

GUIDE FOR IDENTIFYING CAUSAL FACTORS & CORRECTIVE ACTIONS

Answer questions by placing an X in the "Y" circle or box for yes or in the "N" circle or box for no.

PART 1 EQUIPMENT

1.0 WAS A HAZARDOUS CONDITION[S] A CONTRIBUTING FACTOR?
If yes, answer the following. If no, proceed to Part 2.

Y	N	Causal Factors	Comment	Possible Corrective Actions	Recommended Corrective Actions
☐	☐	1.1 Did any defect(s) in equipment/tool(s)/material contribute to hazardous condition(s)?		Review procedure for inspecting, reporting, maintaining, repairing, replacing, or recalling defective equipment/tool(s)/material used.	
☐	☐	1.2 Was the hazardous condition(s) recognized? If yes, answer A and B. If no, proceed to 1.3.		Perform job safety analysis. Improve employee ability to recognize existing or potential hazardous conditions. Provide test equipment, as required, to detect hazard. Review any change or modification of equipment/tool(s)/material.	
☐	☐	A. Was the hazardous conditions(s) reported?		Train employees in reporting procedures. Stress individual acceptance of responsibility.	
☐	☐	B. Was employee(s) informed of the hazardous condition(s) and the job procedures for dealing with it as an interim measure?		Review job procedures for hazard avoidance. Review supervisory responsibility. Improve supervisor/employee communications. Take action to remove or minimize hazard.	
☐	☐	1.3 Was there an equipment inspection procedure(s) to detect the hazardous condition(s)?		Develop and adopt procedures (for example, an inspection system) to detect hazardous conditions. Conduct test.	
☐	☐	1.4 Did the existing equipment inspection procedure(s) detect the hazardous condition(s)?		Review procedures. Change frequency or comprehensiveness. Provide test equipment as required. Improve employee ability to detect defects and hazardous conditions. Change job procedures as required.	
☐	☐	1.5 Was the correct equipment/tool(s)/material used?		Specify correct equipment/tool(s)/material in job procedures.	
☐	☐	1.6 Was the correct equipment/tool(s)/material readily available?		Provide correct equipment/tool(s)/material. Review purchasing specifications and procedures. Anticipate future requirements.	

Figure 7-3. A causal factors analysis breaks down each incident into areas that contribute to an injury: equipment, environment, personnel, and management. By answering each question and placing an X in either a circle or a box will determine that item's relationship to the injury.

	Causal Factors	Comment	Possible Corrective Actions	Recommended Corrective Actions
☐ ☐ Y N	1.7 Did employee(s) know where to obtain equipment/tool(s)/material required for the job?		Review procedures for storage, access, delivery, or distribution. Review job procedures for obtaining equipment/tool(s)/material.	
☐ ☐ Y N	1.8 Was substitute equipment/tool(s)/material used in place of correct one?		Provide correct equipment/tool(s)/material. Warn against use of substitutes in job procedures and in job instruction.	
☐ ☐ Y N	1.9 Did the design of the equipment/tool(s) create operator stress or encourage operator error?		Review human factors engineering principles. Alter equipment/tool(s) to make it more compatible with human capability and limitations. Review purchasing procedures and specifications. Check out new equipment and job procedures involving new equipment before putting into service. Encourage employees to report potential hazardous conditions created by equipment design.	
☐ ☐ Y N	1.10 Did the general design or quality of the equipment/tool(s) contribute to a hazardous condition?		Review criteria in codes, standards, specifications, and regulations. Establish new criteria as required.	
☐	1.11 List other causal factors in "Comment" column.			

PART 2 ENVIRONMENT

- ☐ ☐
Y N
- 2.0 WAS THE LOCATION OF EQUIPMENT/MATERIALS/EMPLOYEE(S) A CONTRIBUTING FACTOR?**
If yes, answer the following. If no, proceed to Part 3.

	Causal Factors	Comment	Possible Corrective Actions	Recommended Corrective Actions
☐ ☐ Y N	2.1 Did the location/position of equipment/material/employee(s) contribute to a hazardous condition?		Perform job safety analysis. Review job procedures. Change the location, position, or layout of the equipment. Change position of employee(s). Provide guardrails, barricades, barriers, warning lights, signs, or signals.	
☐ ☐ Y N	2.2 Was the hazardous condition recognized? If yes, answer A and B. If no, proceed to 2.3.		Perform job safety analysis. Improve employee ability to recognize existing or potential hazardous conditions. Provide test equipment, as required, to detect hazard. Review any change or modification of equipment/tools/materials.	
☐ ☐ Y N	A. Was the hazardous condition reported?		Train employees in reporting procedures. Stress individual acceptance of responsibility.	

	Causal Factors	Comment	Possible Corrective Actions	Recommended Corrective Actions
☐ ☐ Y N	B. Was employee(s) informed of the job procedures for dealing with the hazardous condition as an interim action?		Review job procedures for hazard avoidance. Review supervisory responsibility. Improve employee/supervisor communications. Take action to remove or minimize hazard.	
☐ ☐ Y N	2.3 Was employee(s) supposed to be in the vicinity of the equipment/material?		Review job procedures and instruction. Provide guardrails, barricades, barriers, warning lights, signs, or signals.	
☐ ☐ Y N	2.4 Was the hazardous condition created by the location/position of equipment/material visible to employee(s)?		Change lighting or layout to increase visibility of equipment. Provide guardrails, barricades, barriers, warning lights, signs or signals, floor stripes, etc.	
☐ ☐ Y N	2.5 Was there sufficient workspace?		Review workspace requirements and modify as required.	
☐ ☐ Y N	2.6 Were environmental conditions a contributing factor (for example, illumination, noise levels, air contaminant, temperature extremes, ventilation, vibration, radiation)?		Monitor, or periodically check, environmental conditions as required. Check results against acceptable levels. Initiate action for those found unacceptable.	
☐	2.7 List other causal factors in "Comment" column.			

PART 3 PEOPLE

☐ ☐
Y N **3.0 WAS THE JOB PROCEDURE(S) USED A CONTRIBUTING FACTOR?**
If yes, answer the following. If no, proceed to Part 3.6.

	Causal Factors	Comment	Possible Corrective Actions	Recommended Corrective Actions
☐ ☐ Y N	3.1 Was there a written or known procedure (rules) for this job? If yes, answer A, B, and C. If no, proceed to 3.2.		Perform job safety analysis and develop safe job procedures.	
☐ ☐ Y N	A. Did job procedures anticipate the factors that contributed to the accident?		Perform job safety analysis and change job procedures.	
☐ ☐ Y N	B. Did employee(s) know the job procedure?		Improve job instruction. Train employees in correct job procedures.	
☐ ☐ Y N	C. Did employee(s) deviate from the known job procedure?		Determine why. Encourage all employees to report problems with an established procedure to supervisor. Review job procedure and modify if necessary. Counsel or discipline employee. Provide closer supervision.	

Figure 7-3. Continued.

	Causal Factors	Comment	Possible Corrective Actions	Recommended Corrective Actions
☐ Y ☐ N	3.2 Was employee(s) mentally and physically capable of performing the job?		Review employee requirements for the job. Improve employee selection. Remove or transfer employees who are temporarily, either mentally or physically, incapable of performing the job.	
☐ Y ☐ N	3.3 Were any tasks in the job procedure too difficult to perform (for example, excessive concentration or physical demands)?		Change job design and procedures.	
☐ Y ☐ N	3.4 Is the job structured to encourage or require deviation from job procedures (for example, incentive, piecework, work pace)?		Change job design and procedures.	
☐	3.5 List other causal factors in "Comment" column.			

☐ Y ☐ N **3.6 WAS LACK OF PERSONAL PROTECTIVE EQUIPMENT OR EMERGENCY EQUIPMENT A CONTRIBUTING FACTOR IN THE INJURY?**
 If yes, answer the following. If no, proceed to Part 4.
 Note: The following causal factors relate to the *injury*.

	Causal Factors	Comment	Possible Corrective Actions	Recommended Corrective Actions
☐ Y ☐ N	3.7 Was appropriate personal protective equipment (PPE) specified for the task or job? If yes, answer A, B, and C. If no, proceed to 3.8.		Review methods to specify PPE requirements.	
☐ Y ☐ N	A. Was appropriate PPE available?		Provide appropriate PPE. Review purchasing and distribution procedures.	
☐ Y ☐ N	B. Did employee(s) know that wearing specified PPE was required?		Review job procedures. Improve job instruction.	
☐ Y ☐ N	C. Did employee(s) know how to use and maintain the PPE?		Improve job instruction.	
☐ Y ☐ N	3.8 Was the PPE used properly when the injury occurred?		Determine why and take appropriate action. Implement procedures to monitor and enforce use of PPE.	
☐ Y ☐ N	3.9 Was the PPE adequate?		Review PPE requirements. Check standards, specifications, and certification of the PPE.	

Recommended
Corrective Action

PART 4 MANAGEMENT

4.0 WAS A MANAGEMENT SYSTEM DEFECT A CONTRIBUTING FACTOR?

If yes, answer the following. If no, STOP. Your causal factor identification exercise is complete.

Recommended
Corrective Actions

Figure 7-3. Concluded.