**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 |
|  |  |  |  |
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| --- |
| **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**

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| --- | --- | --- |
| **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** |  |  |  |  |  |
| ConditionWHY |  |  |  |  |  |  |
| WHY |  |  |  |  |  |  |
| WHY |  |  |  |  |  |  |
| WHY |  |  |  |  |  |  |
| WHY |  |  |  |  |  |  |
| WHY |  |  |  |  |  |  |

# **Appendix 3: PEEPO Analysis**

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| --- | --- | --- | --- | --- |
| 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 |