Uniform Procedure for EHSM – SAP

ISSUE NO.: 01
DATE: 12th July 2016

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**Introduction**

The objective of Safety Management System is to manage the planning and implementation of an organization’s Safety Policy. Safety Management System may include setting and prioritising of organization’s safety goal as well as developing safety program, its effective implementation and review for continual improvement. GAIL has taken initiative to enhance SAP EHSM Platform with additional new functionalities. The following modules are implemented in EHSM SAP:

- Incident Management
- Risk Management
- Worker Safety Management

A committee was constituted by Competent Authority, comprising of BIS, O&M representing Petrochemical, Gas Processing, LPG and Natural Gas Pipelines and Corporate HSE to develop the SAP functionalities and implement across the GAIL Installations.

The roles of committee is to overview the existing procedure of GAIL Installations and formulate common procedure of Safety Observation, Near Miss, Incident, Job Safety Analysis & Equipment/Location Based Risk Assessment by taking inputs from site specific procedures. The aforesaid procedures have been developed based on references of National & International Standards by keeping the view of internal processes. These procedures are duly mapped in EHSM–SAP for uniform implementation of across GAIL Installations. Provision has been made for guided process where step by step process can be followed by end user. Mail notification to users in each step should be triggered such as at the time of incident creation, for investigation steps etc.

In keeping view of site specific requirements & responsibilities, documented procedure may vary from site to site. Accordingly, sites are requested to adopt the same for inclusion in Site Specific ISO/QMS.
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Job Safety Analysis (EHSM_SAP_01)

**Purpose**: The purpose of this procedure is to establish a formal process for evaluating and controlling existing or potential hazards associated with the Job/Activities, and to ensure the information is communicated to all concerned personnel.

1.0 **Applicability**: This document is applicable for GAIL.

2.0 **Scope**: Job Safety Analysis (JSA) is a systematic stepwise review of job tasks having focus to identify hazards before they occur. It focuses on the relationship between worker, the task, the tools and the work environment. JSA helps in identifying the measures to be taken for eliminating or reducing identified hazards, and integrating accepted safety standards and practices into a particular task or job.

3.0 **Cross References**: OHSA 3071, 2002 (Revised), OHSAS 18001: 20017, IS 18001, OISD-GDN-207, OISD –GDN- 232 & Risk Management Policy, GAIL

4.0 **Categorization of Jobs/Activities** to be considered for Job Safety Analysis (JSA):

4.1 Jobs with the highest injury or illness rate.
4.2 Jobs with the potential to cause severe or disabling injuries or illness, even if there is no history of previous accidents.
4.3 Jobs in which one simple human error could lead to a sever accident or injury.
4.4 Jobs that new to your operation or have undergone changes in processes and procedures.

5.0 **Development of Job Safety Analysis**: The development of Job Safety Analysis should include:

5.1 Selection of Job
5.2 Breakup the Job down in to steps (Refer Standard Operating Procedure/Standard Work Instruction, if any already made)
5.3 Identify the hazards like Chemical, Electrical, Mechanical, Physical, Ergonomics, and Environmental etc.
5.4 Listing existing control measures
5.5 Determine additional control measures
5.6 Apply the control measures to the identified hazards
5.7 Performance checking of control measures taken
5.8 Determine corrective action, if any

6.0 **Hazard Control Measures**: The mandate of preference and effectiveness of hazards controls is the following: -

6.1 Engineering Controls: Elimination/minimization, enclosure, isolation or removal of hazards etc.
6.2 Administrative Controls: Written Standard Operating Procedures (SOPs), work permit, limiting exposure time, monitoring, alarms, signs, warning, training etc.

6.3 Personal Protective Equipment: Such as head protection, eye protection, hearing protection, protective clothing, foot protection etc. (Only when engineering controls are not feasible or do not totally eliminate the hazard)

7.0 **Formulating Risk Rating or Risk Matrix** by determining the consequence and frequency value corresponding to particular hazard

<table>
<thead>
<tr>
<th>SN</th>
<th>Rank</th>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Negligible</td>
<td>1</td>
<td>No Medical Treatment Required</td>
</tr>
<tr>
<td>2.</td>
<td>Minor</td>
<td>2</td>
<td>Objective but reversible disability requiring hospitalization (First Aid Injury)</td>
</tr>
<tr>
<td>3.</td>
<td>Moderate</td>
<td>3</td>
<td>Moderate Irreversible Disability or Impairment to One or More Persons (Non Reportable/Reportable Injury)</td>
</tr>
<tr>
<td>4.</td>
<td>Major</td>
<td>4</td>
<td>Single Fatality or Severe, Irreversible Disability to One or More Persons (Reportable Injury)</td>
</tr>
<tr>
<td>5.</td>
<td>Severe</td>
<td>5</td>
<td>Multiple Fatalities or Significant, Irreversible Effects to &gt;50 Persons (Reportable Injury)</td>
</tr>
</tbody>
</table>

**Table- B**

<table>
<thead>
<tr>
<th>SN</th>
<th>Rank</th>
<th>Grade</th>
<th>Description</th>
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</thead>
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<tr>
<td>1.</td>
<td>Rare</td>
<td>1</td>
<td>Similar instances have never occurred in the past.</td>
</tr>
<tr>
<td>2.</td>
<td>Not Likely</td>
<td>2</td>
<td>Though not routinely but there have been instances in the last 2 to 5 years</td>
</tr>
<tr>
<td>3.</td>
<td>Likely</td>
<td>3</td>
<td>There have been one or two similar instances in the past year</td>
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<tr>
<td>4.</td>
<td>Highly Likely</td>
<td>4</td>
<td>Similar instances have occurred several times in the past year</td>
</tr>
<tr>
<td>5.</td>
<td>Expected</td>
<td>5</td>
<td>Similar instances have commonly occurred every year in the past.</td>
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Table- C

Likelihood Criteria Definitions: Risk Matrix

<table>
<thead>
<tr>
<th>Likelihood</th>
<th>1 (Very Low)</th>
<th>2 (Low)</th>
<th>3 (Moderate)</th>
<th>4 (High)</th>
<th>5 (Very High)</th>
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<td>Low</td>
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<td>Medium</td>
<td>Medium</td>
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<td>3 (Likely)</td>
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<td>4 (Highly Likely)</td>
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Table- D

Risk Rating

<table>
<thead>
<tr>
<th>Level of Risk</th>
<th>Rating (Impact*Likelihood)</th>
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<tr>
<td>High</td>
<td>&gt;12</td>
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<tr>
<td>Medium</td>
<td>Between 8-12</td>
</tr>
<tr>
<td>Low</td>
<td>&lt;8</td>
</tr>
</tbody>
</table>

8.0 Job Safety Analysis Methodology:

8.1 The identification of job to carry out Job Safety Analysis shall be done by respective Head of Department (HODs) of GAIL Installations within their line of authority.

8.2 Jobs or activities with a high frequency and/or severity of injuries and illnesses, a number of near misses, high employee turnover, non-routine jobs and newly established jobs will be given priority consideration for developing JSAs.

8.3 The preparation of JSA shall be initiated by respective department which responsible to carry out the aforesaid job.

8.4 Job Safety Analysis of identified jobs/activities will be carried out by Multi-Disciplinary Group (Preferably Three Members but not less than Two Members) from Operation/Maintenance and F&S.
8.5 Generally, JSA is carried out the observing actual performance of job (for the jobs being performed frequently) followed with group discussion. Shop floor employee may also be concerned, if required.

8.6 The process of Job Safety Analysis includes:

8.6.1 Selection of Job or activity
8.6.2 Breaking down the job or activity into a number of logical (correct sequence) steps to be taken, to accomplish the task (Refer Standard Operating Procedure or Standard Work Instruction if any already made)
8.6.3 Identification of hazards associated with each step of activity & its impact
8.6.4 Determine Inherent Risk which is risk of identified hazard without considering existing controls (Refer 8.0: Formulating Risk Rating or Risk Matrix)

- **Inherent Risk:** Inherent risk is used to rate the risk without any controls or mitigations.

8.6.5 Specify Existing Controls
8.6.6 Determine Initial Risk (Refer 8.0: Formulating Risk Rating or Risk Matrix)

- **Initial Risk:** Initial risk is used to rate the risk with existing controls or mitigations.

8.6.7 Recommendation for additional controls, if any
8.6.8 In listing of the control measures, general statements such as ‘Be Careful’, ‘Use PPE’, ‘Use Caution’ etc. should be avoided.
8.6.9 Implementation of control measures, as recommended
8.6.10 Determine Residue Risk (Refer 8.0: Formulating Risk Rating or Risk Matrix)

- **Residual Risk:** Residual risk is used to rate the risk after implementing existing and or additional controls or mitigations.

8.6.11 Generation of Job Safety Analysis with Unique ID

8.7 The Job Safety Analysis prepared by team shall be approved by Sectional Head/Head of Department of the respective department, which initiate the preparation of JSA.

8.8 Any new control(s) suggested by JSA team shall be implemented and verified before approval of JSA, through assignment of task to all concern.

8.9 It will be the responsibility of the HOD and Sectional Heads to ensure that employees follow the approved written Job Safety Analysis.

8.10 Each department will arrange to provide instruction and training to individuals who will conduct JSAs for the department.

8.11 Only approved JSAs should be attached with Work Permit System.

8.12 The HOD and Sectional Heads will arrange to review the written JSAs at least once in a year through Multi-Disciplinary Group.

8.13 Job Safety Analysis Report compulsorily should be reviewed immediately after incident reported for that particular activity.
8.14 An updated copy of all JSAs will be maintained electronically in SAP for employee access and review.

9.0 **Custodian**: Respective HODs will be the custodian of all JSAs.

*Refer EHSM Job Safety Analysis Ready Reckoner*
# Job Safety Analysis

## Job/Activity Title:
Description of Analysed Job:
ID:
Status: Operation/Maintenance/Other

## Assessment Team:

## Approved By:

## Observed Person if any:

## Analysis Location
Functional Location:
Exact Location:

## Analysed Job (Job Steps, Hazards and Controls)

<table>
<thead>
<tr>
<th>No.</th>
<th>Job Step</th>
<th>Hazard</th>
<th>Required Control</th>
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## Control Summary

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<th>Type of Control</th>
<th>Sub Type of Control</th>
<th>Measures</th>
<th>Sub Measures</th>
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</table>
**Equipment/Location Risk Assessment (EHSM_SAP_02)**

**Purpose:** The purpose of this procedure is to establish a formal process for evaluating and controlling existing or potential hazards pertaining to equipment or location, and to ensure the information is communicated to all affected personnel.

1.0 **Applicability:** This document is applicable for GAIL.

2.0 **Scope:** Risk Assessment helps in identifying the hazard of location or equipment, measures to be taken for eliminating or reducing identified hazards, and integrating accepted safety standards and practices into a particular task or job.

3.0 **Cross References:** OHSAS 18001, IS 18001, IS 15656, Guidelines on Risk Assessment & Safety Statement: Health & Safety Authority, Risk Assessment – A Brief Guide to Controlling Risks at Workplace: Health & Safety Executive, UK & Risk Management Policy, GAIL

4.0 **Categorization of Equipment or Location** to be considered for Risk Assessment:

   5.1 Location/Equipment with the highest injury or illness rate.
   5.2 Location/Equipment with the potential to cause severe or disabling injuries or illness, even if there is no history of previous accidents.
   5.3 Location/Equipment in which one simple human error could lead to a severe accident or injury.
   5.4 Location/Equipment that new to your operation or have undergone changes in processes and procedures.

5.0 **Development of Risk Assessment:** The development of Risk Assessment should includes

   5.1 Selection of Plant Location/Equipment
   5.2 Identify the hazards like Chemical, Electrical, Mechanical, Physical, Ergonomics, and Environmental etc.
   5.3 Listing existing control measures
   5.4 Determine additional control measures
   5.5 Apply the control measures to the identified hazards
   5.6 Performance checking of control measures taken
   5.7 Determine corrective action, if any

6.0 **Hazard Control Measures:** The mandate of preference and effectiveness of hazards controls is the following

   6.1 Engineering Controls: Elimination/minimization, enclosure, isolation or removal of hazards etc.
   6.2 Administrative Controls: Written Standard Operating Procedures (SOPs), work permit, limiting exposure time, monitoring, alarms, signs, warning, training etc.
6.3 Personal Protective Equipment: Such as head protection, eye protection, hearing protection, protective clothing, foot protection etc. (Only when engineering controls are not feasible or do not totally eliminate the hazard)

7.0 **Formulating Risk Rating or Risk Matrix** by determining the consequence and frequency value corresponding to particular hazard

### Table- A
**Risk Rating Criteria**

<table>
<thead>
<tr>
<th>SN</th>
<th>Rank</th>
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### Table- B
**Likelihood Criteria Definitions**

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</tr>
</tbody>
</table>
Table- C

Likelihood Criteria Definitions: Risk Matrix

<table>
<thead>
<tr>
<th>Impact</th>
<th>1 (Very Low)</th>
<th>2 (Low)</th>
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<td>Medium</td>
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Table- D

Risk Rating

<table>
<thead>
<tr>
<th>Level of Risk</th>
<th>Rating (Impact*Likelihood)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
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<td>Between 8-12</td>
</tr>
<tr>
<td>Low</td>
<td>&lt;8</td>
</tr>
</tbody>
</table>

8.0 Location or Equipment Risk Assessment Methodology:

8.1 The identifying Location/Equipment, for which Risk Assessment will be developed, shall be done by respective Head of Department (HODs) of GAIL Installations within their line of authority.

8.2 The preparation of Location/Equipment Risk Assessment shall be initiated by respective department which responsible as the custodian of Location/Equipment.

8.3 Location/Equipment with a high frequency and/or severity of injuries and illnesses, a number of near misses, high employee turnover and newly established location/equipment will be given priority consideration for developing Risk Assessment.
8.4 Risk Assessment of identified Location/Equipment will be carried out by Multi-Disciplinary Group (Preferably Three Members but not less Two Members) from Operation/Maintenance and F&S.

8.5 Risk Assessment should be carried out with group discussion at site. Shop floor employee may also be concerned, if required.

8.6 The process of Risk Assessment includes:

8.6.1 Selection of Location or Equipment
8.6.2 Identification of hazards associated with each step of activity & its impact
8.6.3 Determine Inherent Risk which is risk of identified hazard without considering existing controls (Refer 8.0: Formulating Risk Rating or Risk Matrix)
   *Inherent Risk: Inherent risk is used to rate the risk without any controls or mitigations.*
8.6.4 Specify Existing Controls
8.6.5 Determine Initial Risk (Refer 8.0: Formulating Risk Rating or Risk Matrix)
   *Initial Risk: Initial risk is used to rate the risk with existing controls or mitigations.*
8.6.6 Recommendation for additional controls, if any
8.6.7 In listing of the control measures, general statements such as ‘Be Careful’, ‘Use PPE’, ‘Use Caution’ etc. should be avoided.
8.6.8 Implementation of control measures, as recommended
8.6.9 Determine Residue Risk (Refer 8.0: Formulating Risk Rating or Risk Matrix)
   *Residual Risk: Residual risk is used to rate the risk with implementation of existing and or addition controls or mitigations.*
8.6.10 Generation of Risk Assessment Report with Unique ID

8.7 The Location/Equipment Risk Assessment prepared by team shall be approved by Sectional Head/Head of Department of the respective department, which initiate the preparation of Location/Equipment Risk Assessment.

8.8 Any new control(s) suggested by team shall be implemented and verified before approval of Risk Assessment, through assignment of task to all concern.

8.9 It will be the responsibility of the HOD and Sectional Heads to ensure that employees follow the approved written Risk Assessment.

8.10 Each department will arrange to provide instruction and training to individuals who will conduct Risk Assessments for the department.

8.11 The HOD and Sectional Heads will arrange to review the written Risk Assessments at least once in a year through Multi-Disciplinary Group.

8.12 Risk Assessment Report compulsorily should be reviewed immediately after incident reported for particular that Location/Equipment.
8.13 An updated copy of all Risk Assessments will be maintained electronically in SAP for employee access and review.

9.0 **Custodian**: Respective HODs will be the custodian of all Location or Equipment RAs.

*Refer EHSM Safety Risk Assessment Ready Reckoner*
Risk Assessment

Analyze & Evaluate Risk

Risk Identification

10B Create a Risk Assessment of Safety / Health / Environment

20B Enter the Basic Data

30B Assign documents, if any

60B Select the Location

50B Select Operational Condition

40B Click on Identify Risk in Risk Tab

70B Select Hazard / Agent for the Location

80B Select Impact and Existing Control for each Hazard

90B Review and Submit

100B Click on Return to Risk Assessment

110B Select the Individual Risk

120B Enter the Basic Information related to Risk Identified

130B Determine Inherent Risk

140B Specify Existing Controls

150B Determine Initial Risk

160B Initial Risk within Limit

170B Recommend Additional Control

200B Set the status of Action as Implemented

220B Close the Risk Assessment

210B Determine the Residual Risk

230B Need for review the Risk Assessment

180B Specify Control Details

190B Action Required?

B

Action Required?

A

Close

Create Follow Up Risk Assessment

Need for review the Risk Assessment

YES

CLOSE

NO

Rev B

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## Risk Assessment

**Title:**
Description of Equipment/Location:
ID:

**Assessment Team:**

### Risk Identification

<table>
<thead>
<tr>
<th>Risk ID</th>
<th>Location/Equipment</th>
<th>Hazard Category</th>
<th>Hazard</th>
<th>Impact</th>
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### Risk Matrix
## Assessment Summary

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<th>Risk ID</th>
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<th>Residual Risk</th>
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## Controls

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<th>Controls</th>
<th>Control Type</th>
<th>Effectiveness</th>
<th>Status</th>
<th>Remarks</th>
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</table>
Safety Observation (EHSM SAP 03)

1.0 **Purpose:** To check & report deviation from recommended operating procedures/safety practices by employees on daily basis & its timely corrections to make Work Place Safe.

2.0 **Applicability:** This document is applicable for all installations of GAIL.

3.0 **Scope:** Battery limit of GAIL plants, pipelines and other premises.

4.0 **Frequency:** Daily

5.0 **Cross References:** HSE Management System & OISD- STD-144

6.0 **Safety Observation Methodology:**

6.1 GAIL Employees will report Safety Observation in prescribed format (preferably through Interactive Form) and forward it to HOD (F&S)/Nominated F&S/Other Representative, as nominated by OIC/WIC for further forwarding to concerned HOD for corrective action and information.

6.2 If necessary corrective actions already have been taken by employee, he will close the Safety Observations and further forward to HOD (F&S)/Nominated F&S Representative for information & record.

6.3 In addition with above, Fire & Safety Executives shall undertake daily check of various plant areas to ensure the compliances of recommended operating procedures/safety practices. A checklist shall be prepared in accordance with OISD-STD-144 (Annexure 14-I) to carry out daily safety checks.

6.4 Safety Observations made during plant visit by OICs/WICs/HODs will be also be recorded.

6.5 HOD (F&S)/Nominated F&S/Other Representative shall assign Safety Observation to employee corrective action, in consultation with HOD/Sectional Head.

6.6 Compliance report on the same shall be forwarded to HOD (F&S)/Nominated F&S/Other Representative for closure the same.

7.0 **Custodian:** HOD (F&S) will be the custodian of all Safety Observation Reports.

*Refer EHSM Safety Observation Ready Reckoner*
GAIL Safety Observation To Be Processed

Record and Process Safety Observation

**Safety Observation Reporter**
- Start
- 10 Online Recording
- 20 Enter The Preliminary Safety Observation Details
- 30 Maintain Details of Reporting Person
- 40 Click On send
- 70 Update the action taken
- Close

**Incident Processor (HOD F&S/OIC-WIC Nominated Person)**
- 100 Assign Regulation
- 90 Assign Safety Observation Group
- 80 Open the Work Item
- 70 Requires Further Processing
- 60 Update the action taken
- 50 Workflow to OIC and HOD (F&S)
- 110 Update Basic Information of Safety Observation
- 120 Update Observed Person’s details (if required)
- 130 Add Witness and record statement (if required)
- 140 Determine Task / Action
- A
- B
- 300 Generate Reports
- 310 Close Incident
- Close
Report Safety Observation

Reporting Person: 
Personnel Number: 
First Name: 
Last Name: 
Organization Unit: 
Address: 
Phone: 
Email: 

What happened?
Title: 
Safety Observation: 

When did it happen?
Date/Time: 2016-06-27 00:00:00 
Where did it happen?
Plant: 
Location: 
Location Description: 

Who was observed?
Personnel Number: 
First Name: 
Last Name: 
Organization Unit: 
Address: 
Phone: 
Email: 

Add Other Observed Person:

What do you know about the circumstances of the safety observation?
Situation:

- UA-Failure to Secure
- UA-Horseplay
- UA-Improper Lifting
- UA-Improper Loading
- UA-Using Mobile in Restricted Area
- UA-Making Safety Devices Inoperable
- UA-Operating Equipment without Authority
- UA-Operating at improper Speed
- UA-Improper Placement
- UA-Failure to use PPE
- UA-Removing Safety Devices
- UA-Operation of Service Equipment
- UA-Violation of SOP/GMP
- UA-Improper Position/Body Posture for its
- UA-Using Defective Equipment
- UA-Using Equipment Improperly
Report Safety Observation

<table>
<thead>
<tr>
<th>UC-Congestion or Restricted Action</th>
<th>UC-Fire and Explosion Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>UC-Inadequate guards of Barriers</td>
<td>UC-Hazardous Environmental Conditions</td>
</tr>
<tr>
<td>UC-Poor Housekeeping</td>
<td>UC-Inadequate or Excess Illumination</td>
</tr>
<tr>
<td>UC-No Load Marked Lifting Tools/Truck</td>
<td>UC-Noise Exposure beyond Permissible</td>
</tr>
<tr>
<td>UC-Inadequate or Improper PPE</td>
<td>UC-Protruding Object Hazards</td>
</tr>
<tr>
<td>UC-Radiation Exposure</td>
<td>UC-High or Low Temperature Exposure</td>
</tr>
<tr>
<td>UC-Defective Tools Equipments/Material</td>
<td>UC-Inadequate Ventilation</td>
</tr>
<tr>
<td>UC-Inadequate Warning System</td>
<td></td>
</tr>
</tbody>
</table>

Situation Description: ____________________________________________

What is the risk of these circumstances causing an injury or accident in the future?

Estimated Risk: ____________________________________________

Send
**Near Miss Management (EHSM_SAP_04)**

1.0 **Purpose:** A near miss is an undesired event that, under slightly different circumstances, could have resulted in harm to people or damage to property, materials or the environment. Reporting & corrective action on near misses can reduce accidents and improve safety at work place.

2.0 **Applicability:** This document is applicable for GAIL.

3.0 **Scope:** Battery limit to plants, pipelines and other GAIL premises.

4.0 **Cross References:** PNGRB (Emergency Response and Disaster Management Plan) Regulation 2010.

5.0 **Near Miss Reporting & Investigation Methodology:**

5.1 GAIL Employees including contract workers will report Near Miss in prescribed format (preferably through Interactive Form) and forward it to HOD (F&S)/Nominated F&S/Other Representative, as nominated by OIC/WIC for further action.

5.2 HOD (F&S)/Nominated F&S/Other Representative shall analyse the reported Near Miss for detailed investigation, if any.

5.3 Investigation of Minor (Low/Medium Risk) Near Miss shall be carried out Fire & Safety Executive. However, High Potential (High Risk) Near Miss will be invested through a multi-disciplinary team (Minimum 2) based on severity or nature of Near Miss respectively.

5.4 Necessary approval shall be accorded for multi-disciplinary team for investigation of Near Miss by HOD (F&S) in case of Pata/Vijaipur (in consultation with respective HOD) and OIC/WIC in case of other Installations.

5.5 Near Miss shall be investigated by Fire & Safety Executive/Committee within 7 days of reporting of Near Miss.

5.6 Detailed investigation report in prescribed format (Scheduled VI - PNGRB) along with observations/recommendations shall be prepared.

5.7 Detailed investigation of Near Miss shall be approved by HOD (F&S) in case of Process Plant (Pata & Vijaipur) and OIC/WIC in case of other Installations.

5.8 HOD (F&S)/Nominated F&S/Other Representative shall assign observations/recommendations to employee for corrective action, in consultation with HOD/Sectional Head.
5.9 Compliance report on the same shall be forwarded to HOD (F&S)/Nominated F&S/Other Representative for closure the same.

5.10 Detailed investigation report in prescribed format (Scheduled VI - PNGRB) & OISD Incident Reporting Form along with observations/recommendations shall be forward to Corporate HSE while submitting the Monthly HSE Score for onward transmission to PNGRB.

5.11 Scheduled VI – PNGRB: Incident Reporting System shall be signed by OIC/WIC/Factory Manager.

5.12 Logged Near Miss shall be closed after verification of compliance by HOD (F&S)/Nominated F&S/Other Representative.

6.0 **Near Miss Investigation Competency Level**

<table>
<thead>
<tr>
<th>Installations Type</th>
<th>Leader</th>
<th>Team Members</th>
<th>Approval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petrochemicals</td>
<td>E4 &amp; Above</td>
<td>E2 &amp; Above</td>
<td>DGM/HOD (F&amp;S)</td>
</tr>
<tr>
<td>GPUs</td>
<td>E4 &amp; Above</td>
<td>E2 &amp; Above</td>
<td>OIC</td>
</tr>
<tr>
<td>Compressor Stations, Pumping Stations &amp; P/L</td>
<td>E3 &amp; Above</td>
<td>E2 &amp; Above</td>
<td>OIC/WIC</td>
</tr>
</tbody>
</table>

- Leader only for High Potential (High Risk) Near Miss

7.0 **Reports:**

a) Near Miss Reporting Form  
b) Scheduled VI PNGRB Incident Reporting Form  
c) OISD Report  
d) Near Miss Investigation Report

8.0 **Custodian:** HOD (F&S) will be the custodian of all Near Miss Reports.
GAIL Near Miss To Be Process

Record Near Miss

Incident Reporter

Start

10 Online Recording

20 Enter The Near Miss Details

30 Maintain Details of reporting person

40 Click On send

Incident Processor (OIC/WIC/HOD F&S/OIC-WIC Nominated Person)

90 Update Information specific to OISD, PNGRB, PESO, MOPNG

80 Assign Regulation

70 Assign Near Miss Group

60 Open the Work Item

50 Workflow to OIC and HOD (F&S)

YES

100 Person Nearly injured?

110 Maintain Injured person related data

YES

120 Maintain Witness Details

130 Equipment Damage

NO

140 Enter Equipment and its Damage details

NO

150 Vehicles involved in Incident

YES

160 Enter Vehicle and its Damage details

180 Enter Property and its Damage details

170 Property Damage

190 Attach Documents / Photos

A

Update Information specific to OISD, PNGRB, PESO, MOPNG
Report Near Miss

Reporting Person
Personnel Number: ____________________________
First Name: ____________________________ Last Name: ____________________________
Organization Unit: ____________________________ Address: ____________________________
Phone: ____________________________ E-Mail: ____________________________

What happened and which immediate actions have been carried out?
Title: _______________________________________
Description of Events: _______________________________________
Immediate Actions: _______________________________________

When did it happen?
Date *: 2018-08-27 00:00:00
Where did it happen?
Plant: _______________________________________
Location: _______________________________________
Location Description: _______________________________________

Who was nearly injured?
Personnel Number: ____________________________
First Name: ____________________________ Last Name: ____________________________
Organization Unit: ____________________________ Address: ____________________________
Phone: ____________________________ E-Mail: ____________________________

Add Nearly Injured Person
What do you know about the circumstances of the near miss?
Situation: [ ] UA-Under Influence of Alcohol / Drug
[ ] UA-Failure to Secure
[ ] UA-Horseplay
[ ] UA-Improper Lifting
[ ] UA-Improper Loading
[ ] UA-Using Mobile in Restricted Area
[ ] UA-Making Safety Devices Inoperable
[ ] UA-Operating Equipment without Authority
[ ] UA-Operating at Improper Speed
[ ] UA-Improper Placement
[ ] UA-Failure to use PPE
[ ] UA-Removing Safety Devices
[ ] UA-Operation of Service Equipment
[ ] UA-Violation of SOP/SWP
[ ] UA-Improper Position/Body Posture for t
<p>| | | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>UA-Using Defective Equipment   </td>
<td>UA-Using Equipment Improperly   </td>
<td>UC-Congestion or Restricted Action   </td>
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<td>UC-Fire and Explosion Hazard   </td>
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<td>UC-Inadequate Warning System   </td>
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</table>

**Situation Description:**

**Cause:**

**What is the risk of these circumstances causing a future injury or accident?**

**Estimated Risk:**

Send
**SCHEDULE-VI**  
(Refer Regulation 22.0)  

**INCIDENT REPORTING FORMAT**

<table>
<thead>
<tr>
<th>1. Organization</th>
<th>2. Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Location</td>
<td>4. Incident Sr. no</td>
</tr>
<tr>
<td>5. Date of Incident</td>
<td>6. Time of Incident</td>
</tr>
<tr>
<td>7. Major / Minor / Near miss</td>
<td>8. Report - Preliminary / Final</td>
</tr>
<tr>
<td>9. Fire / Accident</td>
<td>10. Duration of fire – Hrs. / Min</td>
</tr>
</tbody>
</table>

11. Type of incident with loss of life/ injury; Fire, Explosion, Blowout, Electrocution, Fall from Height, Inhalation of Gas, Driving, Slip/Trip, Others, NA

12. Location of the Incident (Name of the Plant / Unit / Area / Facility / Tank farm / Gantry / Road / parking area etc.)

13. Whether plant shutdown / caused outage of the facility? Yes / No.

14. Fatalities nos.  
   a) Employees =  
   b) Contractor =  
   c) Others =

15. Injuries nos.  
   a) Employees =  
   b) Contractor =  
   c) Others =

16. Man-hours  
   a) Employees =  
   b) Contractor =  
   c) Others =

17. Direct Loss due the incident (Rs. in Lacs), Loss to equipment / Machinery as per Insurance claim etc.

18. Indirect Losses: Through Put / Production Loss etc.

19. Status of the Facility: Construction / Commissioning / Operation / Shutting down / Turn around, Maintenance / Startup / Any other

20. Brief Description of the Incident including post incident measures.  
   (Attach details in separate sheet)

21. Whether Similar Incident has occurred in past at the same location. If yes, give brief description of the incident and attach details in separate sheet.

22. Whether Internal Investigation has been completed. If no, likely date by which it will be completed.

23. Whether internal investigation report (Major Incident) has been submitted to PNGRB. If no, likely date by which it will be submitted.

24. Cause of the Incident (Tick the most relevant cause preferably one, maximum two)  
   a) Deviation from Procedures  
   i) Not using the PPE  
   b) Lack of Job knowledge  
   j) Equipment failure  
   c) Lack of supervision  
   k) Poor design /Layout etc.  
   d) Improper Inspection  
   l) Inadequate facility  
   e) Improper Maintenance (Mech/Elec/Inst)  
   m) Poor housekeeping  
   f) Improper material handling  
   n) Natural Calamity  
   g) Negligent Driving  
   o) Pilferage / Sabotage  
   h) Careless walking/climbing etc.  
   p) Any other (give details)
25. Cause of leakage - Oil, Gas or Chemical (Tick one only)

| a) Weld leak from equip/lines | f) Leakage due to improper operation |
| b) Leak from flange, gasket etc. | g) Leakage due to improper maintenance |
| c) Leak from rotary equipment | h) Normal operation-Venting/drainage |
| d) Metallurgical failure | i) Any other |
| e) Any other |

26. Cause of ignition leading to fire (Tick only one cause)

| a) Near to hot work | f) Static Electricity |
| b) Near to furnace/flare etc. | g) Hammering/Fall of object |
| c) Auto-ignition | h) Heat due to friction |
| d) Loose electrical connection | i) Lightning |
| e) Near to hot surface | j) Any other (pyrophoric etc.) |

27. Was the incident Avoidable? (Yes/No)

28. The incident could have been avoided by the use of/or by;
(Tick the most relevant point preferably one, maximum two)

| a) Better supervision | 2) Personal Protective Equipment |
| b) Adhering to specified operating procedure | 3) Better equipment |
| c) Improving Training | 4) Management Control |
| d) Giving adequate time to do the activity through proper planning | 5) Adhering to specified maintenance procedure |
| e) Adhering to the work permit system | 6) Adhering to specified inspection/testing procedures |
| f) Any other information: |

Guidelines for filling the Incident Report:
1. All Major, Minor and Near miss incidents shall be reported in the quarterly report.
2. Incident reporting form shall be filled up for all Major, Minor and near-miss incidents.
3. Summary report shall be enclosed with every quarterly report.
4. Investigation shall be carried out for all Major, Minor and near-miss Incidents.
5. Investigation report of all Major incidents shall be submitted to PNGRB. An incident shall be treated as Major if any of the following occurs:
   - Fire for more than 15 minutes
   - Explosion/Blowout
   - Fatal Incident
   - Loss above Rs.10.0 Lacs
   - Cumulative man hours lost more than 500hrs.
   - Plant Shutdown/Outage due to the incident
6. Loss time Incident shall be monitored till the affected person joins duty. In case the affected person is yet to join the duty, then the status of report submitted will be preliminary. Final report against the same incident shall be sent once he joins duty and man-hours lost are known.
7. All columns must be filled up.
8. For any additional information use separate sheets as required.
9. Quarterly report shall be sent to PNGRB within 15 to 30 days of end of quarter.
10. Immediate reporting of incident through fax/telephone shall continue as per prevailing system.

Signature _____________________________
Name ________________________________
Designation of the Operative/Manager ________________
### INCIDENT REPORTING FORM

<table>
<thead>
<tr>
<th>1. Organisation</th>
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<th>5. Date of Incident</th>
<th>6. Time of Incident</th>
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<thead>
<tr>
<th>7. Major / Minor / Nearness</th>
<th>8. Report - Preliminary / Final</th>
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<tr>
<th>9. Fire / Accident</th>
<th>10. Duration of fire - Hrs / Min</th>
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<table>
<thead>
<tr>
<th>11. Type of Incident with loss of life / injury, Fire, Explosion, Blowout, Electrocution, Fall from Height, Inhalation of Gas, Driving, Slip / Trip, Others, NA</th>
</tr>
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<tbody>
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<table>
<thead>
<tr>
<th>12. Location of Incident ( Name of Plant / Unit / Area / Facility / Tank farm / Gantry / Road / Parking area etc. )</th>
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<tbody>
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<table>
<thead>
<tr>
<th>13. Whether plant shutdown / caused outage of the facility? Yes / No</th>
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</table>

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<thead>
<tr>
<th>14. Fatalities nos.</th>
<th>a) Employees =</th>
<th>b) Contractor =</th>
<th>c) Others =</th>
</tr>
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<thead>
<tr>
<th>15. Injuries nos.</th>
<th>a) Employees =</th>
<th>b) Contractor =</th>
<th>c) Others =</th>
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</table>

<table>
<thead>
<tr>
<th>16. Man - hours Lost</th>
<th>a) Employees =</th>
<th>b) Contractor =</th>
<th>c) Others =</th>
</tr>
</thead>
<tbody>
<tr>
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</table>

<table>
<thead>
<tr>
<th>17. Direct Loss due to the incident (Rs. In Lac). Loss to equipment / Machinery as per insurance claim etc.</th>
</tr>
</thead>
<tbody>
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</table>

<table>
<thead>
<tr>
<th>18. Indirect Losses : Through put / Production Loss</th>
</tr>
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</table>

<table>
<thead>
<tr>
<th>19. Status of the Facility: Construction / Commissioning / Operation / Shutting down / Turn around, Maintenance / Start up / Any other</th>
</tr>
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</table>

<table>
<thead>
<tr>
<th>20. Brief Description of the incident including post incident measures. (Attach details in separate sheet)</th>
</tr>
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</table>

<table>
<thead>
<tr>
<th>21. Whether similar Incident has occurred in past at the same</th>
</tr>
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</tbody>
</table>

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22. Whether Internal Investigation has been completed. If no, likely date by which it will be completed.

23. Whether internal investigation report (Major Incident) has been submitted to OISD. If no, likely date by which it will be submitted.

24. Cause of the Incident (Tick the most relevant cause preferably one, maximum two)

<table>
<thead>
<tr>
<th>A) Deviation from Procedure</th>
<th>I) Not using the PPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>B) Lack of Job Knowledge</td>
<td>J) Equipment failure</td>
</tr>
<tr>
<td>C) Lack of supervision</td>
<td>K) Poor design / Layout etc.</td>
</tr>
<tr>
<td>D) Improper Inspection</td>
<td>L) Inadequate facility</td>
</tr>
<tr>
<td>E) Improper Maint. (Mech. / Elec. / Inst.)</td>
<td>M) Poor House Keeping</td>
</tr>
<tr>
<td>F) Improper material handling</td>
<td>N) Natural Calamity</td>
</tr>
<tr>
<td>G) Negligent Driving</td>
<td>O) Pilferage / Sabotage</td>
</tr>
<tr>
<td>H) Careless walking / climbing etc.</td>
<td>P) Any other (give details)</td>
</tr>
</tbody>
</table>

25. Cause of leakage - Oil, Gas or Chemical (Tick one only) N/A

| A) Weld leak from equipment / lines | E) Leakage due to improper operation |
| B) Leak from flange, gland etc.    | F) Leak due to improper maintenance |
| C) Leak from rotary equipment      | G) Normal operation - Venting / draining |
| D) Metallurgical failure           | H) Any other |

26. Cause of Ignition leading to fire (Tick only one cause) N/A

<table>
<thead>
<tr>
<th>A) Near to hot work</th>
<th>F) Static Electricity</th>
</tr>
</thead>
<tbody>
<tr>
<td>B) Near to Furnace / Flare etc.</td>
<td>G) Hammering / Fall of object</td>
</tr>
<tr>
<td>C) Auto - ignition</td>
<td>H) Heat due to Friction</td>
</tr>
<tr>
<td>D) Loose electrical connection</td>
<td>I) Lightning</td>
</tr>
<tr>
<td>E) Near to hot surface</td>
<td>J) Any other (pyrophoric etc.)</td>
</tr>
</tbody>
</table>
27. Was the incident Avoidable? (Yes / No)

28. The incident could have been avoided by the use of / or by:
   (Tick the most relevant point preferably one, maximum two)

   A) Better supervision
   B) Adhering to specified operating procedure
   C) Imparting Training
   D) Giving adequate time to do the activity through proper planning
   E) Adhering to the work permit system
   F) Personal Protective Equipment
   G) Better equipment
   H) Management Control
   I) Adhering to specified maintenance procedure
   J) Adhering to specified inspection / testing procedures
   K) Any other: Safe driving.


**Incident Investigation Report**

1. **Introduction:**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Location of incident</td>
</tr>
<tr>
<td>2.</td>
<td>Date of Incident</td>
</tr>
<tr>
<td>3.</td>
<td>Time of Incident</td>
</tr>
<tr>
<td>4.</td>
<td>Type/Nature of Incident</td>
</tr>
<tr>
<td>5.</td>
<td>Loss :</td>
</tr>
<tr>
<td></td>
<td>a) Direct</td>
</tr>
<tr>
<td></td>
<td>b) Indirect</td>
</tr>
</tbody>
</table>

2. **Incident Description**

3. **Witness Details & Statement**

4. **Observations:**

5. **Probable Root Cause Analysis**  
(Refer Schedule VI, Sr. No. 24, 25 & 26)

6. **Recommendations:**
**Incident/Accident Management (EHSM_SAP_05)**

1.0 **Purpose:** Incident means an unplanned, unintended or undesired event having potential to cause damage to life, property and environment. The purpose of this procedure to streamlining the incident reporting, processing, investigation, analysis and ensure compliances of recommendation through guided process.

2.0 **Applicability:** This document is applicable for GAIL.

3.0 **Scope:** Battery limit to plants, pipelines and other GAIL premises.

4.0 **Cross References:** GAIL Incident Reporting System (Latest Revision), PNGRB (Emergency Response and Disaster Management Plan) Regulation 2010, Factory Act & Rules, PESO, MOPNG, OISD etc.

5.0 **Incident/Accident Reporting & Investigation Methodology (Reference Incident Reporting System of GAIL, Latest Revision):**

   5.1 Reporting of Minor (Level I) and Major (Level II & III) incidents to NGMC (National Gas Management Centre) by OIC/WIC or nominated representative (*Refer GAIL IRS*).

   5.2 Generation of GAIL FIR, OISD FIR (in case of Major Incidents only), PESO, PNGRB, OISD etc. and reporting to concerned by OIC/WIC (*Refer GAIL IRS*).

   5.3 Preliminary Investigation of Major (Level II & III) incident shall be carried out to report PESO, PNGRG, OISD etc. in stipulated time.

   5.4 All incidents shall be duly investigated by team as stipulated in IRS (*Only Internal investigation of incident will be done through SAP Incident Management*).

   5.5 Detailed investigation report in prescribed format (Scheduled VI - PNGRB) & OISD Incident Reporting Form along with observations/recommendations shall be prepared.

   5.6 OIC/WIC shall assign observations/recommendations, as given in approved investigation report(s) (Internal/External) to employee for corrective action in time bound manner.

   5.7 Compliance report on the same shall be forwarded to HOD (F&S)/Nominated F&S/Other Representative for closure the same.

   5.8 Logged incident shall be closed after verification of compliance by HOD (F&S)/Nominated F&S/Other Representative.

6.0 **Reports:**

   a) Incident Reporting Form
   b) GAIL First Information Report
   c) Preliminary Schedule VI PNGRB Incident Reporting Form (Only in Case of Major – Level II & III Incident) – Refer Page No. 30-31
d) OISD FIR (Only in Case of Major – Level II & III Incident)
e) Preliminary OISD Report (Only in Case of Major – Level II & III Incident) – Refer Page No. 32-33
f) Final Schedule VI PNGRB Incident Reporting Form (For Level I, Level II & III Incident) - Refer Page No. 30-31
g) Final OISD Report (For Level I, Level II & III Incident) - Refer Page No. 32-33
h) PESO Report
i) Incident Investigation Report - Refer Page No. 34

7.0 **Custodian**: HOD (F&S) will be the custodian of all Incident/Accident Reports.
# Report Incident

**Reporting Person**
- **Personnel Number:**
- **First Name:**
- **Organization Unit:**
- **Phone:**
- **E-Mail:**

**What happened and which immediate actions have been carried out?**
- **Title:**
- **Description of Events:**

**Immediate Actions:**

**When did it happen?**
- **Date:** 2018-08-18 00:00:00
- **Time Unknown**

**Where did it happen?**
- **Plant:**
- **Location:**
- **Location Description:**

**Who was injured?**
- **Personnel Number:**
- **First Name:**
- **Organization Unit:**
- **Phone:**
- **E-Mail:**

**Who witnessed the incident?**
- **Personnel Number:**
- **First Name:**
- **Organization Unit:**
- **Phone:**
- **E-Mail:**

[Send]
FIRST INFORMATION REPORT

Date: ____________________

Incident / Abnormal Occurrence

Location of Incident: ____________________

Information received from: ____________________

Date & Time of incident: ____________________

Date & Time of occurrence: ____________________

Description of incident: ____________________

Loss to life / property: ____________________

Category of incident as per STNDOV regulation: ____________________

Level I / Level II / Level III

Signature: ____________________

Designation: ____________________

Optional Details:

1. New GIC will generate First Information Report (FIR) immediately, not later than 24 hours from date of incident.
2. FIR will be sent to GIC, GIC DG/MD, and Inspector of GIC.
3. FIR will be forwarded to the Head Office of GIC.
4. FIR will be maintained in the GIC database.
5. FIR will be submitted to the nearest police station.

GAIL INDIA LTD
16, BIRKANJU CAMA PLACE, R K PURAM, NEW DELHI

Report Date: XX/XX/XXXX

Subject: ____________________

Town & District & State: ____________________

Date of Accident: ____________________

Casualties: ____________________

Property Lost / Damaged: ____________________

Customer / Occupant Name: ____________________

Customer Address: ____________________

Consumer No / License No: ____________________

Business / Occupation: ____________________

Place of Accident: ____________________

Type of premises where accident took place: ____________________

Description of Accident: ____________________

Estimated by: ____________________

Address: ____________________

Phone No: ____________________

Email: ____________________

Signature: ____________________

Xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

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GAIL Incident Management Process

Incident Reporter

10 Record Incident Using Simplified Screen
20 Enter the preliminary Incident information
30 Maintain the details of Reporting Person
40 Click on Send

80 Update Information specific to OISD, PNGRB, PESO, MOPNG
70 Assign Regulations to Incident
60 Assign Incident Group
50 Workflow to OIC and HOD (F&S)

90 Generate First Information Report
100 Person injured? YES
110 Maintain Injured person related data
120 Maintain Witness Details

130 Equipment Damage
140 Enter Equipment and its Damage details

150 Vehicles involved in Incident

160 Enter Vehicle and its Damage details
170 Property Damage
180 Enter Property and its Damage details
190 Attach Documents / Photos

A
GAIL Incident Management Process

Incident Processor

Incident Processor (OIC/WIC/HOD F&S/OIC-WIC Nominated Person)

200 Update Injured Person details (if required)

210 Update treatment details of Injured Person (if required)

220 Update Health and Safety details of Injured Person (if required)

230 Assign Absence / Restriction to injured person (if required)

240 Record Witness statement (if required)

250 Update the additional details of Equipment (if required)

260 Update the additional details of Vehicle (if required)

270 Update the additional details of Property (if required)

280 Perform Initial Risk Assessment of Incident

B
Incident Processing

C
370 Implementer receives Notification

380 Implement Action

YES
420 Work item return to Process Lead to redefine implementer

NO
390 Approver defined

400 Work Item to Approver

YES
410 Action Successfully Implemented

NO
430 Approve Action

440 Close the Task

Implementer

D