<table>
<thead>
<tr>
<th>Sr.No</th>
<th>Topics</th>
<th>Page No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Purpose</td>
<td>03</td>
</tr>
<tr>
<td>2</td>
<td>Scope</td>
<td>03</td>
</tr>
<tr>
<td>3</td>
<td>Emergency Situations</td>
<td>03</td>
</tr>
<tr>
<td>4</td>
<td>Emergency Team at rig site</td>
<td>03</td>
</tr>
<tr>
<td></td>
<td>4.1 Roles &amp; Responsibilities</td>
<td>04</td>
</tr>
<tr>
<td>5</td>
<td>Emergency team at project office</td>
<td>06</td>
</tr>
<tr>
<td></td>
<td>5.1 Roles &amp; responsibilities</td>
<td>06</td>
</tr>
<tr>
<td>6</td>
<td>Alarm systems &amp; notifications of emergencies</td>
<td>07</td>
</tr>
<tr>
<td></td>
<td>6.1- Emergency alarm codes</td>
<td>07</td>
</tr>
<tr>
<td></td>
<td>6.2- Members of emergency team</td>
<td>07</td>
</tr>
<tr>
<td></td>
<td>6.3- Camp safety team</td>
<td>07</td>
</tr>
<tr>
<td>7</td>
<td>General rig emergencies</td>
<td>08</td>
</tr>
<tr>
<td></td>
<td>A) Major fire</td>
<td>08</td>
</tr>
<tr>
<td></td>
<td>B) Fire at camp site</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>C) Flammable or toxic gas leak</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>D) Serious injury/ Fatality/ Serious illness</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>E) Emergency evacuation</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>F) Road tanker fire</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>G) Vehicle missing / Accident</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>H) Oil spill</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>I) Road tanker oil spill</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>J) Chemical spill</td>
<td>16</td>
</tr>
<tr>
<td>8</td>
<td>Medical evacuation</td>
<td>17</td>
</tr>
<tr>
<td>9</td>
<td>Heat stroke</td>
<td>19</td>
</tr>
<tr>
<td>10</td>
<td>Rig operational emergency</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>10.1 - Well kick</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>10.2 – Rig failure</td>
<td>22</td>
</tr>
<tr>
<td>11</td>
<td>Social &amp; local disturbance</td>
<td>23</td>
</tr>
</tbody>
</table>
1) **Purpose:** The objective of this emergency plan is to define roles, responsibilities, actions, reporting requirements and methods to follow to ensure effectively & timely management of emergencies at rig site to minimize the human and property loses.

2) **Scope:** This emergency response plan is solely constituted to respond to emergencies arising due to major fire, explosion, major spill, or natural calamities, rig operational emergencies like blowout, in an appropriate and safe manner.

3) **Emergency Situations:**

<table>
<thead>
<tr>
<th>General Rig Emergencies</th>
<th>Environmental Emergencies</th>
<th>Rig Operational Emergencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Major Fire/Explosion</td>
<td>• Oil Spill</td>
<td>• Well Kick</td>
</tr>
<tr>
<td>• Flammable or toxic gas release</td>
<td>• Chemical Spill</td>
<td>• Potential Blowout</td>
</tr>
<tr>
<td>• Road Tanker fire</td>
<td>• Road Tanker Oil Spill</td>
<td>• Blowout</td>
</tr>
<tr>
<td>• Accident/missing Vehicles</td>
<td></td>
<td>• Blowout</td>
</tr>
<tr>
<td>• Serious injury/illness</td>
<td></td>
<td>• Rig Structure Failure</td>
</tr>
<tr>
<td>• Inclement weather condition including storm, cyclones, high wind speeds and/or heavy rain conditions.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4) **EMERGENCY TEAM AT RIG SITE:**

The main role of emergency team at rig site is to respond to a critical condition requiring immediate operational response, which can be contained and can be handled by personnel and resources available within the area. The team shall also ensure that there is little danger to life or the risk of damage to company assets and/or the environment.

Following personnel shall be responsible for coordinating emergency at Rig site –

<table>
<thead>
<tr>
<th>Emergency Roles</th>
<th>Emergency Responsibility</th>
<th>Alternate Responsibility</th>
<th>Contact Nos</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drill Site Emergency Controller</td>
<td>Company Representative</td>
<td>Drilling superintendent</td>
<td></td>
</tr>
<tr>
<td>Incident Controller</td>
<td>Tool Pusher</td>
<td>Night Tool Pusher</td>
<td></td>
</tr>
<tr>
<td>Medical Support</td>
<td>Medical officer</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Communications coordinator</td>
<td>HSE Officer</td>
<td>Night Tool Pusher</td>
<td></td>
</tr>
<tr>
<td>Incident Recorder</td>
<td>HSE Officer</td>
<td>Asst. driller</td>
<td></td>
</tr>
<tr>
<td>Muster point</td>
<td>Asst Driller of the</td>
<td>security officer</td>
<td></td>
</tr>
</tbody>
</table>
**Emergency Contact Nos:**

<table>
<thead>
<tr>
<th></th>
<th>OIL OFFICE</th>
<th>0884 2352383</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Contractor PROJECT OFFICE</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>POLICE STATION</th>
<th>HOSPITAL</th>
<th>AMBULANCE</th>
<th>FIRE</th>
<th>DISTRICT ADMIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>KAKINADA</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

**5) 4.1 Roles & Responsibilities:**

**All Personnel:**

1. If any person happens to be first observer of any incident like Fire, Injury Accident, Oil spill, Chemical Spill etc, he shall not create panic.
2. He shall inform the nearest person of the incident and ensure that Tool pusher is informed.
3. If he is trained to mitigate accident situation, he shall try to control the situation with available means.
4. Follow the instructions of Tool pusher.
5. Do not spread rumours.
6. Do not make use of internal & external communication causing congestion in emergency communication.
7. If evacuation alarm is raised, evacuate through specified emergency exit route identified at the site to the designated assembly point.

**Emergency responsibility:**

**Incident Controller, Tool pusher (TP):**

1. The TP is overall incharge of any emergency situation.
2. He shall ensure that this procedure is implemented and communicated to all rig personnel in HSE meetings and through in-house training and that those key personnel are well aware of their roles & responsibilities as defined in this procedure.
3. Ensuring all key contact numbers of key personnel Govt officials, Ambulance, Consented hospitals are with him.
4. Review and update the contact list periodically.
5. He will inform the project head for status of field emergency situation and if required ask for additional resources from offsite to mitigate the emergency situation.
6. Arrange for medical evacuation if required.

**Rig Medical Officer:**

1. He is responsible for providing first aid and treatment to injured personnel.
2. Examining the patient and take decision whether medical evacuation is needed.
3. Arrange the required facilities/ medical support needed by the patient during transportation to hospital.
4. Liaisoning with local hospitals in an emergency situation.

**Communications Co-ordinator, HSE Officer:**

1. HSE Officer is responsible to ensure that all activities are carried out as per HSE requirements for the safety of all personnel involved in the operation.
2. Support the TP in coordinating the emergency activities
3. Collect information of missing/injured personnel.
4. Record the incident/ accident in chronological order.
5. Co-ordinate with local authorities to achieve the HSE compliance.
6. The HSE Officer shall assist the TP in establishing communications with emergency services as and when required in an Emergency situation in consultation with TP.
7. Maintain the log of events along with time.
8. Will ensure that any call not associated with the emergency should be terminated as soon as is practical.

**Muster Point Controller, Assistant Driller / Security Officer:**

1. After evacuation to assembly point, he will carry out the head count and report missing personnel to TP.
2. Do not allow the nonessential personnel inside the zone 1 & zone 2.

**Role of Security during emergency:**

1. Take control of the both gates for emergency vehicle movement.
2. Request visitors, transporters, vendors, tankers and instruct them to move out of the Rig site.
3. To keep ready the list of visitors, list of contract workmen inside the rig site.
4. To guide fire brigade personnel by deputing one guard at access road entrance and also inside the gate ensuring free access to the Fire Tender/ engine.
Role of Ambulance (vehicle at site) Driver during Emergency:

1. Ensure Ambulance preparedness in all respect.
2. On instructions of TP/ HSE Officer, to take vehicle available to the site of incident.
3. Park vehicle in forward moving position.
4. Open the rear door of the vehicle to receive the injured or for collection of the “stretcher”.
5. Once instructed by TP/ HSE Officer/ Medical officer, drive the ambulance to the designated medical facility safely, following all road safety “Emergency Vehicle” standards.
6. Give feedback to the HSE Officer after reaching safely to medical facility.

5) EMERGENCY RESPONSE TEAM AT CONTRACTOR PROJECT OFFICE:

A critical condition which requires the involvement of a wide range of operator and contractor resources and/ or third party and government agencies to handle or contain, this incident could have an implication on the company image and reputation is handled by emergency team in office.

In case of emergency requiring assistance beyond the authority of Contractor Tool pusher, he shall communicate the same to project head of Contractor, he will be the Emergency Response Team Leader. Project head shall provide all necessary help in terms of manpower, equipment & other resources.

Emergency Response Team at contractor office comprises of:

<table>
<thead>
<tr>
<th>Emergency roles</th>
<th>responsibilities</th>
<th>Contact No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency Response Team Leader</td>
<td>Project Head</td>
<td></td>
</tr>
<tr>
<td>Communication Coordinator</td>
<td>Base Manager</td>
<td></td>
</tr>
<tr>
<td>HR/Admin persons</td>
<td>Coordinate with ERT</td>
<td></td>
</tr>
<tr>
<td>Incident recorder</td>
<td>HR/Admin</td>
<td></td>
</tr>
</tbody>
</table>

5.1 Responsibilities of Emergency Response Team at OIL Office:

Head Drilling:

1. Assess and declare the level of emergency.
2. To approve man/material/financial requirement to meet the emergency.
3. Inform the Mines Agent/ Mines Owner/ CMD
4. Declare state of emergency.
5. Co-ordinate with company man and Tool pusher for:
   - Assessing the extent of emergency and support services required
   - Mobilizing identified support services, finance and other resources.
   - Constantly communicate with forward controller for updation on status of emergency.

Communication Coordinator:
1. To arrange Transportation to bring the victim to hospital as per requirement of operations and HR.

**FIRE & HSE Officer:**

1. Co-ordination between ERT members.
2. Inform statutory authorities/bodies like DGH/DGMS/PCB/OISD/ Labour authorities/ Dist Collector, CCE & OIL Corporate office etc.
3. Assess the adequacy of onsite emergency response plan & all responsible agencies for discharging their role.
4. Inform relative if required of the victims(s).
5. Release of updated status with the Contractor on the incident at Rig site to staff members.
6. Arrange for evacuation, of the victims(s) to place of his family.
7. Provide emotional support to the victims & his/her family.
8. Arrange urgent movement of personnel from source to site as required and as instructed by ERT leader.

**Transport Persons:**

1. Constantly in contact with emergency response team leader.
2. Arrange proper vehicle to mitigate the situation as earliest.

6) Alarm system and Notification of Emergencies:

6.1) Emergency Alarm Code:

<table>
<thead>
<tr>
<th>Fire Emergency</th>
<th>BOP Drill</th>
<th>Gas Leak/ Evacuation/ Disaster</th>
<th>All Clear</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 horns of 30 sec with 15 sec interval from fire hooter</td>
<td>3 horns of 15 sec with 5 sec interval from Driller Console</td>
<td>3 horns of 2 min with 1 min interval from fire hooter</td>
<td>Straight run of siren for 2 min followed by announcement</td>
</tr>
</tbody>
</table>

6.2) Members of Emergency team: (These names in this form to be displayed at the site for all four shifts).

<table>
<thead>
<tr>
<th>Shift</th>
<th>Fire emergency team</th>
<th>Medical rescue Team</th>
<th>Spill control Team</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>
In fire team A/D (Team Leader)

Tool pusher/ HSE Officer can designate more people in any team as per requirements or absence of any persons.

6.3) CAMP SAFETY TEAM (To be displayed at camp site)

<table>
<thead>
<tr>
<th>Sr.No</th>
<th>Fire Emergency Team</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

To minimize danger & damage from fire or other emergency for the protection of vital plant equipment & materials, personnel responsible for shutting down critical operations before evacuation following personnel are responsible for shutting down critical equipment.

<table>
<thead>
<tr>
<th>Shift No</th>
<th>Names of Personnel</th>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ist</td>
<td>Chief Mechanic</td>
<td>Generator</td>
</tr>
<tr>
<td>llnd</td>
<td>Sr. Mechanic</td>
<td>Generator</td>
</tr>
<tr>
<td>Ist</td>
<td>Chief Electrician</td>
<td>VFD</td>
</tr>
<tr>
<td>llnd</td>
<td>Sr. Electrician</td>
<td>VFD</td>
</tr>
</tbody>
</table>

6) INSTRUCTIONS TO BE FOLLOWED TO MITIGATE EMERGENCY SITUATIONS:

General Rig Emergencies:

In the event any personnel reports an emergency situation, the Tool pusher will verify that and emergency situation exists and raise and alarm. He will activate the emergency rescue team and advice the radio operator to mobilize the medical assistance, fire services, Ambulance etc. as appropriate to the situation.

A: Major Fire

In order to respond to an Emergency of major fire the following actions shall be taken:

Fire near Rig Site:

1. On outbreak of fire, First observer at site will shout Fire- Fire and try to extinguish the fire with nearest primary fire fighting equipment if the fire is in incipient stage.
2. TP/HSE Officer shall ensure that basic fire fighting is being carried out by rig fire team. The fire team shall consist of trained personnel and shall fight the fire with the fire fighting equipment provided. Primary firefighting must not endanger rig personnel.

3. Once it is observed that fire is out of control TP/HSE or immediate person will raise 3 long horns for fire alarm. TP will instruct the communication coordinator to contact the nearest fire service station near the rig site.

4. All the unessential personnel after hearing the alarm shall evacuate to the assembly point for head count.

5. Any calls not associated with the emergency should be terminated unless permitted by the TP.

6. If TP observes that, the fire could pose hazard to personnel or equipment, the Company man should be informed by the TP and instruct the driller to secure the well as per Standard Operating Practice.

7. The company man shall inform the operator office on the incident and his assessment of the incident. He shall also discuss the matter with Mines Manager for any outside help that may be required for fire fighting.

8. TP should keep the company man informed about the developments in the fire fighting actions / emergency situations.

9. The fire fighting team shall ensure that the item on the fire should be isolated from all supplies, i.e. electricity, fuel, gas. The power is shut in the incident area. Isolate/close the valve to stop oil or gas flow.

10. If sealed containers ie. Paint tins, gas bottles, fuel tanks, are present in the area of fire then all personnel must move them to a safe distance from the fire or take alternate action.

11. The team shall use relevant fire extinguisher for fire fighting depending upon type and location of fire.

12. If any person is found to be injured due to fire, the person shall be removed from the danger area and first-aid shall be administered to him as per medivac procedure.

13. If any person is found missing, identify the last seen location of the missing person. TP will identify search team for rescue operation.

14. In case there are serious injury medical evacuation procedure shall be followed.

15. The fire fighting team will be waiting for the secondary fire services to arrive at the location and will try to prevent the fire from spreading.

16. The time required to wait for the fire services depends on the distance of the rig from fire service station. Preparations shall be made for free movement and access of fire tender to fire to fire location by

   I. Posting man at access road entrance
   II. Ensuring free access to the fire engine.
   III. Passing on relevant fire information to the fireman supervisor, on arrival.

17. The rig superintendent should be in touch with TP and if required mobilize the offsite resources to mitigate the emergency condition. He should also keep informed the company man & the ERT leader about the emergency situation.

18. In case there is major injury/accident, Tool pusher shall inform the project head for appropriate actions. HR coordinator in consultation with project head shall inform to the family persons of the injured personnel, and arrange further necessary actions.
Similarly, the TP/DS shall inform the project head on the condition of all workers at the rig site.

**Reporting Procedure:**

1. The equipment involved in the fire shall be assessed for damage and reported to company man. An accident/ incident report shall be prepared & submitted by site HSE Officer identifying loss of damage to property and personnel injured to Mine Manager, Mines safety officer, HSE Officer & Fire Officer (OIL), project head & GM (HSE).
2. The company man shall ensure initial incident notification report submitted to operator head office within 24 hours of the incident as required.

**B: Fire at Camp Site:**

1. On outbreak of fire, First observer at site will shout Fire- Fire and try to extinguish the fire with nearest primary fire fighting equipment if the fire is in incipient stage.
2. Shutdown any equipment that feeds fire, (fan, AC, etc.)
3. Camp boss or HSE Officer and communication coordinator are informed.
4. Camp boss informs the TP, who in turn will inform the company man. Project head and rig superintendent regarding the incident.
5. Camp boss will alert the fire fighting team, HSE Officer & Medical officer.
6. TP/CB/HSE shall ensure that basic fire fighting is being carried out by fire fighting team. The fire team shall consist of trained personnel and shall fight the fire with fire fighting equipment provided. Primary fire fighting must not endanger personnel in the camp.
7. Once it is observed that fire is out of control, camp boss will inform TP & Company man.
8. If require TP/HSE will contact the nearest Fire service station.
9. All the personnel hearing the alarm shall evacuate to the assembly point for head count by camp boss.
10. If any person is found to be injured due to the fire, the person shall be removed from the danger area and first-aid shall be administered to him. Medical Officer shall be called to attend the injury.
11. If any person is found missing, identify the last seen location of the missing person camp boss will identify search team for rescue operation.
12. In case there are serious injury medical evacuation procedure shall be followed by the camp boss.
13. The fire fighting team will be waiting for the secondary fire services to arrive at the location and will try to prevent the fire from spreading by available a waterjet or sand to reduce the heat effect.
14. Preparations shall be made for free movement and access of fire engine to fire location.
15. HSE Officer shall collect the list of injured / missing personnel and other relevant information.
16. If required TP shall inform local police station for their support.
17. In case there is any major injury or fatal accident the same is communicated to TP, Company man and Rig Superintendent.
18. TP shall inform the project head in case of major injury/accident for appropriate actions. HR coordinator in consultation with project head shall inform the family persons of the injured personnel, and arrange further necessary actions for rehabilitation of camp.

19. In case fire at camp site damages the local power generator and telecommunication link the standby equipment should be available to resume the activities.

**Reporting Procedure:**

1. The equipment involved in the fire shall be assessed for damage and reported to company man. An accident/Incident report shall be prepared & submitted by site HSE Officer identifying loss of damage to property and personnel injured to Mine manager, Mines safety officer, HSE officer, Fire Officer (OIL), project Head

2. The company man shall ensure initial incident notification report submitted to OIL office within 24 hours of the incident as required.

**C: Flammable or toxic gas leak:**

1. The person discovering the gas leak will inform driller.

2. Driller will ensure that TP is informed immediately.

3. TP shall nominate trained person to identify the location of the leakage, type of gas and the concentration of leakage using explosive meter.

4. The nominated person shall wear breathing apparatus/respiratory mask to carry out the activity.

5. If the concentration level goes beyond danger level, TP shall raise the gas leak alarm as identified, and ensure that all activities are that may ignite the gas are stopped.

6. The trained person on identification of leakage will try to isolate the leak by shutting the relevant valve.

7. On hearing the gas leak alarm all persons except drill crew shall immediately evacuated the area by moving towards the upwind assembly point.

8. TP in consultation with company man shall plan to stop the leakage.

9. The fire fighting team shall be informed to ready for any potential fire.

10. TP shall inform the project head regarding the emergency situation.

11. TP in consultation with company man will try to stop the leakage if safe to do so.

12. Company man shall be provided assistance as required until incident scene declared safe. He shall also inform the Mines Manager, operator regarding incident and any offsite help required.

13. The rig shall be secured by closing of all entrances using hazard tape and drums. Main entrance shall be guarded and entry restricted to essential personnel only.

14. TP/HSE shall instruct the security to control the traffic away from the wind direction.

15. Medical officer shall be made available at rig site in a safe area.

16. TP along with crew shall assess situation and develop plan to vent gas from the area.

17. TP shall instruct the communication coordinator to contact the local authorities and police in case of evacuation is required for venting the gas.

18. Security shall ensure that all Hot works are stopped in the nearby area.

19. Once the venting has been carried out safely, TP shall ensure that the gas concentration level, All clear signal is given.

**Reporting Procedure:**
An Incident/ accident report shall be prepared by HSE Officer identifying loss of damage to property and personnel injured and send to Mine manager, Mines safety officer, HSE officer, Fire Officer (OIL), project Head & contractor GM (HSE).

The company man shall ensure initial incident notification report submitted to operator office within 24 hours of the incident.

**D: Serious Injury/ Fatality/ Serious Illness:**

In order to respond to an emergency of serious injury the following actions shall be taken:

1. The person noticing the incident shall raise alarm. Check that the surrounding area is safe enough to reach out to victim(s).
2. Check person for response by calling or gently shaking. Qualified first aiders shall attend to injured till medical officer arrives.
3. Qualified first aiders will check airways to find out whether they are clear and person is breathing. Otherwise they will start the first aid to help commence breathing.
4. Check circulation and pulse and if no pulse is observed, inform medical officer.
5. On receipt of knowledge of a serious injury / fatality, the TP shall verify that an emergency situation exists, to stop drilling activity. In such case he will instruct the driller, to secure the well following safe operating practice. And raise alarm for medical emergency and inform the company man and rig superintendent.
6. The TP shall instruct to contact the HSE Officer, Medical Officer and the ambulance is called to the incident scene.
7. The HSE Officer will inspect the accident site and will immediately record the following things:
   I. Name of the victim
   II. Location of the accident / incident
   III. Cause of the accident
8. TP/ Medical Officer shall verify that accident / incident site is safe to carry out the rescue operations for retrieval of the patient(s) from the accident site.
9. In case of a fatality on the rig, nothing in the incident area shall be moved until the site has been inspected by concerned authorities. The incident scene must be sealed off and personnel on the rig prohibited from entering the area. Cover for the victim should also be arranged.
10. Once medical officer has reviewed the casualty, under his guidance TP shall arrange the local medication or medical evacuation of the casualty as per the medivac procedure.
11. Tool Pusher shall inform the ERT leader of major injury / accident for appropriate actions. HR manager/ executive in consultation with ERT leader, shall inform the family persons of the injured personnel, and arrange further necessary actions.
12. TP will inform the crew once the emergency is over, after the injured/ sick person(s) has been transferred for medical care and dangerous situation no longer exists.
13. Company man and Contractor rig superintendent shall keep themselves updated with the medical emergency situation in consultation with TP.

**Reporting Procedure:**
1. HSE Officer shall make an incident / accident report and send to Mine manager, Mines safety officer, HSE officer, Fire Officer (OIL), project Head & contractor GM (HSE).
2. Project Head, if required, will carry out the accident investigation and submits the report to operator and the CEO.

**E: Emergency Evacuation:**

1. Under emergency conditions like fire, explosion or other operational emergencies etc. emergency evacuation alarm is raised. Inclement weather condition including storm, cyclones, high wind speeds and/ or heavy rain conditions may also necessitate an evacuation.
2. TP shall initiate any further actions as appropriate in order to deal with the emergency in liaison with company man.
3. All people shall evacuate on hearing of evacuation alarm through specified emergency exit route identified in emergency exit plan and SINGES at the site to the designated assembly point.
4. If TP/HSE observes that the emergency conditions could pose hazard to personnel or equipment, the company man should be informed by the TP and instruct the driller to secure the well as per Standard Operating Practice.
5. Ensure that all persons move to assembly point and head count is carried out by Muster Point Controller.
6. In case the head count does not tally, TP/HSE shall be informed. TP shall identify a search team to initiate rescue operations.
7. In case of blow out or explosion the TP shall instruct the communication coordinator to inform the district authorities for demobilization of people from nearby villagers to safe location.

**F: Road tanker Fire**

1. On receipt of such information by the rig site, the communication coordinator shall be informed and he will try to ascertain following from the caller:
   I. Location of tanker
   II. Nature of fire
   III. If there is any injury
2. Communication coordinator shall inform TP. TP shall instruct the communication coordinator to contact the HSE Officer and to activate the fire team.
3. TP will inform the company man and the project head on the incident any off site help requirement.
4. Radio Officer/ HSE Officer will be informed and if required he will contact nearby police station to cordon off and clear the public from the vicinity of tanker.
5. The fire team along with the medical team will be deputed to the location for fire fighting and medivac if required.
6. If required, communication coordinator shall contact the nearest fire service station and inform the emergency location.
7. Project head through Tool pusher will inform the district authorities of the emergency response action and inform of any additional help required.
8. HSE Officer shall keep communication with TP and organize additional facilities like ambulance external medical support etc, if required.
9. HSE Officer will prepare the chronological report of the emergency situation and send report to project head & GM (HSE). An initial incident notification shall be sent in the required format by the company man to operator office within 24 hours of the incident.

**G: Vehicle Missing/ Accident**

A vehicle will be considered missing if the vehicle reporting to the destination is unduly delayed and no information is available on the delay till 2 hours.

1. Security shall maintain the log book for vehicular movement in and out of the rig site.
2. All vehicles moving out of rig site shall inform the TP.
3. TP will instruct the HSE Officer to collect the information to carry out assessment:
   a) Person(s) traveling to/from the rig left on time
   b) Person(s) traveling had no other stops on route they would delay their expected time of travel.
   c) Person(s) were informed of the correct rig location and rig no.
   d) Person(s) are not at the rig camp.
   e) Sufficient time has been allowed for the journey and any other circumstances that may cause delay in expected time of travel
   f) Full name(s) and address of missing person(s)
   g) Date and time last seen and by whom
   h) Description of vehicle, (make, type, colour, vehicle number), also fuel if known.
4. The search route shall be selected to cover the likelihood of the route taken by the person(s) missing and rescue team including first aiders will be sent by TP/HSE to trace the route and rescue if any accident has occurred.
5. HSE Officer shall collect the list of missing personnel and other relevant information.
6. If required communication coordinator will report to the local police station for their support.
7. The emergency team shall assess the site damage and take necessary actions to isolate the accident site.
8. If the vehicle is in contact with power lines, stay clear and advise occupants if they are responding to the call to stay in vehicle.
9. Emergency team shall ensure that all residual risks have been eliminated before evacuating the trapped / injury casualty.
10. If there is oil (diesel/petrol) spillages cover the same with sand.
11. Cooperate with police and investigation if arrives at incident location. (Do not admit liability or make any promise)

**H: Oil Spill**

On being informed that an oil spill has occurred, the following actions shall be taken:

1. The person reporting oil spill, if aware of location of leakage and finds it controllable will shut the relevant valves.
2. The TP shall informed of the oil spill.
3. The TP/HSE shall ensure that all hot work in the nearby area is stopped and power cut off and the area is marked off by hazard tape, drum etc.
4. If TP/HSE observes that the oil spill could pose hazard to personnel or equipment, the company man should be informed by the TP and instruct the driller to secure the well as per standard operating practice. And spill control team shall be informed.
5. The team will ensure that upstream and downstream valves of the leakage are closed and the system depressurized.
6. If the oil spill could pose hazards to personnel from poisonous or combustible gases, the area shall be evacuated by moving all personnel to the upwind assembly point.
7. The spill control team shall be deputed to construct temporary bund around the oil and use the available absorbent or equivalent quick clean up material to collect the spilled oil in the containers / if the quantity is very less.
8. In case the quantity of oil is large; pump shall be used to collect the spilled oil and available absorbent used to collect the remaining spillage.
9. In case the oil has spilled into land and spill control team shall remove the contaminated soil and collect the same in drums for disposal.
10. The spill control procedure will be followed for disposal of the absorbent / water if any generated during the process.
11. HSE Officer shall record the incident in incident report.
12. Company man to send the initial incident notification format duly filled to operator office.

I: Road Tanker Oil Spill

1. The tanker driver/ helper will notify the
2. TP/HSE about the incident informing:
   - Location of tanker
   - Nature of emergency
   - If there is any injury
3. He should find means to barricade the area with stones, tree trunks etc to stop the vehicular traffic and inform the nearby inhabitant’s roadside/ villagers to move away from the tanker.
4. On receipt of the information, TP will inform the spill control team to barricade the area and stop all vehicular movement near that area. The TP shall also inform the company man, HSE Officer in consultation with TP shall inform the nearest police station to ensure that the area is secured from external personnel, to carry out the spill control.
5. Guards are to be posted to warn approaching vehicles until barriers and signs are erected. In the case of the presence of poisonous gases, guards and barriers must be placed at greater distances accounting for wind direction. Ensure that all sources of ignition are stopped
6. Personnel in the vicinity should be made aware that there may be hazardous situation. Possible dangers may include toxic gases, explosive or combustible gases, unstable structures, mechanical damage, threat to adjacent facilities and installations etc.
7. On the basis of information, TP shall provide the necessary equipment such as pumps, vacuum truck, crude tankers/barrel, transporters, dump trucks, piping barrier etc., to carry out spill control.

8. The residual oil accumulated shall be pumped and collected in the crude tanks, absorbent or equivalent quick clean up material shall be used to absorb the surface oil spill and is collected in drums.

9. The excavator is used to clear the soil and collected in dumper for proper disposal.

10. The spill control procedure will be followed for disposal of the absorbent/water if any generated during the process.

J: Chemical Spill

On being informed that a chemical spill has occurred, the following actions should be taken:

1. In the event of chemical spill that could be hazardous to personnel or equipment, the first person at site shall inform the same to TP, who in turn shall inform the company man.
2. The TP shall assemble the spill control team.
3. The identification of the source of the chemical spill, type of chemical and quantity (volume) is ascertained by spill control team.
4. The spill area should be separated and marked off by hazard tape or drums etc. Chemical spillage onto roads and vehicle access ways should be similarly marked off at a good distance and suitable position to allow for vehicles to slow down and stop.
5. In case the chemical spill poses any hazard i.e. poisonous or combustible gases, self-contained breathing apparatus, personal protective equipment needed to handle the chemical is used.
6. The procedure for chemical spill control shall be followed to mitigate the situation.
7. If any of the crew personnel is injured, communication coordinator will inform the medical officer so that injured are given immediate first aid.
8. The TP shall provide the company man with information concerning the requirement of necessary equipment such as vacuum trucks, pumps, crude tanks, transporters, loaders, dump trucks, piping barriers etc. If required.
9. Spill team should make concentrated effort on means of isolation of the source, basic containment of the chemical spill and removal of ignition sources.
10. TP will declare end of the emergency in consultation with the company man once:
   - The chemical spill has been removed from the site.
   - There is no immediate possibility of further chemical spillage.
11. HSE Officer will make an incident report and send to GM (HSE) & Project Head.
12. The company man shall send the initial incident notification report to operator office within 24 hours of the incident.

8) Medical Evacuation:

Introduction:

MEDEVAC is a sum of the medical evacuation activities made in order to prevent death or to diminish the serious damage that might occur to a person due to either illness or injury, especially those where a risk for life is emphasized. The procedure foresees:

Assessment and the first aid treatment on the spot of the accident;
Evaluation of situation and the decision to;

Transport the patient to the nearest medical point (Primary Evacuation) to stabilize his condition.

**MEDEVAC** has priority over other normal operations and includes usage of the ambulance or other available means of transportation.

**MEDEVAC** is divided as follows:

**MEDEVAC**

A patient, whose illness or injury may be serious but does not require immediate medical treatment. Special evacuation arrangements are not required, and the patient may be sent to the clinic. This is not EMERGENCY Medical Evacuation.

**MEDIRESCUE**

A patient who seriously ill or injured, requiring urgent medical treatment. The patient must be transported to the clinic as fast as possible. This is an EMERGENCY Medical Evacuation.

Various scenes / situations are described and the action to be followed is given below with the duties of various personnel.

- **Injured person lying in open space:**
  1. First man to see the injured person raises alarm as he goes to the injured person (IP).
  2. If nobody is in sight then rush and raise manual alarm kept outside the tool pusher’s office.
  3. Inform the doctor & HSE Officer regarding the patient location and anything of importance.
  4. The site doctor proceeds to inspect the IP with the stretcher team to provide necessary medical assistance.
  5. The doctor has to take the decision on transfer of IP to nearby hospital.
  6. Simultaneously, the ambulance driver prepares for emergency transfer of patient to the hospital as advised by the doctor.
  7. The doctor will accompany the IP to the hospital till the IP is admitted and till the doctor of the hospital takes charge of the IP.

- **Injured Person lying in enclosed space:**
  1. First man to see the injured person raises alarm by shouting.
  2. If nobody is in sight then rush and raise manual alarm kept outside the tool pusher’s office.
  3. Inform the doctor & HSE Officer regarding the patient location and anything of importance.
  4. Doctor calls for stretcher team and proceeds to the IP along with the HSE Officer.
  5. Simultaneously, the ambulance driver prepares for emergency transfer of patient to hospital.
**Warning:** Do not enter enclosed space unless it has been declared safe by the HSE Officer.

1. On declaration of the enclosed space as safe by the HSE Officer.
2. Either the doctor enters the enclosed space or trained persons in fire rescue operations bring the IP out of the closed space.
3. The doctor inspects the patient and if stretcher is needed, guides the crew in getting the IP onto the stretchers for taking him out of the enclosed space or onto the ambulance.
4. The basket stretcher kept on the rig floor tied with 4 nylon ropes can be used for lifting out patients from tanks & cellar pit.
5. On the advice of doctor further action will be initiated. If needed the IP will be transferred to the medical bunk at site or to the hospital.

- **Injured Person on Rig Floor:**
  1. First man to see the injured person will inform the driller, doctor HSE Officer.
  2. Driller to supervise the transfer of IP onto the basket stretcher kept in the dog house on the rig floor. Four crew members to lift the basket with two holding the **feet end** as leaders.
  3. The leaders will lift the feet end onto their shoulders as they descend the stairs leading towards the tool pusher’s office.
  4. The persons holding the head end of IP will try and keep the IP at a comfortable angle while descending the stairs.
  5. The IP will be taken to the medical bunk house for treatment by doctor.

- **Injured Person on the Monkey board:**
  1. First man to see the injured person will inform the driller, doctor HSE Officer.
  2. If the IP id not in a position to come down, send the basket upon the man riding winch with tag line. Meanwhile send three or more crew to the monkey board.
  3. Transfer the patient to the basket and gently lower him to the rig floor. From there on proceed as per the procedures for “Injured Person on Rig Floor”.

- **Injured Person in a normally inaccessible area:**
  In such cases use of crane, forklift, air winch etc, to be used to somehow to get the IP onto a stretcher, if not possible immediately inform Doctor & HSE Officer.

**REMEMBER:** Before rescuing, make sure the rescuers are safe.

**9) Heat Stroke:**

1. Under very hot conditions of temperature around 45° C or above if a person collapses on rig floor or any operating area at rig site, primary concern may be heat stroke. The nearest person shall call for help and call for first aid provider and inform tool pusher.
2. Move the person to a cool place indoors. Place the feet higher than the head to avoid shock.
3. Inform the doctor/medic and the HSE Officer
4. First aider will look for following symptoms:
   Very high temperature (104°F or higher)
   Hot, dry, red skin, no sweating
   Deep breathing and fast pulse, then shallow breathing and weak pulse
   Confusion or Hallucinations
   Convulsions
   Loss of consciousness
5. In absence of medic, the first aid provider will remove the clothing and either wraps the person in a cold wet sheet or sponge the person with towels or sheets that are soaked in cold water. Or spray the person with cool water. Fan the person.
6. If available put ice packs or cols compresses on the neck, under the armpits, and on the groin area.
7. Once persons temperature gets to 101°F, place him or her in the recovery position. Do not lower the temperature the temperature further.
8. Don’t give fever reducing medicine.
9. On arrival of the doctor, he has to take the decision on patients condition and if required transfer the patient to nearby hospital.

10) Rig Operational Emergency:

In the event of a Rig Operational Emergency the focus is on drilling technical aspects, therefore the emergency is coordinated by the well officering task force. The driller will inform the tool pusher about the emergency who in turn will inform the company man for taking other necessary actions to deal with the emergency situation. The TP shall immediately contact the project head and apprise him of the situation and further guidance, as we as company man should inform to operational head of operator for further guidance.

10.1) WELL KICK:

A) While Drilling:

1. Once the well has kicked following courses of actions will be taken:
2. Crew leader (Driller/asst driller) is to alert the drilling crew and stop the rotary table.
3. Pull the Kelly above rotary table until the lower Kelly cock is above drill floor and stop pumping.
4. TP shall be informed of the well kick.
5. The TP shall verify the readings and mud level and inform the company man (Drilling supervisor). On his instructions, the driller will shut the well following standard operating procedures.
6. Company man shall be contacted and informed about the situation. He shall be provided with all assistance required to normalize the situation by TP.
7. Further actions shall be taken as per procedures for flammable or toxic gas leak.
8. The emergency situation will be ended by the client drilling task force commander when
   1. The influx is found not to contain H2S.
II. Primary well control has been regained

Once the well has kicked following courses of actions will be taken:

1. Crew leader (Driller/Asst driller) is to alert the drilling crew and set the slip, tool joint above 1 mtr rotary table.
2. TP/Driller makes sure that FOSV is properly make-up in open condition, after making up close it.
3. Driller lift the string to adjust proper height for closing BOP
4. TP/Driller makes sure that man at flow line to check flow & man at control panel to close BOP if necessary.

Potential Blow Out:

A potential blow out situation may include:

i. Kick with high pressure approaching pressure limits of equipment or formation.
ii. Kick in combination of losses
iii. Kick in combination with malfunctioning pressure control equipment.
iv. Kick with pipe off bottom

The actions to be taken when a well has kicked and the driller has closed the well in as per standard shut-in procedure are as follows:

1. A brief and accurate assessment of the situation shall be made the following:
   a. Identify cause of problem
   b. Collect all data possible, to complete well control sheets.
   c. Determine risks to personnel and drilling rig with particular consideration given to H2S presents. At any time if the situation is endangering personnel, the TP in conjunction with the company man shall take action to evacuate the rig.
   d. Identify possible options to overcome the problem.
   e. When a situation indicates a kick with losses, then determine the loss zone.
   f. Determine if cement or a barite plug can be used if required as a last resort.
   g. If practical, estimate the likelihood to the situation deteriorating and a full blowout occurring.
   h. If at any stage in the emergency the recognized “Safe area” is not considered sufficiently distant from the danger area, all personnel must be evacuated to an alternative area.
2. Any personnel involved must be trained in the use of Breathing apparatus and confirm to all requirements of working in an H2S environment.
3. TP shall ensure that only an experienced group of three or four people will attempt any repair activities.
4. Working to the “Buddy system” must be strictly enforced. Also a standby rescue crew must be kept ready in attendance.
5. All remaining personnel must stay well clear of the danger area, i.e. at one of the upwind safe assembly points.
6. The situation should be regularly monitored using gas analyser by HSE Officer.
7. A responsible person shall be nominated by TP to maintain the communications as advised by the company man. These persons must be clearly instructed to simply note down the name and number of the caller and not become involved in discussion concerning the emergency.

8. If it is still possible to pump down the string, consideration must be given to spot a plug at short notice to seal the well. Should it not be possible to move the string plugging with almost certainly lead to loss of the string and must be regarded as a last resort.

9. With any potential blowout situation, the prospect of a full blowout and its consequences must be considered. If possible the chance of a blowout should be estimated. TP shall instruct the communication coordinator to contact the local authorities and police in case of evacuation is required for installation or personnel in the surrounding area, particularly downwind which will be effected.

10. The emergency situation will be ended by company man when the well has been brought under control and the potential blowout has been avoided.

**Blow Out:**

Considering that a blowout is occurring or has occurred, the courses of action will be as follows:

1. The rig shall be evacuated as an immediate action for safety of personnel.
2. In serious blowout situations natural survival instincts aver rule all else and an orderly evacuation is not possible, still if circumstances permit the rig should be evacuated in an orderly manner.
3. A head count shall be carried out once the personnel have reached a safe distance.
4. First aid shall be given to the injured without delay at assembly point area.
5. All electrical installations within the danger zone shall be de energised; approved safety lamps or torches shall only be used within the danger zone; no naked lights or vehicular traffic shall be permitted within the danger zone.
6. Circumstances permitting a search party should cover the area surrounding the rig, but under no circumstances should their safety be put at risk. It shall be ensure that no one returns to rig unless permitted by the company man.
7. The TP shall work with the company man to re-organize rig crew and delegate tasks as per his instructions.
8. If the well is on fire, the H2S danger is eliminated the presence of wind will reduce the possibility of H2S build up in low lying areas. However personnel on the downwind side of the rig are still at risk. If the presence of H2S is uncertain testing should only be carried out if safe to do so and tester shall wear a breathing apparatus set.
9. TP shall ascertain the condition of ventilation and presence of gases with an approved instrument.
10. TP shall ensure that the communication coordinator contacts all the nearby installation communities & villages and made them aware of the possible risks from the products that may have landed at their location inform them. No personnel should be allowed within the 500Mtrs distance from the location fencing.
11. The spill control team will be activated by the TP/HSE Officer in case of such calls to collect the blowout product.
12. The emergency situation will be ended by the client’s drilling task force when:
   i. Primary or secondary control of the well has been re-engineered and situation is confirmed as stable.
   ii. The blowing well has been sealed and no longer giving cause for concern.

10.2) Rig Failure:

Rig failures include:

I. Sub structure collapse
II. Mast failure
III. Rig foundation collapse
IV. Draw works breakdown
V. Complete mud pump failure
VI. Total power failure

After a rig failure occurred, the courses of action will be as follows:

1. In case of injury first aid shall be given without delay to injured personnel and medic shall be called to the incident scene.
2. OPERATOR drilling supervisor or company man shall be informed and all assistance shall be provided to him for further processing in the emergency situation.
3. Once a rig failure has taken place, the TP, in coordination with the company man (Operator drilling supervisor), must establish if the well can be shut in by considering the following:
   - Are the BOPs functioning normally?
   - Is the BOP accumulator still operating?
   - Can a stab-in valve or Kelly cock be installed in the string?
4. In case answer to any of the following is negative, first considerations must be given to restoring the capability of securing the well.
5. If secondary well control is not possible, then the first priority must be ensure the well can be secured. This can either be achieved by restoring secondary well control or by plugging the well bore using a cement or barite plug.
6. If the string in the well cannot be moved any cement job will result in cement left in the pipe and will require remedial operations at a later date and must therefore only be carried out as a last resort.
7. In all cases the information communication channel as indicated in the flow chart must be followed.

11) Social & local Disturbance:

1. TP shall take stock of the situation and inform the company man.
2. TP to inform the project head drilling briefing the situation.
3. Inform staff not to allow rumours to spread.
4. Coordinate with project head to involve police if necessary and try to diffuse the situation at the earliest.
5. TP shall liaise with the community leader in consultation with police.
6. If required increase security.