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6.5 Based on the above information Mgr (F&S) or his representatives shall carry out cost analysis of accidents and circulate the report to Management

## 7 APPLICABLE ACTS / RULES CHECK CHART

S. No	Act / Rules	Details of accident	Responsibility	Action	Agencies to be informed
1	Factories Act - Sec 88, 88A and Rajasthan Factories Rules 101	<p><b>Accident</b></p> <p>a. Occurrence of accident resulting in death of which results in such bodily injury to any person as is likely to cause his death.</p> <p>b. Which prevents the person injured from working for a period of 48 hrs. or more of the accident.</p>	<p>Factory Manager</p> <p>Factory Manager</p>	<p>▪ Immediately inform by telephone/ special messenger or telegram.</p> <p>▪ To be confirmed within 12 hrs. of accident in form-20.</p> <p>Inform within 24 hrs. after the expiry of 48 hrs. from the time of accident or dangerous occurrence</p>	<p>Dy.CIF&amp;B, CIF&amp;B, DM or SDM, Nearest police station, Relatives of injured/deceased person.</p> <p>DY.CIF&amp;B Kota</p>

## 8 DOCUMENTATION:

The pre-structured formats for reporting and investigation of accidents are enclosed as below :

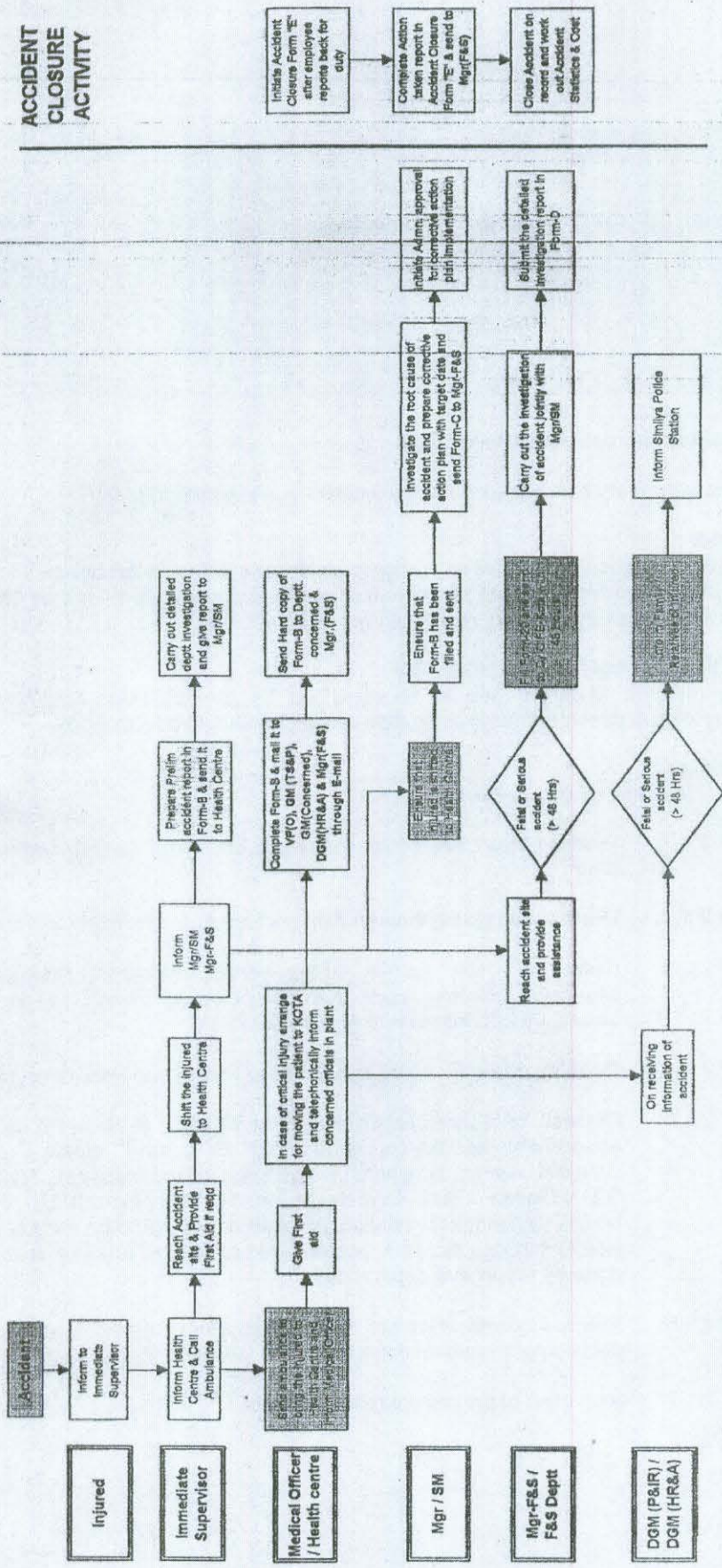
- Annexure-1 - Near Miss reporting format – "Form-A"
- Annexure-2 - Accident reporting format – "Form-B"
- Annexure-3 - Preliminary departmental accident investigation format-"Form-C"
- Annexure-4 - Detailed accident reporting format – "Form-D"
- Annexure-5 - Accident Closure Form – "Form-E"
- Annexure-6 - Accident Reporting form to Inspectorate of Factories – "Form-20"
- Annexure-7 - Make to Good Conditions Summary Report
- Annexure-8 - Near Miss Incident Summary Report
- Annexure-9 - Accident Summary Report
- Annexure-10 - Month wise Accident Analysis Report – Contract Labour
- Annexure-11 - Month wise Accident Analysis Report – Company Employee
- Annexure-12 - Month wise Accident Analysis Report – Overall

## 9 RECORDS:

S.No.	Record Title	Location	Responsibility	Retention Time
1	First aid injury record	Concerned Plant	Section In-charge Mgr. F&S	5 years
2	Near Miss/ incident	Concerned Plant & F&S dept.	Section In-charge Mgr. F&S	5 years
3	Minor Injury /Loss Time Accident	Concerned Plant & F&S dept.	Section In-charge Mgr. F&S	All Time
4	Fatal Accident	F&S dept.	Mgr. F&S	All Time
5	Dangerous Occurrence	F&S dept.	Mgr. F&S	All Time
6	Notifying Disease	Health Centre	Medical Officer	All Time



**COMMUNICATION / ACTION CHART FOR ACCIDENT REPORTING & INVESTIGATION**



**ACCIDENT CLOSURE ACTIVITY**



Injured

Immediate Supervisor

Medical Officer / Health centre



Mgr / SM

Mgr-F&S / F&S Deptt

DGM (P&IR) / DGM (HR&A)

Inform Shilpa Police Station



<b>CHAMBAL FERTILISERS AND CHEMICALS LIMITED, GADEPAN KOTA</b>	
<b>EHS SYSTEM PROCEDURE</b>	
<b>IDENTIFICATION OF UNSAFE CONDITIONS / AGT &amp; REPORTING OF NEAR MISS INCIDENT / ACCIDENT &amp; PROCESS INCIDENT INVESTIGATION AND ANALYSIS</b>	Doc. No. EHS 05-05 (B)
	Rev. No. 00
	Eff. date 16 FEB, 2009
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Approved By: 	Issued By: 
Unit Head	MR

### Process Incident Investigation Procedure

Following procedure shall be followed for any Incident Investigation in plant:

#### 1. PURPOSE :

- 1.1. To do root cause analysis of any process incident as define in 2.2 below.
- 1.2. To make recommendations so preventive and corrective actions can be taken, so incident can be avoided, or frequency can be reduced.

#### 2. PROCESS INCIDENT IDENTIFICATION

2.1. Any Incident identified has to be classified by the SM-Plant in following categories & based on this investigation procedure should be followed.

##### 2.2. Incidents

##### 2.2.1. Process related incidents

- 2.2.1.1. Process trips / Breakdown leading to downtime / unplanned down time
- 2.2.1.2. Unplanned venting through flare system during Normal Operation
- 2.2.1.3. Failure of Utility system during normal operation, Start-up & Shutdown affecting plant (Nitrogen, Cooling Water, HP & MP steam, Power, Instrument Air, Polish water)
- 2.2.1.4. Opening of Relief valves connected to Steam and Process system
- 2.2.1.5. Release of Hazardous Chemicals in which F & S and E & QC department assistance is required to control situation like; Chlorine, Ammonia, Naphtha, Hydrogen / Synthesis gas, Natural Gas, Molten Urea, Carbamate solution Sulphuric Acid, HCl, NaOH, GV/ Benfield solution. All other cases are to be recorded in HSEQ process incident records and root-cause analysis is to be done by respective department.
- 2.2.1.6. Process upsets which are discussed in plant meetings and as per decision of President (Operation) are identified for investigations.
- 2.2.1.7. Activation of pre-alarms related to trips.



2.3. All above incidents shall be informed by SM (Concerned Plant) to SM (Process).

**3. Investigation team:**

3.1. Incidents which are related to activation of Pre -Alarms related to trips (Point No 2.2.1.7.) are to be investigated by team comprising within plant and report is to be submitted to concerned GM. The suggested corrections are to be taken within department as per procedure.

3.2. Incident related to process upsets and not marked critical as per discussion in plant meetings/ Monday meetings are to be investigated by plant itself and report is to be submitted to concerned GM.

3.3. All other incidents as mentioned above from point no 2.2.1.1 to 2.2.1.5 are to be investigated by a team headed by SM (Process). The team members are

3.3.1. SM (Process) / SM (Project) (In case of Breakdown incidents, SM (Project) will lead the team)

3.3.2. Manager (Concerned plant)

3.3.3. Any one maintenance manager or more as per the process incident

3.3.4. Person deputed by CGM or President (Operation)

**4. Investigation time:**

All incident investigation process is to be started within 48 hrs of the Process Incident / Miss Incident investigation report format (attached).

**5. Incident Investigation form:**

5.1. Type of incident is to be marked as per the case may be in the form.

5.2. Cost of incident is to be calculated by process department and same is to be recorded.

5.3. Injured persons if any including contractor employees are to be recorded in the form.

5.4. Incident is to be investigated under the following headings

5.4.1. Write the incident under the heading of "what happened".

5.4.2. Write down the events, facts preceding the incidents as per the alarm list, log book records, data available under the heading of "How did it happened".

5.4.3. Do root cause analysis of the incidents, and record the same under the heading of "Why did it happen". Additional sheets may be attached and referred to in the form.

5.4.4. Based on above analysis, mark the PSM elements that failed to prevent the incident and where improvement is needed in the PSM system.



5.4.5. Based on above analysis mark the recurrence probability of the incident as High/Low/None.

5.5. Recommendations as agreed to prevent recurrence are to be recorded. All recommendations should have target date of completion & specified responsibility of executing department.

5.6. Investigation report is to be sent for review to GM (P), GM (M), CGM (TS&P) & then President Operation.

5.7. After review when report is received by SM (Process) / SM (Project), SM (Process) will forward this report to SM (Executing Deptt.) for implementation of recommendations. In the recommendations if any "Change" is required, then Management of change procedure should be followed.

5.8. SM (Process) will track for Physical implementation of all the recommendations.

5.9. After having confirmation from respective SMs (Executing deptt.) about implementation of recommendations, incident closure is to be marked by SM (Process) and report is to be sent to President - Operation.

5.10. SM (Concerned Plant) is responsible for conducting on the job training sessions for communicating the results of the incident investigation to all concerned plant personnel. This training must be recorded.

#### 6.0 Records:

6.1 Completed process incident investigations will be maintained by SM (Process).

6.2 Training records for operating personnel will be maintained by concerned SM - Plant.

**PROCESS INCIDENT / MISS INCIDENT INVESTIGATION REPORT**  
(To be started within 48 hrs.)

Report No.: CFCL/TSP/Process/2008-

Unit:

Date:

Area or Equipment where incident occurred:

Time of Incident:

Classification of Incident: (Tick as applicable)

FIRE

EXPLOSION

CHEMICAL RELEASE

PROCESS RELATED

- PROCESS UPSETS (CRITICAL) – DECIDED IN PLANT MEETING
- PROCESS TRIPS / BREAKDOWN LEADING TO DOWNTIME / UNPLANNED DOWNTIME
- UNPLANNED VENTING THROUGH FLARE SYSTEM DURING NORMAL OPERATION
- FAILURE OF UTILITY SYSTEM DURING NORMAL OPERATION, START UP AND SHUTDOWN AFFECTING PLANT
- ACTIVATION OF PRE ALARM RELATED TO TRIPS
- OPENING OF RELIEF VALVES CONNECTED TO STEAM AND PROCESS SYSTEM
- RELEASE OF HAZARDOUS CHEMICALS IN WHICH FIRE AND SAFETY DEPARTMENT ASSISTANCE IS REQUIRED TO CONTROL SITUATION

Cost of incident Rs (in lacs) : .....

Name(s) of injured employee(s) (if any) :

Name

EPR No.

- 1.
- 2.
- 3.

Injured contractor employee:  
(If contractor employee is involved)

Name

Gate Pass No.

Contactor's Name

- 1.
- 2.
- 3.



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**Is there any damage to the equipment, specify.**

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**What happened? (Write the incident)**

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**How did it happen? (Write down the events preceding the incident)**

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**Why did it happen? (Write down the root causes of the incident)**

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**Which of the elements of PSM failed to prevent the incident and where is improvement needed in the PSM system?**

**Probability of incident recurrence:**

High

Low

None

Recommendations to prevent recurrence:

#1

#2

#3

#4

#5

Recommendations	Responsibility/ Action to be taken by	Expected date of completion	Management of Change reqd. or Not
# 1			
# 2			
# 3			
# 4			
# 5			

Prepared by:

Name of Team Leader :

Signature:

Names of team members

Department

Signatures

1

2

3

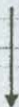
4

(Contractor's Representative)



Reviewed by:

GM (P)



GM (Maint.)



CGM (TS&P)



President (O)

back to →

SM (Process)

ALL / REMAINING recommendations implemented:

Signed:

PRESIDENT (O)

Date: