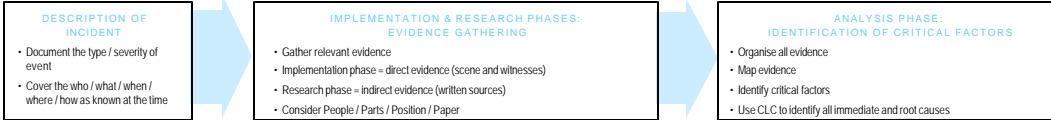
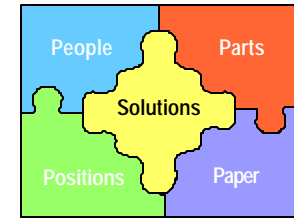


Comprehensive List of Causes

A TOOL FOR ROOT CAUSE ANALYSIS



POSSIBLE IMMEDIATE CAUSES			
ACTIONS	Use of Tools or Equipment	Use of Protective Methods	Inattention / Lack of Awareness
1. Following Procedures	2. Use of Tools or Equipment	3. Use of Protective Methods	4. Inattention / Lack of Awareness
11 Violation by individual	21 Improper use of equipment	31 Lack of knowledge of hazards present	41 Improper decision making or lack of judgment
12 Violation by group	22 Improper use of tools	32 Personal protective equipment not used	42 Distracted by other concerns
13 Violation by supervisor	23 Use of defective equipment (aware)	33 Improper use of proper personal protective equipment	43 Intentional to fooling and surroundings
14 Operation of equipment without authority	24 Use of defective tools (aware)	34 Servicing of energized equipment	44 Hasty
15 Improper position or posture for the task	25 Improper placement of tools, equipment or materials	35 Equipment or materials not secured	45 Acts of violence
16 Overexertion of physical capability	26 Operation of equipment at improper speed	36 Disabled guards, warning systems or safety devices	46 Failure to warn
17 Work or motion at improper speed	27 Servicing of equipment in operation	37 Removal of guards, warning systems or safety devices	47 Use of drugs or alcohol
18 Improper fitting	28 Other	38 Personal protective equipment not available	48 Routine activity without thought
19 Improper loading		39 Other	49 Other
1-10 Shortcuts			
1-11 Other			

POSSIBLE SYSTEM CAUSES														
PERSONAL FACTORS					JOB FACTORS					CONDITIONS				
1. Physical Capability	2. Physical Condition	3. Mental State	4. Mental Stress	5. Behavior	6. Skill Level	7. Training / Knowledge Transfer	8. Management / Supervision / Employee Leadership	9. Contractor Selection & Oversight	10. Engineering / Design	11. Work Planning	12. Purchasing / Material Handling / Material Control	13. Tools & Equipment	14. Work Rules / Policies / Standards / Procedures (PSP)	15. Communication
11 Vision deficiency	21 Previous injury or illness	31 Poor judgment	41 Preoccupation with problems	51 Improper performance is rewarded	61 Inadequate assessment of required skills	71 Inadequate knowledge transfer	81 Conflicting roles / responsibilities	91 Lack of contractor pre-qualifications	101 Inadequate technical design	111 Inadequate work planning	121 Inadequate item received	131 Inadequate assessment of needs and risks	141 Lack of PSP for the task	151 Inadequate horizontal communication
12 Hearing deficiency	22 Fatigue	32 Poor coordination or reaction time	42 Frustration	52 Avoids time or effort	62 Inadequate practice of skill	72 Inability to comprehend	82 Under-reporting relationships	92 Contractor pre-qualifications	102 Inadequate design input	112 Inadequate preventive maintenance	122 Specifications to vendor	132 Inadequate standards or specifications	142 Lack of job safety analysis	152 Inadequate vertical communication
13 Other sensory deficiency	23 World	33 Emotional	43 Conflicting demands / directions	53 Improper supervisory example	63 Inadequate performance of skill	73 Inadequate instructor qualifications	83 Under-assignment of responsibility	93 Contractor selection	103 Inadequate design input not correct	113 Assessment of needs	123 Lubrication / servicing	133 Inadequate standards or specifications	143 Inadequate job safety analysis	153 Inadequate communication between supervisor and person
14 Reduced respiratory capacity	24 Due to lack of rest	34 Emotional	44 Conflicting demands / directions	54 Identification of critical safe behaviors	64 Lack of coaching skill	74 Inadequate training equipment	84 Conflicting assignment of responsibility	94 Use of non-approved contractor	104 Inadequate design output	114 Adjustment / assembly	124 Specifications on requisition	134 Inadequate adjustment / repair / maintenance	144 Inadequate coordination with process / equipment design	154 Inadequate communication between different organizations
15 Temporary disabilities	25 Sensory overload	35 Fears or phobias	45 Meaningless or degrading activities	55 Inadequate reinforcement of critical safe behaviors	65 Inadequate review of instruction to establish skill	75 Inadequate recall of training material	85 Inadequate delegation of authority	95 Lack of job oversight	105 Inadequate design output infeasible	115 Repair / refurbishing	125 Inadequate control on changes to orders	135 Inadequate availability	145 Inadequate employee involvement in the development	155 Inadequate communication between work groups
16 Inability to sustain body positions	26 Diminished performance	36 Influenced by medication	46 Extreme judgment / decision demands	56 Proper performance is criticized	66 Not Applicable	76 Training not reinforced on the job	86 Standards of performance missing or not enforced	96 Other	106 Inadequate design output unclear	116 Scheduling of work	126 Unauthorized substitution	136 Inadequate record history	146 Inadequate definition of corrective actions	156 Inadequate communication between shifts
17 Residual range of body movement	27 Due to oxygen deficiency	37 Other	47 Extreme concentration / perception demands	57 Inappropriate peer pressure	67 Not Applicable	77 Training frequency	87 Inadequate accountability	97 Not Applicable	107 Inadequate design output inconsistent	117 Examination of parts	127 No equipment record history	137 Inadequate product acceptance	147 Inadequate implementation of PSP, due to deficiencies	157 Inadequate communication methods
18 Substance sensitivities or allergies	28 Atmospheric pressure variation	38 Not Applicable	48 Extreme concentration / perception demands	58 Inadequate disciplinary process	68 Not Applicable	78 Inadequate training effort	88 Inadequate or incorrect performance feedback	98 Not Applicable	108 Inadequate design review	118 Excessive wear and tear	128 Inadequate research on materials	138 Inadequate verification performed	148 Inadequate corrective actions	158 Inadequate communication due to job turnover
19 Inadequate size or strength	29 Blood sugar insufficiency	39 Other	49 Extreme boredom	59 Inappropriate aggression	69 Not Applicable	79 Training program design	89 Inadequate work site walk-through	99 Not Applicable	109 Inadequate standards, specifications, and / or design criteria	119 Scheduling of work	129 Inadequate mode or route of shipment	139 Inadequate acceptance requirements	149 Inadequate corrective actions	159 Inadequate communication of safety and health data, regulations or guidelines
1-11 Diminished capacity due to medication	20 Other	40 Not Applicable	50 Other	60 Inadequate training program design	70 Inadequate training goals / objectives	80 Inadequate new employee orientation	90 Inadequate safety promotion	100 Other	110 Inadequate reference materials or publications	120 Inadequate handling of materials	130 Inadequate storage of materials or spare parts	140 Inadequate record history	150 Inadequate potential situations not covered	160 Inadequate communication of safety and health data, regulations or guidelines
1-12 Other	21 Not Applicable	41 Not Applicable	51 Inadequate feedback	61 Inadequate reinforcement of critical safe behaviors	71 Inadequate means to determine if qualified for job	81 Inadequate initial training	91 Inadequate correction of prior hazard / incident	101 Other	111 Inadequate reference materials or publications	121 Inadequate storage of materials or spare parts	131 Inadequate storage of materials or spare parts	141 Inadequate record history	151 Inadequate potential situations not covered	161 Inadequate communication of safety and health data, regulations or guidelines
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For each identified critical factor, consider if any of the listed root cause categories apply. If yes, circle the specific root cause. If none of the root causes in the category apply, then check the 'not applicable' box at the bottom of the column.

CORRECTIVE PHASE: PROPOSALS FOR CORRECTIVE ACTION

Align with 'Getting HSE Right' elements

