

**CP 108**  
**Exhibit D**  
**Causal Factor Checklist**  
 Page 1 of 2

**INSTRUCTIONS FOR USING THE CAUSAL FACTOR CHECKLIST:**

1. Using Page 2 of the Checklist, the Investigation Team determines which of the various potential casual factors are associated with the subject incident.
2. A check mark is placed adjacent to the number that corresponds to a specific causal factor.
3. Using Page 1 of the Checklist, the Investigation Team locates each of the checked causal factors, by associated number (from Page 2 of the Checklist), to determine the Root Causes Categories for the subject incident.
4. The Root Cause Categories determined using this Checklist are then entered into Exhibit E, paragraph XI (for Category 1 incidents), Exhibit F, paragraph X (for Category 2 incidents), and Exhibit G, section V (for Category 3 incidents).

<b>ROOT CAUSAL FACTOR CATEGORIES</b>	
<b>ROOT CAUSE CATEGORY</b>	<b>CAUSAL FACTOR LINKS (CHECKLIST ITEMS)</b>
Planning and Risk Assessment	5.1; 5.3; 5.5; 5.7; 6.2; 6.5; 7.1–7.11; 12.1; 15.4; 17.3; 17.4; 20.1; 20.2
People/Behavior and Training	1.1; 1.2; 1.4; 1.7; 1.9; 2.1–2.7; 3.1–3.7; 4.1–4.9; 6.3; 6.6; 9.1–9.11; 10.1–10.5; 11.2–11.5; 12.2–12.4; 13.1–13.9; 14.1–14.3; 15.1; 18.7
Subcontractor Operations	16.1–16.4; 19.1–19.10
Work Environment and Design	7.1–7.11; 8.1–8.5; 17.1; 17.2; 17.5; 17.6
Monitoring and Inspection	5.2; 5.4; 5.6; 6.1; 6.3; 6.4; 6.6; 17.7; 18.1–18.6; 20.3–20.8; 21.1–21.3
Management of Change	15.5; 17.8
Communication	15.7; 21.5; 22.1–22.13
Incident Investigation and Hazard Prevention	15.3; 15.6
Human Factors	1.5; 1.6; 1.8; 7.2
Leadership, Oversight and Direction	1.3; 3.8; 11.1; 11.6; 11.7; 15.2; 15.8; 21.4

<b>CP 108</b> <b>Exhibit D</b> <b>Causal Factor Checklist</b> Page 2 of 2				<b>JOB FACTORS (continued)</b>	
		<input checked="" type="checkbox"/> <b>7.0 Work Exposure To:</b> <input type="checkbox"/> 7.1 Fire or explosion <input type="checkbox"/> 7.2 Noise <input type="checkbox"/> 7.3 Energized electrical systems <input type="checkbox"/> 7.4 Energized systems (non-electrical) <input type="checkbox"/> 7.5 Radiation <input type="checkbox"/> 7.6 Temperature extremes <input type="checkbox"/> 7.7 Hazardous chemicals/substances <input type="checkbox"/> 7.8 Mechanical hazards <input type="checkbox"/> 7.9 Clutter or debris <input type="checkbox"/> 7.10 Storms or acts of nature <input type="checkbox"/> 7.11 Slippery floors or walkways			<input type="checkbox"/> 15.3 Correction of reported hazard <input type="checkbox"/> 15.4 Identification of hazards <input type="checkbox"/> 15.5 Management of change <input type="checkbox"/> 15.6 Incident reporting/invest. <input checked="" type="checkbox"/> 15.7 Safety meetings <input type="checkbox"/> 15.8 Performance measurement
<b>IMMEDIATE CAUSAL FACTORS</b>		<input checked="" type="checkbox"/> <b>8.0 Workplace Environment</b> <input type="checkbox"/> 8.1 Congestion or restricted motion <input type="checkbox"/> 8.2 Lighting <input type="checkbox"/> 8.3 Ventilation <input type="checkbox"/> 8.4 Clearance <input type="checkbox"/> 8.5 Layout (ergonomics)			<input checked="" type="checkbox"/> <b>16.0 Contractor Selection/Oversight</b> <input type="checkbox"/> 16.1 Contractor pre-qualifications <input type="checkbox"/> 16.2 Contractor selection <input type="checkbox"/> 16.3 Non-approved contractor <input type="checkbox"/> 16.4 Oversight
<b>ACTIONS</b>		<b>CONTRIBUTORY CAUSAL FACTORS</b>			
<b>PERSONAL FACTORS</b>		<b>PERSONAL FACTORS</b>			
<input checked="" type="checkbox"/> <b>1.0 Following Procedures</b> <input checked="" type="checkbox"/> 1.1 Individual <input checked="" type="checkbox"/> 1.2 Group <input checked="" type="checkbox"/> 1.3 Supervision <input type="checkbox"/> 1.4 Operating equipment w/o authority <input type="checkbox"/> 1.5 Improper position/posture <input type="checkbox"/> 1.6 Overexertion - physical capabilities <input type="checkbox"/> 1.7 Work or motion at improper speed <input type="checkbox"/> 1.8 Improper loading <input type="checkbox"/> 1.9 Shortcuts	<input checked="" type="checkbox"/> <b>9.0 Physical Capability</b> <input type="checkbox"/> 9.1 Vision <input type="checkbox"/> 9.2 Hearing <input type="checkbox"/> 9.3 Other sensory impact (smell/touch) <input type="checkbox"/> 9.4 Respiratory capacity <input type="checkbox"/> 9.5 Physical disabilities <input type="checkbox"/> 9.6 Temporary disabilities (broken leg) <input type="checkbox"/> 9.7 Inability to sustain body positions <input type="checkbox"/> 9.8 Restricted range -body movement <input type="checkbox"/> 9.9 Substance sensitivities or allergies <input type="checkbox"/> 9.10 Size or strength <input type="checkbox"/> 9.11 Medication			<input checked="" type="checkbox"/> <b>17.0 Engineering/Design</b> <input type="checkbox"/> 17.1 Technical design <input type="checkbox"/> 17.2 Standards/specs/criteria <input type="checkbox"/> 17.3 Assessment of potential failures <input type="checkbox"/> 17.4 Ergonomic design <input type="checkbox"/> 17.5 Monitoring of construction <input type="checkbox"/> 17.6 Assessment/operational readiness <input type="checkbox"/> 17.7 Monitoring of initial operation <input type="checkbox"/> 17.8 Evaluation/documentation change	
<input checked="" type="checkbox"/> <b>2.0 Use of Tools or Equipment</b> <input checked="" type="checkbox"/> 2.1 Use of tools <input type="checkbox"/> 2.2 Use of equipment <input type="checkbox"/> 2.3 Use of defective tools <input type="checkbox"/> 2.4 Use of defective equipment <input type="checkbox"/> 2.5 Improper placement of tools/equip. <input type="checkbox"/> 2.6 Operating equip. at improper speed <input type="checkbox"/> 2.7 Servicing of equipment in operation	<input checked="" type="checkbox"/> <b>10.0 Physical Condition</b> <input type="checkbox"/> 10.1 Previous injury or illness <input type="checkbox"/> 10.2 Fatigue (workload, lack of rest) <input type="checkbox"/> 10.3 Performance loss (temp., O <sub>2</sub> level) <input type="checkbox"/> 10.4 Blood sugar deficiency <input type="checkbox"/> 10.5 Impairment (drug or alcohol use)			<input checked="" type="checkbox"/> <b>18.0 Work Planning</b> <input type="checkbox"/> 18.1 Work planning <input type="checkbox"/> 18.2 Preventive maintenance <input type="checkbox"/> 18.3 Repairs <input type="checkbox"/> 18.4 Wear and tear <input type="checkbox"/> 18.5 Reference materials <input type="checkbox"/> 18.6 Audit/inspection/monitoring <input type="checkbox"/> 18.7 Job placement (personnel)	
<input checked="" type="checkbox"/> <b>3.0 Use of Protective Methods</b> <input checked="" type="checkbox"/> 3.1 Prescribed PPE not used <input type="checkbox"/> 3.2 PPE used improperly <input type="checkbox"/> 3.3 Servicing energized equipment <input type="checkbox"/> 3.4 Lack of knowledge of job hazards <input type="checkbox"/> 3.5 Equipment/materials not secured <input type="checkbox"/> 3.6 Disabled guards/warning systems <input type="checkbox"/> 3.7 Removed guards/warning devices <input checked="" type="checkbox"/> 3.8 PPE not available	<input checked="" type="checkbox"/> <b>11.0 Behavioral Aspects</b> <input type="checkbox"/> 11.1 Examples by supervision <input type="checkbox"/> 11.2 Critical behaviors not identified <input type="checkbox"/> 11.3 Critical behaviors not reinforced <input type="checkbox"/> 11.4 Unsafe behaviors not identified <input type="checkbox"/> 11.5 Response to unsafe acts <input type="checkbox"/> 11.6 Productivity incentives <input type="checkbox"/> 11.7 Time and cost constraints			<input checked="" type="checkbox"/> <b>19.0 Purchasing/Material Handling</b> <input type="checkbox"/> 19.1 Item(s) received <input checked="" type="checkbox"/> 19.2 Research on requirements <input type="checkbox"/> 19.3 Mode or route of shipment <input type="checkbox"/> 19.4 Handling of materials <input type="checkbox"/> 19.5 Storage of materials/parts <input type="checkbox"/> 19.6 Material packaging <input type="checkbox"/> 19.7 Material shelf-life exceeded <input type="checkbox"/> 19.8 Identification of hazardous material <input type="checkbox"/> 19.9 Salvage and/or waste disposal <input type="checkbox"/> 19.10 Use of ES&H data	
<input checked="" type="checkbox"/> <b>4.0 Inattention/Lack of Awareness</b> <input type="checkbox"/> 4.1 Horseplay <input type="checkbox"/> 4.2 Acts of violence <input type="checkbox"/> 4.3 Failure to warn <input type="checkbox"/> 4.4 Decisions/judgment <input type="checkbox"/> 4.5 Distracted by other concerns <input type="checkbox"/> 4.6 Inattention to footing/surroundings <input type="checkbox"/> 4.7 Routine activity (complacency) <input type="checkbox"/> 4.8 Use of drugs or alcohol <input type="checkbox"/> 4.9 Use of prescribed medications	<input checked="" type="checkbox"/> <b>12.0 Skill Level</b> <input type="checkbox"/> 12.1 Assessment of required skills <input type="checkbox"/> 12.2 Practice of required skills <input type="checkbox"/> 12.3 Performance of skill <input type="checkbox"/> 12.4 Skill			<input checked="" type="checkbox"/> <b>20.0 Tools and Equipment</b> <input type="checkbox"/> 20.1 Assessment of needs/risks <input type="checkbox"/> 20.2 Ergonomic considerations <input checked="" type="checkbox"/> 20.3 Standards/specifications <input type="checkbox"/> 20.4 Availability (tools/equipment) <input type="checkbox"/> 20.5 Adjustment/repair/maintenance <input type="checkbox"/> 20.6 Salvage and reclamation <input type="checkbox"/> 20.7 Removal/replaced wrong item <input type="checkbox"/> 20.8 Equipment record history	
<b>CONDITIONS</b>		<b>JOB FACTORS</b>			
<input checked="" type="checkbox"/> <b>5.0 Protective Systems</b> <input type="checkbox"/> 5.1 Guards/safety device utilization <input type="checkbox"/> 5.2 Guards/safety device functionality <input type="checkbox"/> 5.3 PPE utilization <input type="checkbox"/> 5.4 PPE functionality <input type="checkbox"/> 5.5 Warning systems effectiveness <input type="checkbox"/> 5.6 Warning systems functionality <input type="checkbox"/> 5.7 Isolation (LOTO)	<input checked="" type="checkbox"/> <b>13.0 Other</b> <input checked="" type="checkbox"/> 13.1 Judgment <input type="checkbox"/> 13.2 Memory <input type="checkbox"/> 13.3 Poor condition or reaction time <input type="checkbox"/> 13.4 Emotional upset <input type="checkbox"/> 13.5 Fears and phobias <input type="checkbox"/> 13.6 Preoccupied w/problems/concerns <input type="checkbox"/> 13.7 Conflicting directions/demands <input type="checkbox"/> 13.8 Confusing directions/demands <input type="checkbox"/> 13.9 Frustration			<input checked="" type="checkbox"/> <b>21.0 Policies/Standards/Procedures</b> <input type="checkbox"/> 21.1 PSP for the work performed <input type="checkbox"/> 21.2 Development of PSP <input type="checkbox"/> 21.3 Implementation of PSP <input type="checkbox"/> 21.4 Enforcement of PSP <input type="checkbox"/> 21.5 Communication of PSP	
<input checked="" type="checkbox"/> <b>6.0 Tools, Equipment, &amp; Vehicles</b> <input type="checkbox"/> 6.1 Equipment/tools utilization <input type="checkbox"/> 6.2 Equipment/tools functionality <input type="checkbox"/> 6.3 Equipment/tools preparation <input type="checkbox"/> 6.4 Defective vehicle <input type="checkbox"/> 6.5 Proper vehicle for purpose <input type="checkbox"/> 6.6 Vehicle preparation	<input checked="" type="checkbox"/> <b>14.0 Training/Knowledge Transfer</b> <input type="checkbox"/> 14.1 Knowledge transfer <input type="checkbox"/> 14.2 Recall of training <input checked="" type="checkbox"/> 14.3 Training provided for work <input checked="" type="checkbox"/> <b>15.0 Leadership (Mgmt)</b> <input type="checkbox"/> 15.1 Conflicting roles or responsibilities <input checked="" type="checkbox"/> 15.2 Leadership practices			<input checked="" type="checkbox"/> <b>22.0 Communication</b> <input type="checkbox"/> 22.1 Horizontal (peer-to-peer) <input type="checkbox"/> 22.2 Vertical (employee to super) <input type="checkbox"/> 22.3 Between organizations <input type="checkbox"/> 22.4 Between work groups <input type="checkbox"/> 22.5 Between shifts <input type="checkbox"/> 22.6 Communication methods <input type="checkbox"/> 22.7 Communication method available <input type="checkbox"/> 22.8 Instructions <input type="checkbox"/> 22.9 Job turnover <input type="checkbox"/> 22.10 Communication of ES&H data <input type="checkbox"/> 22.11 Standard terminology <input type="checkbox"/> 22.12 Verification practices <input type="checkbox"/> 22.13 Language differences	