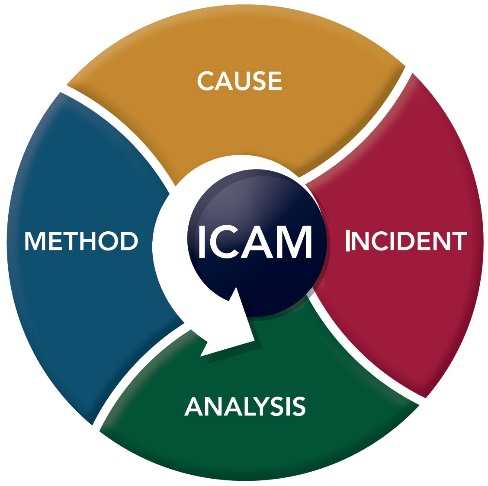
**ICAM INVESTIGATION REPORT**

**(Template)**



|  |  |
| --- | --- |
| **Report Title:** |  |
| **Date:** |  |
| **Student Name:** |  |

|  |  |
| --- | --- |
| **Report Status: Preliminary report / Final Report** | |
| **Investigation Team** | |
| **Name:** | **Position** |
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**Control Page**

*This document has been prepared on behalf of and for the exclusive use of insert business entity name*

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| --- | --- | --- | --- |
| **Rev. #** | **Date** | **Section** | **Description** |
| E.g. 1. | 01/01/2018 | *All* | Draft report |
|  |  |  |  |
|  |  |  |  |

|  |  |  |
| --- | --- | --- |
| **Report Agreed/Approved** | | |
| Sponsor Manager Name/s: | Signature: | Date: |
|  |  |  |
|  |  |  |
| *Comments:* | | |

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# **Executive Summary**

(Summary of Incident Description, Findings, Recommendations)

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# **Incident Description**

## **2.1 Location details**

|  |  |
| --- | --- |
| Location: |  |
| Time: |  |
| Date: |  |

## **2.2 Details of injured person/s**

|  |  |
| --- | --- |
| Name: |  |
| Company: |  |
| Injuries sustained: |  |
| Medical treatment: |  |

## **2.3 Details of damage/impact**

|  |  |
| --- | --- |
| Damage to equipment: |  |
| Environmental impact: |  |

## **2.4 Risk rating**

|  |  |
| --- | --- |
| Actual consequence level: |  |
| Potential consequence level: |  |

## **2.5 Incident**

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## **2.6 Photographs**

## **2.7 Timelines**

See Appendix for sample

## **2.8 Statements obtained**

2.8.1 Statement from insert person/role

# **Key Findings**

## **3.1 Immediate Cause**

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## **3.2 Contributing Factors**

|  |  |  |  |
| --- | --- | --- | --- |
| **Category** | **Code** | | **Contributing Factor Type** |
| **Absent or Failed Defense** | DF1 |  | Awareness – hazard identification |
| DF2 |  | Awareness – communication |
| DF3 |  | Awareness – competence/knowledge |
| DF4 |  | Awareness – supervision |
| DF5 |  | Awareness -work instruction/procedure |
| DF6 |  | Detection – visual warning systems |
| DF7 |  | Detection – aural warning systems |
| DF8 |  | Detection -speed/movement detectors |
| DF9 |  | Detection – vigilance/fatigue |
| DF10 |  | Detection – gas/substance |
| DF11 |  | Control and Recovery – procedures |
| DF12 |  | Control and Recovery – bypass valves/circuits |
| DF13 |  | Control and Recovery – emergency shut down |
| DF14 |  | Protection and Containment – PPE |
| DF15 |  | Protection and Containment – fire fighting |
| DF16 |  | Protection and Containment – spill response |
| DF17 |  | Protection and Containment –bunding/barricading/exclusion zones |
| DF18 |  | Escape and Rescue – safe access/egress |
| DF19 |  | Escape and Rescue – emergency planning/response |
| DF20 |  | Escape and Rescue – emergency communication |
| DF21 |  | Other… |
| **Evidence: (detail evidence for each box ticked above)** | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Category** | **Code** | | **Contributing Factor Type** |
| **Individual Team or Action** | IT1 |  | Supervisory error or violation |
| IT2 |  | Operating authority error or violation |
| IT3 |  | Operating speed |
| IT4 |  | Equipment use error or violation |
| IT5 |  | PPE use error or violation |
| IT6 |  | Procedural compliance |
| IT7 |  | Change management error |
| IT8 |  | Equipment/materials handling error or violation |
| IT9 |  | Horseplay/thrill seeking error or violation |
| IT10 |  | Hazard recognition/perception |
| IT11 |  | Hazard management error or violation |
| IT12 |  | Work method error or violation |
| IT13 |  | Occupational hygiene practices |
| IT14 |  | Other… |
| **Evidence: (detail evidence for each box ticked above)** | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Category** | **Code** | | **Contributing Factor Type** |
| **Task / Environment Conditions - WORKPLACE** | TE1 |  | Task Planning / Preparation / Manning |
| TE2 |  | Hazard Analysis / Job Safety Analysis / Take 5 |
| TE3 |  | Work Procedures availability and suitability |
| TE4 |  | Permit to work availability and suitability |
| TE5 |  | Abnormal operation situation / Condition |
| TE6 |  | Tools / Equipment condition / Availability |
| TE7 |  | Materials availability and suitability |
| TE8 |  | Equipment integrity |
| TE9 |  | Housekeeping |
| TE10 |  | Weather conditions |
| TE11 |  | Congestion/ Restrictions / Access |
| TE12 |  | Routine / Non-routine task |
| TE13 |  | Fire and / or explosion hazard |
| TE14 |  | Lighting |
| TE15 |  | Equipment / Material temperature / Conditions |
| TE16 |  | Noise |
| TE17 |  | Ventilation |
| TE18 |  | Gas, dust or fumes |
| TE19 |  | Radiation |
| TE20 |  | Chemical |
| TE21 |  | Wildlife |
| TE22 |  | Surface Gradient / Conditions |
| TE23 |  | Reduced / Restricted visibility |
| TE24 |  | Other Factor… |
| **Evidence: (detail evidence for each box ticked above)** | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Category** | **Code** | | **Contributing Factor Type** |
| **Task / Environment Conditions HUMAN FACTORS** | HF1 |  | Complacency/motivation/desensitization to hazard |
| HF2 |  | Drugs/Alcohol influence |
| HF3 |  | Familiarity with task |
| HF4 |  | Fatigue |
| HF5 |  | Situational awareness |
| HF6 |  | Time/productivity pressures |
| HF7 |  | Peer pressure/supervisory example |
| HF8 |  | Physical capabilities |
| HF9 |  | Mental capabilities |
| HF10 |  | Physical stress |
| HF11 |  | Mental stress |
| HF12 |  | Confidence level |
| HF13 |  | Secondary level |
| HF14 |  | Personal issues |
| HF15 |  | Distraction/pre-occupation |
| HF16 |  | Experience/knowledge/skill for task |
| HF17 |  | Competency |
| HF18 |  | Behavioral beliefs (gains – risks) |
| HF19 |  | Personality/attitude |
| HF20 |  | Poor communications |
| HF21 |  | Poor shift patterns & overtime working |
| HF22 |  | Passive tolerance of violations |
| HF23 |  | Perceived license to bend rules |
| HF24 |  | Change of routine |
| HF25 |  | Reliance on undocumented knowledge |
| HF26 |  | Other Human Factor… |
| **Evidence: (detail evidence for each box ticked above)** | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Category** | **Code** | | **Contributing Factor Type** |
| **Organizational Factors** | HW |  | Hardware |
| TR |  | Training |
| OR |  | Organization |
| CO |  | Communication |
| IG |  | Incompatible Goals |
| PR |  | Procedures |
| MM |  | Maintenance Management |
| DE |  | Design |
| RM |  | Risk Management |
| MC |  | Management of Change |
| CM |  | Contractor Management |
| OC |  | Organizational Culture |
| RI |  | Regulatory Influence |
| OL |  | Organizational Learning |
| VM |  | Vehicle Management |
| MS |  | Management Systems |
| **Evidence: (detail evidence for each box ticked above)** | | | |

# **Recommendations**

## Recommendations from Contributing Factors – Corrective Action Plan

|  |  |  |  |
| --- | --- | --- | --- |
| **Item Ref** | **Corrective Action** | **Responsible Dept/Person** | **Completion Date** |
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| **PCBU’s Close Out of Corrective Actions:**  Comments:  Name: Signature: Date: | | | |

# **Observations while conducting the investigation**

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# **Positive observations during the investigation**

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# **Significant Learnings**

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# **8.0 References**

The following documentation has been referenced as part of this investigation.

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# **9.0 APPENDICES**

* Appendix 1 – Timeline
* Appendix 2 – Five Why’s
* Appendix 3 – PEEPO
* Appendix 4 – Corrective Action Plan
* Appendix 5 – ICAM Factor Analysis
* Appendix 6 – ICAM Codes

# **Appendix 1: Timeline**

# **Appendix 2: Event & Condition Chart (‘Five Whys’)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Date:** | **Event** |  |  |  |  |  |
| Condition  WHY |  |  |  |  |  |  |
| WHY |  |  |  |  |  |  |
| WHY |  |  |  |  |  |  |
| WHY |  |  |  |  |  |  |
| WHY |  |  |  |  |  |  |
| WHY |  |  |  |  |  |  |

# **Appendix 3: PEEPO Analysis**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| PEOPLE | EQUIPMENT | ENVIRONMENT | PROCEDURES | ORGANISATION |
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# **Appendix 4:** **ICAM FACTOR ANALYIS**

# **Appendix 5: ICAM CODES**

|  |  |
| --- | --- |
| **CODE** | **Contributing Factor Types**  **ABSENT / FAILED DEFENCES** |
| DF1 | Awareness – hazard identification |
| DF2 | Awareness – communication |
| DF3 | Awareness – competence/knowledge |
| DF4 | Awareness – supervision |
| DF5 | Awareness -work instruction/procedure |
| DF6 | Detection – visual warning systems |
| DF7 | Detection – aural warning systems |
| DF8 | Detection -speed/movement detectors |
| DF9 | Detection – vigilance/fatigue |
| DF10 | Detection – gas/substance |
| DF11 | Control and Recovery – procedures |
| DF12 | Control and Recovery – bypass valves/circuits |
| DF13 | Control and Recovery – emergency shut down |
| DF14 | Protection and Containment – PPE |
| DF15 | Protection and Containment – fire fighting |
| DF16 | Protection and Containment – spill response |
| DF17 | Protection and Containment –bunding/barricading/exclusion zones |
| DF18 | Escape and Rescue – safe access/egress |
| DF19 | Escape and Rescue – emergency planning/response |
| DF20 | Escape and Rescue – emergency communication |
| DF21 | Other… |

|  |  |
| --- | --- |
| **CODE** | **Contributing Factor types**  **INDIVIDUAL / TEAM ACTIONS** |
| IT1 | Supervisory error or violation |
| IT2 | Operating authority error or violation |
| IT3 | Operating speed |
| IT4 | Equipment use error or violation |
| IT5 | PPE use error or violation |
| IT6 | Procedural compliance |
| IT7 | Change management error |
| IT8 | Equipment/materials handling error or violation |
| IT9 | Horseplay/thrill seeking error or violation |
| IT10 | Hazard recognition/perception |
| IT11 | Hazard management error or violation |
| IT12 | Work method error or violation |
| IT13 | Occupational hygiene practices |
| IT14 | Other… |

|  |  |  |
| --- | --- | --- |
| **CODE** | | **Contributing Factor Types**  **TASK / ENVIRONMENT CONDITIONS –**  **WORKPLACE FACTORS (May be coded as WF)** |
| TE1 Or WF1 | Task Planning / Preparation / Manning | |
| TE2 Or WF2 | Hazard Analysis / Job Safety Analysis / Take 5 | |
| TE3 Or WF3 | Work Procedures availability and suitability | |
| TE4 | Permit to work availability and suitability | |
| TE5 | Abnormal operation situation / Condition | |
| TE6 | Tools / Equipment condition / Availability | |
| TE7 | Materials availability and suitability | |
| TE8 | Equipment integrity | |
| TE9 | Housekeeping | |
| TE10 | Weather conditions | |
| TE11 | Congestion/ Restrictions / Access | |
| TE12 | Routine / Non-routine task | |
| TE13 | Fire and / or explosion hazard | |
| TE14 | Lighting | |
| TE15 | Equipment / Material temperature / Conditions | |
| TE16 | Noise | |
| TE17 | Ventilation | |
| TE18 | Gas, dust or fumes | |
| TE19 | Radiation | |
| TE20 | Chemical | |
| TE21 | Wildlife | |
| TE22 | Surface Gradient / Conditions | |
| TE23 | Reduced / Restricted visibility | |
| TE24 | Other Factor… | |

|  |  |
| --- | --- |
| **CODE** | **Contributing factor types**  **TASK / ENVIRONMENT**  **– HUMAN FACTORS** |
| HF1 | Complacency/motivation/desensitization to hazard |
| HF2 | Drugs/Alcohol influence |
| HF3 | Familiarity with task |
| HF4 | Fatigue |
| HF5 | Situational awareness |
| HF6 | Time/productivity pressures |
| HF7 | Peer pressure/supervisory example |
| HF8 | Physical capabilities |
| HF9 | Mental capabilities |
| HF10 | Physical stress |
| HF11 | Mental stress |
| HF12 | Confidence level |
| HF13 | Secondary level |
| HF14 | Personal issues |
| HF15 | Distraction/pre-occupation |
| HF16 | Experience/knowledge/skill for task |
| HF17 | Competency |
| HF18 | Behavioral beliefs (gains – risks) |
| HF19 | Personality/attitude |
| HF20 | Poor communications |
| HF21 | Poor shift patterns & overtime working |
| HF22 | Passive tolerance of violations |
| HF23 | Perceived license to bend rules |
| HF24 | Change of routine |
| HF25 | Reliance on undocumented knowledge |
| HF26 | Other Human Factor… |

|  |  |
| --- | --- |
| **CODE** | **Contributing Factor Types**  **ORGANISATIONAL FACTORS** |
| HW | Hardware |
| TR | Training |
| OR | Organization |
| CO | Communication |
| IG | Incompatible Goals |
| PR | Procedures |
| MM | Maintenance Management |
| DE | Design |
| RM | Risk Management |
| MC | Management of Change |
| CM | Contractor Management |
| OC | Organizational Culture |
| RI | Regulatory Influence |
| OL | Organizational Learning |
| VM | Vehicle Management |
| MS | Management Systems |