATE	🟨	
	🟥	

11

CORRECTIVE OR PREVENTATIVE ACTION	OWNER

DUE DATE	STATUS	ADDITIONAL RESOURCES NEEDED / COMMENTS
	🟩	
START DATE	🟨	
	🟥	

9

CORRECTIVE OR PREVENTATIVE ACTION	OWNER

DUE DATE	STATUS	ADDITIONAL RESOURCES NEEDED / COMMENTS
	🟩	
START DATE	🟨	
	🟥	

12

CORRECTIVE OR PREVENTATIVE ACTION	OWNER

DUE DATE	STATUS	ADDITIONAL RESOURCES NEEDED / COMMENTS
	🟩	
START DATE	🟨	
	🟥	

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