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| **Incident Investigation Report** | | |
| **Incident No:** |  | |
| **Incident Date:**  **Incident Time:** |  | |
| **Incident Description:** |  | |
| **Actual Incident Level:** | Near Miss  Level 1  Level 2  Level 3a  Level 3b | |
| **Potential Incident Level:** | Level 1  Level 2  Level 3a  Level 3b  *(determine by management)* | |
| Methodology: | 5 Why | Why Tree  *(must use for actual and potential level 2 & 3 incident)* |

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| --- | --- | --- |
| 1. | **Date Investigation Began** |  |
| 2. | **Incident Investigation Leader:**  **Why Tree Facilitator:**  *(Leader can also be the facilitator)* |  |
| 3. | **Investigation Team Member(s):**  *(name & job title of each members)* |  |
| 4. | **Supporting Information/Data (P&IDs, Sketches, Process Trends, Process Alarms, Etc.):** | |

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| **5. Summary of Incident Details**  *(exclude names and personal information, explain in detail with timeline the relevant events leading up to the incident)*   |  |  |  | | --- | --- | --- | | **Date** | **Time (Hrs)** | **Event** | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  | | | | | | | | | | | |
| **6a. Protective Systems** *(if why tree is used, before start of why tree list any management system or hardware system which reduces the potential for having the incident or the consequences of the incident)*  **What exists and work?**  **What exists and didn’t work?**  **What would have helped?**  **6b. Why Tree** *(attach here)*  Attachment Option available   * 5 Why was used | | | | | | | | | | |
| **7a. Summary of Incident Investigation Findings** *(Explain what evidence was reviewed during the investigation and the conclusions based on the facts. The conclusion should discuss the root cause(s) that were identified during the Root Cause Analysis)* | | | | | | | | | | |
| **7b.** | | **Root cause Categories:** | | | | | | | | |
|  | |  | | | | | | | | |
|  | | (1) **Assessments or Audits**  Assessment or audit not conducted  Assessment or audit failed to uncover inadequacies  Results of assessment or audit not acted on | | | | |  | 2) **Communications**  Inadequate verbal communication  Inadequate written communication  Inadequate shift turnover communication  Inadequate signalling  Inadequate signage | | | | |
|  | | (3) **Contractor Health, Environment and Safety Management (CHESM)** | | | | |  | 4) **Design**  Design standards not utilized  Did not anticipate the conditions  Did not consider human factors  Design review failed to uncover inadequacies in design  Design standards inadequate  Design standards did not exist | | | | |
|  | | (5) **Emergency Response** | | | | |  | (6) **Human Performance**  Mistake or mental slip  Wilful deviation  Mental overload | | | | |
|  | | (7) **Incident and Near-Miss Investigation** | | | | |  | (8) **Quality Control or Acceptance Testing**  Not Required  Inadequate  Not conducted  Results not acted on | | | | |
|  | | (9) **Leadership Accountability**  Management expectations inadequately documented, communicated or enforced  Deviation is accepted  Inadequate resource allocation | | | | |  | (10) **Management of Change (MOC)**  MOC not utilized  MOC inadequate for design change  MOC inadequate for organizational change | | | | |
|  | | (11) **Natural Phenomenon**  Weather/wildfire  Insect, reptiles or other animal | | | | |  | (12) **Pre-Start-up Safety Review (PSSR)**  PSSR not conducted  PSSR failed to uncover inadequacies in procedures/equipment  Results of PSSR were not acted on | | | | |
|  | | (13) **Preventive Maintenance, Inspection, Testing or Repair**  Program does not exist  Not conducted  Inadequate  Results were not acted upon  Inadequate maintenance planning | | | | |  | (14) **Procedures or Safe Work Practices**  Did not exist  Not available  Inadequate  Not utilized  Difficult to use | | | | |
|  | | (15) **Risk Assessment**  No Risk Assessment  Hazard not recognized  PotentXYZ consequences not understood  Controls or preventive systems inadequate | | | | |  | (16) **Supervision/Work Direction**  Inadequate selection of worker(s)  Inadequate work oversight or enforcement  Inadequate work direction or expectations | | | | |
|  | | (17) **Training/ Competency**  No training exists  Training exists but inadequate  Training exists but individual was not trained  Individual was trained but lacked competency/fluency | | | | |  |  | | | | |
| **The following information describes reasons for selecting specific Root Cause Categories** | | | | | | | | | | |
|  | | | | | | | | | | |
| **8. Lesson(s) Learnt:** | | | | | | | | | | |
| **9. Tenets Not Followed** *(Check each which was not followed and explain why)* | | | | | | | | | | | |
|  | | | | Tenet No.1  Always operate within design or environmental limits | | | | | | | |
|  | | | | Tenet No. 2  Always operate in a safe and controlled condition | | | | | | | |
|  | | | | Tenet No. 3  Always ensure safety devices are in place and functioning | | | | | | | |
|  | | | | Tenet No. 4  Always follow safe work practices and procedures | | | | | | | |
|  | | | | Tenet No. 5  Always meet or exceed customers’ requirements | | | | | | | |
|  | | | | Tenet No. 6  Always maintain integrity of dedicated systems | | | | | | | |
|  | | | | Tenet No. 7  Always comply with all applicable rules and regulations | | | | | | | |
|  | | | | Tenet No. 8  Always address abnormal conditions | | | | | | | |
|  | | | | Tenets No. 9  Always follow written procedures for high risk or unusual situations. | | | | | | | |
|  | | | | Tenet No. 10  Always involve the right people in decisions that affect procedures and equipment | | | | | | | |
| The following information describes reasons for selecting tenets that were not followed.  **If Tenet No. 4 is selected, please select the procedures SWPs that were violated (if applicable)**   |  |  |  |  | | --- | --- | --- | --- | | Permit-to-Work | Lock Out / Tag-Out | Confined Space Entry | PPE | | Working at Height | JSRA/JSE | Lifting & Rigger | Hot Work | | Electrical Work | Safe Work with H2S | Deviation Procedure | Excavation | | First Break Procedure | Operating Procedures | Technical Procedures | Maintenance Procedures | | Plant Policies / Procedures | Other Procedures-specify: |  |  | | | | | | | | | | | | |
| **10.** | | | **Investigation recommendations:**  We will discuss with client & comeback | | | | | | | | |
|  | | | **Corrective action** | | **Responsible Person for corrective action** | | | **Target Completion Date** | **Require Validation of effectiveness?**  ***(to be check by Incident Owner)*** | **Responsible Person to validate the effectiveness of the action item** | |
| 1 | | |  | |  | | |  | Yes No |  | |
| 2 | | |  | |  | | |  | Yes No |  | |
| 3 | | |  | |  | | |  | Yes No |  | |
| 4 | | |  | |  | | |  | Yes No |  | |

*Sufficient data/samples are required to validate if the implemented corrective action(s) is/are effective. The Responsible Party must send the conclusion of the validation to EHS and Incident Owner for record keeping and review respectively.*

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| **11.** | **Action Taken** *(for Section 10)* | **Date Completed** |
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| **12: REPORT APPROVED BY** | |
| Name | : |
| Designation | : |
| Date | : |

*Complete this incident investigation report, relevant consequence forms and Root Cause Analysis (Five Why or Why Tree); send it to the Incident Owner for review and approval.*

We will do these changes after discussiong with client

*Incident Owner review and if approve, send it to XYZ Incident reporting Group*

Appendix 1

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **FIVE WHY’S form**  *(use for Near Miss and level 1 incidents only)*   |  |  | | --- | --- | | 1. Why did “above” happen? | Verification | |  |  | | 2. Why did “1” happen? |  | |  |  | | 3. Why did “2” happen? |  | |  |  | | 4. Why did “3” happen? |  | |  |  | | 5. Why did “4” happen? |  | |  |  | | 6. Why did “5” happen? |  | |  |  | |

Incident Investigation Quality Checklist

*(Quality Checklist to assure the investigation is of quality before submitting to Incident Owner for approval)*

|  |  |  |  |
| --- | --- | --- | --- |
| **Best Practice Element** | **Y** | **N** | **Findings/Comments** |
| 1. Appropriate use of matrix¹ |  |  |  |
| 1. Investigation initiated within 8 hours² |  |  |  |
| 1. Trained Facilitator/Team Leader used³ |  |  |  |
| 1. Appropriate team make up4 |  |  |  |
| 1. Adequate data collection5 |  |  |  |
| 1. High quality interviews conducted6 |  |  |  |
| 1. Sequence of Events completed |  |  |  |
| 1. Protective Systems List Brainstormed |  |  |  |
| 1. Why tree/Five Why used to identify root causes and appropriate causes are included in the analysis7 |  |  |  |
| 10. System level root causes identified and verified8 |  |  |  |
| 1. Appropriate root cause categories and tenets violated identified |  |  |  |
| 1. Root causes are addressed with definable, actionable corrective actions (SMART) |  |  |  |
| 1. Corrective actions assigned w/ dates |  |  |  |
| 1. Investigation report is complete9 |  |  |  |
| 1. Report issued on time |  |  |  |
| 1. Report includes validation criteria or requirements10 |  |  |  |
| 1. Human/behaviour cause “procedure not followed” driven down as per Appendix III Working Through Human/Behavioural Causes as per RCA Facilitator Handbook |  |  | **NA** |

**Notes:**

1. Appropriate use includes both the proper classification as well as the correct level of investigation.
2. Initiation is defined as beginning the data gathering process.
3. The level of experience depends on the investigation requirements per the Incident Investigation and Reporting Matrix. Trained Line Supervisor or Lead Responsible Person for Near Miss / Level 1, Trained Team Leader for Level 2 and potentXYZ Level 2/ Level 3, and trained Facilitator for Level 3.
4. Team includes: 1) representation from involved Company and contractor groups (this does not necessarily mean the actual people involved with the Incident) and 2) appropriate outside expertise.
5. Data includes facility status at time of Incident, inspection reports, sample results, equipment and process history reports, flow diagrams and P&IDs, still pictures and video tapes.
6. High quality interviews include: 1) timeliness of interview, 2) the right people interviewed, 3) written statements from the involved people (optional), 4) complete written record of interview, 5) adequate level of detail including timeline.
7. Appropriate causal factors include factors addressing the direct causes of the Incident as well as 1) factors affecting the size of the Incident, 2) factors addressing the effectiveness of the protective systems or barriers in place (i.e. alarms, shutdowns, PPE, procedures etc.), 3) factors effecting the response to the Incident.
8. Appropriate root causes are the lowest (system) level root causes which we can identify and which we have control to fix.
9. High quality report includes: 1) Incident summary, 2) team members, 3) time line of events, 4) analysis of facts, 5) any immediate corrective actions, 6) a description of the root causes and causal factors, 7) identification of the OE process compromised, 8) identification of Tenets violated, 9) corrective actions with owners, due dates and validation requirements.
10. Validation is the step taken to identify whether or not the corrective actions implemented have been effective in addressing the Root Causes.