

THIS IS AN AUDITABLE DOCUMENT FOR THE EXTERNAL/ THIRD PARTY HSE AUDITORS NOMINATED BY THE PREQUALIFIED CERTIFICATION BODY AND FOR THE OGDCL's INTERNAL (QUALIFIED) HSE AUDITORS UNDER THE CODE OF CONDUCT DEFINED BY INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO).

# Oil & Gas Development Company Limited's **I N T E G R A T E D** HSE SYSTEM MANUAL

A Manual Based on the Latest Revisions of ISO14001, ISO45001, ISO31001, ISO50001, Guidelines of The International Association of Oil & Gas Producers (now IOGP and formerly known as OGP) and Process Safety & Risk Management (PSRM) Model

ORIGINAL ISSUE JUNE 25, 2007  
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OGDCL PAKISTAN:  
OIL & GAS DEVELOPMENT  
COMPANY LIMITED

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## 1.1 Preamble

OGM/P-HSE-1.1(08) Revision Number 8

Original Issue: June 25, 2007  
This Issue: March 14, 2022

**Updated By:**  
**Muhammad Mubashir Abbas**  
Manager HSEQ, OGDCL

**Reviewed By:**  
**Mahmood-ul-Hassan Khan**  
General Manager HSEQ, OGDCL

**Approved By:**  
**Syed Khalid Siraj Subhani**  
Managing Director, OGDCL

### Change/ Revision Log

#	Description of Change
1.	Added: Mapping of PSM (22 Elements) Model with OGDCL's HSE Management System.
2.	Added: Procedure titled "OGDCL's Process Safety Fundamental (PSFs)"

### Associated Documents Approval & Issue

Related Document/ Record	Initiated by	Reviewed by	Approved by
HSE System Procedures	Manager HSEQ	GM HSEQ	MD / CEO





Latest Framework of OGDCL's HSE Management System





## Preamble

OGDCL has established (developed and implemented) HSE Management System to improve its HSE performance and ultimately to reduce the adverse impact of its operations, activities, and services on 3Ps i.e. people, plant, and planet. The HSE System complies with the latest revisions of international standards ISO14001, ISO45001, ISO31001, ISO50001, Guidelines of The International Association of Oil & Gas Producers (now IOGP and formerly known as OGP) and Process Safety & Risk Management (PSRM) Model.

Effectively mapping and applying 22 PSM Risk-based and Cultural Elements with existing HSE System (*exhibited as Mapping Chart in the proceeding page*) clearly demonstrates an uplifting of HSE standards at OGDCL and also a morale-boost of employees with a reduced number of injuries & incidents. Our commitment is serving as the backbone of entire PSM & HSE drive for sure, and, combined with employee participation, is helping in pursuing the objective "To be Excellence in Process Safety".

Our HSE System's scope covers:

- ▣ Engineering / construction operations;
- ▣ Exploration, including seismic techniques and geological surveys;
- ▣ Drilling of exploratory wells and geological services;
- ▣ Drilling and development of production wells; and
- ▣ Treatment of oil and processing of natural gas to yield marketable products.

This document describes the way OGDCL is managed with respect to its stated HSE policies and strategic objectives. It ensures that the critical activities of the company are identified, controlled and that measurements are made and reported so as to enable monitoring of overall performance and identification of areas for improvement. This HSE System addresses the organizational structure and responsibilities of people, the management of resources and documentation required for sound HSE performance for all OGDCL activities. The document provides a framework for planning of work activities, which include existing operations, management of changes and developing hierarchy of procedures both for the normal as well as abnormal conditions.

This is a CONTROLLED document and is subject to continual review and update as required. Functional / Line Management is the PRIMARY IMPLEMENTER of HSE management system; However, the CUSTODIAN of HSE Policy Framework and System Manual is the General Manager HSE who is responsible for updating these document as required on behalf of the Chairman or Managing Director & CEO of the company and checking / reporting the compliance level.

OGDCL's HSE Policy Framework and Integrated HSE System Manual is divided into Six (06) Core Policy Framework Elements and Thirty Three (33) Procedures, corresponding to the Main Sections & Subsections of ISO14001, ISO45001, ISO31001, ISO50001 standards and PSM guidelines (*exhibited as Outline in the proceeding page*).

Instructions and directives for the implementation of HSE system would be issued from time to time. These instructions would be meant for strict compliance and adherence with no room for tolerance or departure. These instructions would be basically to avoid instances of deviation and non-adherence which can potentially cause irreparable damage or injury to the manpower or company assets besides financial and reputational implications.

It is, therefore, strongly advised that HSE system/ standards/ instructions be fully adhered to. Obligation of compliance rests with all employees whereas Head of Departments would be responsible for ensuring that Functions under their jurisdiction are adequately equipped in terms of awareness and availability of tools to meet the HSE system. It may also be underlined that strict disciplinary action may be taken in case of a laxity, omission or negligence in this regard.

(Syed Khalid Siraj Subhani)  
**Managing Director/ CEO**



# Preamble: OGDCL's Integrated HSE System Manual

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## Outline of OGDCL's HSE Management System

			Plan	Do	Check	Act		
HSE Framework's Core Element								
Preamble OGM/P-HSE-1.1	Terms & Definitions OGM/P-HSE-2.1	Context OGM/P-HSE-3.1	First Leadership	Second Planning	Third Support	Fourth Operation	Fifth Performance Evaluation	Sixth Improvement
			HSE & ERM Policy Statements OGM/P-HSE-4.1	Enterprise Risk Management OGM/P-HSE-5.1	Competence & Awareness OGM/P-HSE-6.1	Operational Planning and Control OGM/P-HSE-7.1	Hazards & UBsUCs Identification & Reporting OGM/P-HSE-8.1	Opportunities For Continual Improvement OGM/P-HSE-9.1
			OGDCL's Lifesaving Golden Rules OGM/P-HSE-4.2	Job Vulnerability /Hazard Analysis OGM/P-HSE-5.2	Communication & Consultation OGM/P-HSE-6.2	Permit to Work System OGM/P-HSE-7.2	Monitoring, Measurement & Compliance Evaluation OGM/P-HSE-8.2	Management of Change OGM/P-HSE-9.2
			*OGDCL's Process Safety Fundamental (PSFs) OGM/P-HSE-4.3	Legal & Other Requirements OGM/P-HSE-5.3	Documented Information OGM/P-HSE-6.3	Handling, Segregation and Disposal of Waste OGM/P-HSE-7.3	Analysis of Data OGM/P-HSE-8.3	Incident Investigation OGM/P-HSE-9.3
			Roles, Responsibilities Accountabilities and Authorities OGM/P-HSE-4.4	Objectives & Management Program OGM/P-HSE-5.4	Control of Records OGM/P-HSE-6.4	Journey Management OGM/P-HSE-7.4	Reward, Recognition & Penalties OGM/P-HSE-8.4	
			Crisis Management OGM/P-HSE-4.5			Hydrogen Sulfide Management Framework OGM/P-HSE-7.5	Internal HSE Audits OGM/P-HSE-8.5	
			Structure OGM/P-HSE-4.6			Management of Project Contractors & Service Companies OGM/P-HSE-7.6	Management Reviews OGM/P-HSE-8.6	
						Use of Personal Protective Equipment OGM/P-HSE-7.7		
						Framework for Site Restoration OGM/P-HSE-7.8		
			*New Procedure					



## Mapping of PSM (22 Elements) Model with OGDCL's HSE Management System

First Leadership	Second Planning	Third Support	Fourth Operation	Fifth Performance Evaluation	Sixth Improvement
<ul style="list-style-type: none"> <li> <b>Management Commitment:</b> Management is responsible for safety of personnel and protection of company property. Management will direct the establishment and implementation of safety programs through participation in various safety committees and conducting plant safety audits. Management should have specific, quantifiable, personal safety goals/targets and implementation plans, which must be stewarded regularly.         </li> <li> <b>Line Management Accountability and Responsibility:</b> The purpose of this element is to delegate HSE responsibility and accountability to each level of the organization. Line supervisors and managers are totally responsible and accountable for safety as well as cost, quality and productivity.         </li> <li> <b>Policies and Principles:</b> To improve safety, a deliberate safety policy must be established and applied daily by each member of the work force, whether manager, supervisor, or contractor employee. Top management must establish the policy that will spell out the principles that are to govern all decisions regarding safety. Without such a policy, safety tends to be pushed aside when other concerns become pressing.         </li> <li> <b>Safety Personnel:</b> This element highlights the main responsibilities of safety personnel so that all members of line organization understand the role and place of safety personnel in the organization.         </li> <li> <b>Integrated Organization for Safety:</b> The purpose of the overall safety organization is to mobilize all available talent in the interest of safety, health, and environmental protection. It does not, in any way, relieve individual members of the line organization of their safety responsibilities. Various committees are staffed principally by members of the line organization supplemented by safety staff members and other specialists.         </li> <li> <b>Emergency Preparedness and Contingency Planning:</b> The intent of this element is in-depth planning for potential emergencies ensuring effective response by site personnel. The outcome of these efforts is mitigation of the impact of incidents on personnel, environment / facilities and prompt control of emergency.         </li> </ul>	<ul style="list-style-type: none"> <li> <b>Process Safety Information:</b> It provides a foundation for identifying and understanding the hazards involved in the process. It ensures that PSM goals of HSE are achieved by providing process safety documentation. A PSI package shall be prepared for each process unit. Documents of the PSI package should be maintained up to date for the life of each process unit.         </li> <li> <b>Risk Assessment and Process Hazard Analysis:</b> A systematic and comprehensive study to identify and evaluate the significant hazards of the process and the safeguards associated with Highly Hazardous Processes (HHP) and Lower Hazard Operations (LHO). Process Hazard Analysis systematically identifies the safety hazards such as potential for fires, explosions and / or release of toxic materials, and is a well-defined program to remove or lower these hazards.         </li> <li> <b>Goals, Objectives and Plans:</b> The purpose of this element is to provide guidelines for establishing realistic, achievable and quantifiable safety goals and objectives. Managing safety, like managing other aspects of a business, includes setting of performance goals and objectives which should be Specific, Measurable, Attainable, Result Oriented, Time Bound (SMART) and within the sphere of influence of the person and group who is to be held accountable for achievement.         </li> </ul>	<ul style="list-style-type: none"> <li> <b>Process Safety Information:</b> It provides a foundation for identifying and understanding the hazards involved in the process. It ensures that PSM goals of HSE are achieved by providing process safety documentation. A PSI package shall be prepared for each process unit. Documents of the PSI package should be maintained up to date for the life of each process unit.         </li> <li> <b>Effective Communication:</b> The purpose of this element is to emphasize and elaborate the importance of effective two-way communication in prevention of occupational accidents/ illnesses and achieving safety goals and objectives.         </li> <li> <b>Training and Development:</b> This element signifies that all personnel whose work could affect the safety of the site must have, and maintain, the necessary knowledge and skills to execute their job functions in a manner consistent with the safe operation of the site.         </li> </ul>	<ul style="list-style-type: none"> <li> <b>Procedure and Performance Standards:</b> This element provides standards of performance including such items as rules, procedures, and design criteria that specify how activities are to be done. They should be written, practical, and available at the point of action, reviewed regularly, followed, and enforced. Adherence to standards must be enforced, even to the point where adherence becomes a condition of employment.         </li> <li> <b>Pre Startup Safety Review (PSSR):</b> PSSR provides a final checkpoint for new and modified equipment and facilities to confirm that all appropriate elements of Process Safety Management have been addressed satisfactorily and the equipment / facility is safe to start-up. It is mainly intended to make sure that alterations / additions to the process or system do not create hazards to personnel at the site, surrounding facilities, community and environment by inadequate, incomplete, or unauthorized design or installation.         </li> <li> <b>Contractor Safety Management:</b> The intent of this element is to make contractors responsible for effectively meeting the safety, health and environmental requirements. It covers safety expectations of contractors with safety performance of the contractor as the top most priority.         </li> </ul>	<ul style="list-style-type: none"> <li> <b>Quality Assurance (QA):</b> QA is important for new facilities and revisions or repairs to existing facilities to ensure that safety critical equipment which handles hazardous material (as it is fabricated) is suitable for the process application. It also ensures that safety critical equipment installed is consistent with design specifications and manufacturer's recommendations.         </li> <li> <b>Mechanical Integrity:</b> This element addresses equipment tests and inspections including predictive and preventive maintenance, reliability engineering, maintenance procedures, quality control procedures, training and performance of maintenance personnel. All of these mechanical integrity efforts ensure an incident free and reliable operation, and they help to pin point root causes and avoid incident recurrence and pre-mature failures.         </li> <li> <b>Audits and Observations:</b> This element covers the importance of effective auditing in site safety management and provides guidelines for conducting and evaluating safety audits.         </li> <li> <b>Integrated Organization for Safety:</b> The purpose of the overall safety organization is to mobilize all available talent in the interest of safety, health, and environmental protection. It does not, in any way, relieve individual members of the line organization of their safety responsibilities. Various committees are staffed principally by members of the line organization supplemented by safety staff members and other specialists.         </li> <li> <b>Motivation and Awareness:</b> The purpose of this element is to discuss and provide guidelines on different concepts on progressive motivation. Internal motivation is necessary to sustain high-level safety performance once that level of performance has been reached. External motivation is necessary to make the initial transition to high level safety performance because of established behavior patterns in the individual.         </li> <li> <b>Integrated Organization for Safety:</b> The purpose of the overall safety organization is to mobilize all available talent in the interest of safety, health, and environmental protection. It does not, in any way, relieve individual members of the line organization of their safety responsibilities. Various committees are staffed principally by members of the line organization supplemented by safety staff members and other specialists.         </li> </ul>	<ul style="list-style-type: none"> <li> <b>Incident Investigation and Communication:</b> The purpose of this element is to document the process for investigating incidents that occur onsite or off-site in a way that promotes thorough and efficient investigation in a timely manner; uniform, accurate, clear, and concise documentation and reporting; identifies and implements recommendations to prevent incident recurrence; involves the right people to get the information; ensures a clear understanding of key factors and key learnings; participating personnel obtain a positive learning experience.         </li> <li> <b>Management of Change - Facility and Technology:</b> Processing plants are designed according to standard engineering practices. The changes to the documented process safety information (e.g. hazard of materials, equipment design basis and process design basis), even if subtle or temporary, can lead to catastrophic events. Therefore, these changes must be managed in such a manner that safety, the integrity of the plant and the environment are not compromised. All changes must receive appropriate review and authorization before being implemented.         </li> <li> <b>Management of Change - Personnel:</b> Safe operations of facilities require an effective personnel change management system as people are the essential ingredient in "Process Safety Management" and play the most important role in its implementation and day to day compliance. It is essential that personnel changes at all levels are controlled according to a pre-established criteria so that minimum levels of experience and knowledge are maintained at the site.         </li> <li> <b>Pre Startup Safety Review (PSSR):</b> PSSR provides a final checkpoint for new and modified equipment and facilities to confirm that all appropriate elements of Process Safety Management have been addressed satisfactorily and the equipment / facility is safe to start-up. It is mainly intended to make sure that alterations / additions to the process or system do not create hazards to personnel at the site, surrounding facilities, community and environment by inadequate, incomplete, or unauthorized design or installation.         </li> </ul>

IMPORTANT:- IT IS EVERYBODY'S RESPONSIBILITY TO ENSURE THAT THE OGDCL'S HSE MANAGEMENT SYSTEM IS IN PLACE.



Preamble

**Terms & Definitions**

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## 2.1 Terms & Definitions

OGM/P-HSE-2.1(08) Revision Number 8

Original Issue: June 25, 2007  
This Issue: March 14, 2022

**Updated By:**  
**Muhammad Mubashir Abbas**  
Manager HSEQ, OGDCL

**Reviewed By:**  
**Mahmood-ul-Hassan Khan**  
General Manager HSEQ, OGDCL

**Approved By:**  
**Syed Khalid Siraj Subhani**  
Managing Director, OGDCL

### Change/ Revision Log

#	Description of Change
1	Added: Active and passive fire protection systems, Emergency Level 1&2, Fire Classes viz a viz Extinguisher Types, Bowties diagram, Swiss-cheese model, Globally harmonized system (GHS), Hazardous materials identification system (HMIS), LOPC, Heinrich (safety triangle) ratio; and process safety pyramid.

### Associated Documents Approval & Issue

Related Document/ Record	Initiated by	Reviewed by	Checked/ Verified / Approved by
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<b>AUDIT</b>	
<b>Auditee</b>	Location (field/ site) to be or being audited.
<b>Auditor</b>	Competent person who conducts an HSE audit.
<b>Audit Conclusion</b>	Outcome of an audit, after consideration of the audit objectives and all audit findings.
<b>Audit Criteria</b>	Set of policies, procedures or requirements used as a reference against which audit evidence is compared.
<b>Audit Evidence</b>	Records, statements of fact, or other documented information (qualitative or quantitative) which are relevant to the audit criteria and verifiable.
<b>Audit Findings</b>	Results of the evaluation of the collected audit evidence against audit criteria. The findings include good practices, nonconformities, observations or opportunities for improvement.
<b>Audit Grade</b>	Audit Grade for a specific location (attributed as Excellent, Good or Poor) is based upon percentage compliance level determined by Audit Team against the Standardized HSE Audit Checklist.
<b>Audit Plan</b>	Arrangements for an audit planned (as per audit planner/ schedule) for a specific time frame and directed towards a specific purpose.
<b>Audit Planner (Schedule)</b>	Audit program arrangements for a set of audits scheduled for a specific time period and directed towards specific purpose.
<b>Audit Scope</b>	Extent and boundaries of an audit; It generally includes a description of the physical locations, organizational units, activities and processes, as well as the time period covered.
<b>Audit Team</b>	One or more HSE Auditors conducting an audit, and supported by technical or subject matter experts, if needed.
<b>Documented Information</b>	Documented information, refers to any information required to be controlled & maintained. (It can be in any format/ media, and from any source.)
<b>Lead Auditor</b>	An experienced HSE Auditor of the Audit Team who is appointed as Team Leader for a specific audit.
<b>Objective Evidence</b>	Records, statements of fact, or other documented information (qualitative or quantitative) supporting the existence or verity of something obtained through observation, measurement, test, or other means.
<b>EMERGENCY PREPAREDNESS AND RESPONSE</b>	
<b>Active Fire Protection Systems</b>	<p>Active fire protection refers to systems that involve a triggered response to a fire. Active systems are initiated by the flame and the response may be manual (for example, a hand operated fire extinguisher qualifies as an active response) or programmed (for example, a sprinkler system). Essentially, active fire protection involves fighting a flame. These systems are considered to be a proactive approach to extinguishing fires and controlling the spread of smoke. The following list of examples are all a part of active fire protection:</p> <ul style="list-style-type: none"> <li>• Fire extinguishers</li> <li>• Fire hose reels</li> <li>• Fire blankets</li> <li>• Sprinkler systems</li> <li>• Smoke alarms</li> <li>• Firefighters/ emergency services</li> <li>• Automated fire doors</li> <li>• Thermal detectors</li> <li>• Fire control systems</li> </ul>
<b>Contingency Plan</b>	A pre-established plan to mitigate an unusual situation which has potential for harm, which incorporates the best use of local as well as remote facilities and resources.
<b>Crisis Management Teams</b>	<p>a. Emergency Management Team (EMT), Head Office</p> <p>b. Location Emergency Management Teams (LMTs)</p> <ol style="list-style-type: none"> <li>i. Rapid Response Team (RRT)</li> <li>ii. Emergency Response Team (ERT)</li> <li>iii. First Aid &amp; Evacuation Team</li> </ol>
<b>Emergency Level-1</b>	<p>An emergency that can be controlled by the localized action at the affected area by the available personnel and resources. This level of emergency doesn't have immediate serious injuries, potential of fatality, major equipment loss, major loss of primary containment, large fire/ explosion, major vehicular incident and/ or major environment impact.</p> <ul style="list-style-type: none"> <li>• Emergency siren is NOT sounded at this stage.</li> <li>• Mustering is NOT required.</li> <li>• LMT is NOT activated; however, the situation is critically monitored</li> </ul>

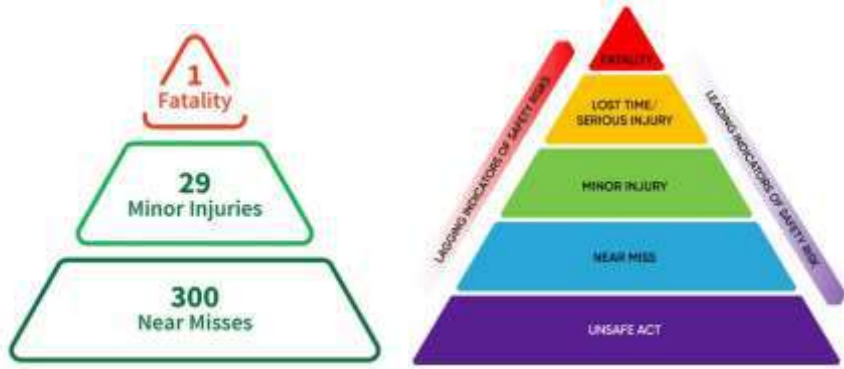


# Terms & Definitions: OGDCL's Integrated HSE System Manual

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	<p>by Location InCharge (Chairman LMT) for assessment of any further escalation potential.</p> <ul style="list-style-type: none"> <li>Work activities can be suspended temporarily in the localized area which is or likely to be affected.</li> </ul>																																																
<b>Emergency Level-2</b>	<p>An emergency situation which has potential to impact the affected site significantly and for which external support services may be required. It may result in serious injuries/ fatality, major equipment damage, major loss of primary containment, significant fire/ explosion, major vehicular incident, and/ or loss of controlled substance to the environment</p> <ul style="list-style-type: none"> <li>Emergency siren is sounded with intermittent tones of 10 seconds each with 5 seconds pause, repeated 3 times. Where available, emergency announcement through Public Address system may also be made. Emergency termination would be managed through siren with continuous tone for 120 seconds.</li> <li>Mustering is required. However, LMT Chairman may further decide to evacuate to the Assembly Points designated outside the main gate. Employees are to wait for further instructions there.</li> <li>LMT is activated; however, EMT may be activated depending upon crisis level (severity) 3, 4, or 5</li> <li>All operations/ activities will be stopped.</li> </ul>																																																
<b>Emergency Response Post</b>	<p>An operations centre established in a suitable location to manage the larger aspects of the emergency. In a high-impact emergency there may be a number of response posts established to support the response like any joint off-site regional response post, provincial government's response post, etc.</p>																																																
<b>Emergency Planning Zone (EPZ)</b>	<p>An area surrounding a facility, pipeline, or well where personnel, residents or other members of the public may be at highest risk during the early stages of an uncontrolled release of toxic materials such as H2S or explosion or fire and the area for which the company must have a specific emergency response plan.</p>																																																
<b>Emergency Response Plan (ERP)</b>	<p>A comprehensive plan to protect the personnel, public, including criteria for assessing an emergency situation and procedures for mobilizing response personnel and agencies and establishing communications and coordination, that is to be followed by all parties in the event of an incident.</p>																																																
<b>Fire Classes and Extinguisher Types</b>	<table border="1"> <thead> <tr> <th>Type</th> <th>CLASS A Combustible materials (e.g. paper &amp; wood)</th> <th>CLASS B Flammable liquids (e.g. paint &amp; petrol)</th> <th>CLASS C Flammable gases (e.g. butane and methane)</th> <th>CLASS D Flammable metals (e.g. lithium &amp; potassium)</th> <th>Electrical equipment (e.g. computers &amp; generators)</th> <th>CLASS F Deep fat fryers (e.g. chip pans)</th> <th>Comments</th> </tr> </thead> <tbody> <tr> <td>Water</td> <td>✓</td> <td>✗</td> <td>✗</td> <td>✗</td> <td>✗</td> <td>✗</td> <td>Do not use on liquid or electric fires</td> </tr> <tr> <td>Foam</td> <td>✓</td> <td>✓</td> <td>✗</td> <td>✗</td> <td>✗</td> <td>✗</td> <td>Not suited to domestic use</td> </tr> <tr> <td>Dry Powder</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✗</td> <td>Can be used safely up to 1000 volts</td> </tr> <tr> <td>CO2</td> <td>✗</td> <td>✓</td> <td>✗</td> <td>✗</td> <td>✓</td> <td>✗</td> <td>Safe on both high and low voltage</td> </tr> <tr> <td>Wet Chemical</td> <td>✓</td> <td>✗</td> <td>✗</td> <td>✗</td> <td>✗</td> <td>✓</td> <td>Use on extremely high temperatures</td> </tr> </tbody> </table>	Type	CLASS A Combustible materials (e.g. paper & wood)	CLASS B Flammable liquids (e.g. paint & petrol)	CLASS C Flammable gases (e.g. butane and methane)	CLASS D Flammable metals (e.g. lithium & potassium)	Electrical equipment (e.g. computers & generators)	CLASS F Deep fat fryers (e.g. chip pans)	Comments	Water	✓	✗	✗	✗	✗	✗	Do not use on liquid or electric fires	Foam	✓	✓	✗	✗	✗	✗	Not suited to domestic use	Dry Powder	✓	✓	✓	✓	✓	✗	Can be used safely up to 1000 volts	CO2	✗	✓	✗	✗	✓	✗	Safe on both high and low voltage	Wet Chemical	✓	✗	✗	✗	✗	✓	Use on extremely high temperatures
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Wet Chemical	✓	✗	✗	✗	✗	✓	Use on extremely high temperatures																																										
<b>Muster Point</b>	<p>The assembly point where the employees have to be gathered in a case of any emergency situation.</p>																																																
<b>Passive Fire Protection Systems</b>	<p>Passive protection refers to fire resistance measures. These systems are all about preventing the spread of flame and resisting ignition in the first place. This resistance is generally structural and designed to compartmentalize your facility and isolate a flame. Passive fire protection is valuable both for the safety of occupants and for the minimizing of asset damage. Through effective compartmentalization, you can maintain the structural integrity of a facility and ensure the safe evacuation of team members. The following list of examples are all a part of passive fire protection:</p> <ul style="list-style-type: none"> <li>Fire doors</li> <li>Fire walls</li> <li>Fire floors</li> <li>Emergency exit lights</li> <li>Dampers</li> <li>Flame shields</li> <li>Intumescent paint</li> </ul>																																																



	<ul style="list-style-type: none"> <li>• Mortar coating</li> <li>• Mineral fibre matting</li> <li>• Protection of muster/ refuge points</li> <li>• Spray fireproofing</li> </ul>
<b>Retrieval System</b>	The equipment used for non-entry rescue of persons from confined spaces such as a safety harness and life line.
<b>Spill Volume (Reportable)</b>	Quantity of spills equal to or more than one barrel i.e. 159 liter of crude, refined products, and chemicals both on land and aqueous environment.
<b>T-Card &amp; Mustering System</b>	Manual Card for the personnel to sign or swipe in and out of the plant areas used for tallying up all the personnel that have assembled at the different "Muster Points" during actual emergencies or mock drill sessions in order to check whether this equates to the total number of people on the entire plant.
<b>HSE PERFORMANCE KPIS</b>	
<b>Fatal Accident Frequency Rate (FAFR) [Corporate]</b>	$(\text{Number of Fatalities due to work related injuries in a year} / \text{Total man hours}) \times 1000,000$
<b>Fatal Accident Frequency Rate (FAFR) [Unit Level]</b>	$(\text{Number of Fatalities due to work related injuries in a year} / \text{Total man hours}) \times 2000,000$
<b>First Aid Case (FAC)</b>	An injury that requires simple treatment, such as cleaning and application of a small bandage, which does not require treatment by a medical professional.
<b>Heinrich (Safety Triangle) Ratio</b>	
<b>Key Performance Indicator (KPI)</b>	Performance indicator or key performance indicator (KPI) is a measure of performance commonly used to help an organization define and evaluate how successful it is, typically in terms of making progress towards its specific goals.
<b>Lagging Indicators</b>	Lagging indicators are typically "output" oriented, easy to measure but hard to improve or influence e.g. incidents related statistics, pollution load, etc.
<b>Leading Indicators</b>	Leading indicators are typically "input" oriented, hard to measure and easy to influence e.g. risk assessment reports, audit results, trainings outcome, etc.
<b>Lost Workday (Time) Injury Frequency (LWIF or LTIF) [Corporate]</b>	$(\text{No. of Fatalities} + \text{No. of Lost Time Injuries in a year} / \text{Total Hours Worked}) \times 1,000,000$
<b>Lost Workday (Time) Injury Frequency (LWIF or LTIF) [Unit Level]</b>	$(\text{No. of Fatalities} + \text{No. of Lost Time Injuries in a year} / \text{Total Hours Worked}) \times 200,000$
<b>Medical Treatment Case (MTC)</b>	An injury severe enough to require treatment by a medical practitioner (a physician or nurse), but does not cause the worker to miss any work.
<b>Restricted Workday Injury (RWI)</b>	An injury that restricts the worker from performing his normal duties but to continue within 24 hours of the injury.
<b>Safe Man Hours</b>	Cumulative hours worked since the most recent Lost Workday (Time) Injury (LWI or LTI) took place in a certain site or location.
<b>Total Reportable (Injury) Cases</b>	Restricted Workday Injuries + Lost Workday Injuries+ Medical Treatment Cases

<p><b>Process Safety Pyramid</b></p>	
<p><b>Total Reportable (Injury) Case Frequency (TRCF) [Corporate]</b></p>	<p>(Total Reportable Injury Cases in a year / Total Exposed Hours) x 1000,000</p>
<p><b>Total Reportable (Injury) Case Frequency (TRCF) [Unit Level]</b></p>	<p>(Total Reportable Injury Cases in a year / Total Exposed Hours) x 200,000</p>
<p><b>Total Reportable Occupational Illness Frequency (TROIF) [Corporate]</b></p>	<p>(Total Occupational Illnesses in a year / Total Hours Worked) x 1000,000</p>
<p><b>Total Reportable Occupational Illness Frequency (TROIF) [Unit Level]</b></p>	<p>(Total Occupational Illnesses in a year / Total Hours Worked) x 200,000</p>
<p><b>Total Vehicle Incident Rate (TVIR) [Corporate]</b></p>	<p>(Total Vehicular Incidents in a year / Business Use Driven KM) x 1000,000</p>
<p><b>Total Vehicle Incident Rate (TVIR) [Unit Level]</b></p>	<p>(Total Vehicular Incidents in a year / Business Use Driven KM) x 200,000</p>
<p><b>GENERAL</b></p>	
<p><b>Asphyxiant</b></p>	<p>A vapor or gas which can cause unconsciousness or death by suffocation (lack of oxygen).</p>
<p><b>Balanced Scorecard (HSE)</b></p>	<p>It is a 'basket' of measures providing information on a range of HSE activities; It defines who, what, when, where, why and how by using a) Results, b) Program and c) Culture derived from leading and lagging indicators to set benchmarks that align with the organizations vision and report progress at all organizational levels.</p>
<p><b>Boiling Liquid Expanding Vapor Explosion (BLEVE)</b></p>	<p>A boiling liquid expanding vapor explosion (BLEVE) is an explosion caused by the rupture of a vessel containing a pressurized liquid that has reached temperatures above its boiling point.</p>
<p><b>Brownfield</b></p>	<p>The projects which are modified or upgraded are called Brownfield projects or a brownfield is the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.</p>
<p><b>Carcinogen</b></p>	<p>A substance or agent capable of causing cancer or having the potential to cause cancer. Carcinogen (H) Known to cause cancer in humans. Carcinogen (A) Known to cause cancer in animals. Carcinogen (S) Suspected to cause cancer.</p>
<p><b>Cardio Pulmonary Resuscitation (CPR)</b></p>	<p>A combination of artificial respiration (mouth to mouth) and artificial circulation (external cardiac compression).</p>
<p><b>Change Management Committee</b></p>	<p>Committee to review the significance of requirement (concept/ design) related to amendments/ modification in the production fields or plants in order to accord approvals and also commission the completed tasks.</p>
<p><b>CNS Depressant</b></p>	<p>A chemical that may cause loss of functioning and possible damage to Central Nervous System (CNS). Central Nervous System depressants may include a majority of hydrocarbons in the refinery. Symptoms from overexposure are headache, dizziness, nausea, unconsciousness and possibly, death.</p>
<p><b>Combustible Liquid</b></p>	<p>A liquid having a flash point at or above 100 °F (37.8 °C).</p>
<p><b>Competence</b></p>	<p>The ability to perform a particular job in compliance with performance standards. Being competent means having the knowledge and skill that you need and knowing how to apply it in a safe &amp; environment conscious way. It means that you're qualified to do the job.</p>
<p><b>Competent Person</b></p>	<p>A person who is suitably qualified (whether by experience, training or</p>



	both) to perform the work or function described in the relevant regulation.
<b>Compliance Obligation</b>	There are two kinds of compliance obligations: mandatory compliance obligations and voluntary compliance obligations. Mandatory compliance obligations include laws and regulations while voluntary compliance obligations include contractual commitments, community and industry standards, ethical codes of conduct, and good governance guidelines. A voluntary obligation becomes mandatory once you decide to comply with it.
<b>Context</b>	An organization's context is its business environment. It includes all of the issues, factors, and conditions that could influence or be influenced by its HSE Management System.
<b>Confined Space (Hazardous)</b>	A confined space is a place which is substantially enclosed (though not always entirely), and where serious injury can occur from hazardous substances or conditions prevailing within the space or nearby (e.g. lack of oxygen) i.e. exists with IDLH conditions.
<b>Confined Space (Non-Hazardous)</b>	A confined space which normally exists without IDLH conditions. Non-hazardous confined spaces are floating roof tank tops, tower skirts, sunken valve and pump manifold areas, cooling tower cells, and fin fans.
<b>Consultation</b>	Seeking views for decision-making.
<b>Corrosive</b>	A chemical that causes visible destruction of, or irreversible alterations in, living tissue.
<b>Dispersion Modeling</b>	Mathematical computerized simulation of how air pollutants disperse in the ambient atmosphere. The dispersion models are used to estimate the downwind ambient concentration of air pollutants or toxins emitted from sources such as industrial plants, vehicular traffic or accidental chemical releases. They can also be used to predict future concentrations under specific scenarios (i.e. changes in emission sources).
<b>Dead Man's Switch</b>	A dead man's switch is a switch that is automatically operated if the human operator becomes incapacitated, such as through death, loss of consciousness or being bodily removed from control.
<b>Documented Information</b>	Information required to be controlled and maintained by an organization and the medium on which it is contained; Documented information can be in any format and media and from any source.
<b>Due Diligence</b>	Due diligence means that employers shall take all reasonable precautions, under the particular circumstances, to prevent injuries or accidents in the workplace. Reasonable precautions are also referred to as reasonable care. It refers to the care, caution, or action a reasonable person is expected to take under similar circumstances. Also check ALARP.
<b>Event</b>	Occurrence of a particular set of circumstances.
<b>Environment</b>	Surroundings in which an organization operates, including air, water, land, natural resources, flora, fauna, humans and their interrelations.
<b>Environmental Aspect</b>	Element of an organization's activities, products or services that can interact with the Environment; A significant environmental aspect has or can have a significant environmental impact.
<b>Environmental Impact</b>	Any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organization's environmental aspects.
<b>Early Production Facility (EPF)</b>	To accelerate the time to first oil and gas, production is started early while full field development is being planned and permanent facilities are being built. Early-production Facilities (EPF) help operators bring their new discoveries on-stream fast.
<b>Ergonomics</b>	The science of studying people at work, and designing tasks, jobs, tools, equipment, facilities, and the work environment so that people can be safe, healthy, effective, efficient, productive and comfortable.
<b>Explosive</b>	A chemical that causes a sudden, almost instantaneous release of pressure, gas or heat when subjected to sudden shock, pressure or high temperature.
<b>Exposure</b>	The measurement of time during which the subject is at risk from vulnerability (hazard).
<b>FEED</b>	Front-End Engineering Design (FEED) is an engineering design approach used to control project expenses and thoroughly plan a project before a fix bid quote is submitted. It may also be referred to as Pre-project planning (PPP), front-end loading (FEL), feasibility analysis, or early project planning.
<b>Fire Watch</b>	A qualified person designated to monitor the area of hot work involving welding or cutting, take appropriate action to reduce risk of fire and if



	necessary extinguish an incipient stage fire.
<b>Fugitive Emissions</b>	Emissions of gases or vapors from pressurized equipment due to leaks and various other unintended or irregular releases of gases, mostly from industrial activities.
<b>Failure Mode and Effect Analysis (FMEA)</b>	<p>Failure mode and effect analysis is a tool that examines potential product or process failures, evaluates risk priorities, and helps determine remedial actions to avoid identified problems.</p> <p>DET = detection        FMEA = failure mode and effects analysis        OCC = occurrence</p> <p>Resp = responsible        RPN = risk priority number        SEV = severity</p>
<b>Flammability Limits</b>	Flammability limits, also called flammable limits, or <i>explosive limits</i> give the proportion of combustible gases in a mixture, between which limits this mixture is flammable. Gas mixtures consisting of combustible, oxidizing, and inert gases are only flammable under certain conditions. The lower flammable limit (LFL) (lower explosive limit) describes the leanest mixture that is still flammable, i.e. the mixture with the smallest fraction of combustible gas, while the upper flammable limit (UFL) (upper explosive limit) gives the richest flammable mixture. Increasing the fraction of inert gases in a mixture raises the LFL and decreases UFL.
<b>Flammable Liquid</b>	<p>A liquid with a flash point below 100 °F (37.8 °C). Further classification is as under:</p> <ul style="list-style-type: none"> <li>• Class IA flammable liquids have a flash point below 73 °F and a boiling point below 100 °F</li> <li>• Class IB flammable liquids have a flash point below 73 °F and a boiling point greater than or equal to 100 °F</li> <li>• Class IC flammable liquids have a flash point greater than or equal to 73 °F and below 100 °F</li> <li>• Class II combustible liquids have a flash point greater than or equal to 100 °F and below 140 °F</li> <li>• Class IIIA combustible liquids have a flash point greater than or equal to 140 °F and below 200 °F</li> <li>• Class IIIB combustible liquids have a flash point greater than or equal to 200 °F</li> </ul>
<b>Flash Point</b>	The lowest temperature of a flammable liquid at which it gives off sufficient vapors to form an ignitable mixture with the air near the surface of the liquid or within the container used.
<b>Fuel Load</b>	The total quantity of combustible contents of a building, space, or fire area, including interior finish and trim, expressed in heat units or the equivalent weight in wood.
<b>Globally Harmonized System (GHS)</b>	<p>System for Classification and Labelling of Chemicals by types of hazard and proposes harmonized hazard communication elements, including labels and safety data sheets as follows:-</p> <p><i>Hazard classification:</i> Provides specific criteria for classification of health and physical hazards, as well as classification of mixtures.</p> <p><i>Labels:</i> Chemical manufacturers and importers are required to provide a label that includes a harmonized signal word, pictogram, and hazard statement for each hazard class and category. Precautionary statements must also be provided.</p> <p><i>Safety Data Sheets:</i> Have a specified 16-section format.</p> <p><i>Information and training:</i> Employers are required to train workers on the labels elements and safety data sheets format to facilitate recognition and understanding.</p> <p>GHS consists of three major hazard groups :</p> <ol style="list-style-type: none"> <li>1. Physical hazards.</li> </ol>





	<p><i>Classes</i></p> <ul style="list-style-type: none"> <li>Acute toxicity.</li> <li>Skin corrosion/irritation.</li> <li>Serious eye damage/eye irritation.</li> <li>Respiratory or skin sensitization.</li> <li>Germ cell mutagenicity.</li> <li>Carcinogenicity.</li> <li>Reproductive toxicity.</li> <li>Specific target organ toxicity - single exposure.</li> <li>Specific target organ toxicity - repeated exposure.</li> <li>Aspiration hazard.</li> </ul> <p>2. Health hazards.</p> <p><i>Classes</i></p> <ul style="list-style-type: none"> <li>Explosives.</li> <li>Flammable gases.</li> <li>Aerosols.</li> <li>Oxidizing gases.</li> <li>Gases under pressure.</li> <li>Flammable liquids.</li> <li>Flammable solids.</li> <li>Self-reactive substances and mixtures.</li> <li>Pyrophoric liquids.</li> <li>Pyrophoric solids.</li> <li>Self-heating substances and mixtures.</li> <li>Substances/mixtures, in contact with water, emit flammable gases</li> <li>Oxidizing liquids.</li> <li>Oxidizing solids.</li> <li>Organic peroxides.</li> <li>Corrosive to metals.</li> </ul> <p>3. Environmental hazards.</p> <p><i>Classes</i></p> <ul style="list-style-type: none"> <li>Hazardous to the aquatic environment (acute and chronic).</li> <li>Hazardous to the ozone layer.</li> </ul>										
<p><b>Global Warming (Greenhouse Effect)</b></p>	<p>Global warming is when the earth heats up (the temperature rises). It happens when greenhouse gases (carbon dioxide, nitrous oxide, CFCs, methane, etc.) trap heat and light from the sun in the earth's atmosphere, which increases the temperature. The heat and light can get through the atmosphere, but it can't get out due to damage in the protective layer i.e. ozone.</p>										
<p><b>Greenfield</b></p>	<p>The Greenfield project means that a work which is not following a prior work. In infrastructure the projects on the unused lands where there is no need to remodel or demolish an existing structure are called Green Field Projects.</p>										
<p><b>Hazardous Atmosphere</b></p>	<p>An atmosphere that may expose entrants to the risk of death, impairment of ability to exit, injury or acute illness from one or more of the following causes:</p> <ul style="list-style-type: none"> <li>• Flammable gas, vapor or mist in excess of 10 percent of the lower explosive limit (LEL)</li> <li>• Atmospheric oxygen concentrations below 19.5% or in excess of 23.5%</li> <li>• Atmospheric concentration of any substance which could result in employee exposure in excess of its permissible exposure limits (PEL)</li> <li>• Any other atmospheric condition that is Immediately Dangerous to Life or Health (IDLH)</li> </ul>										
<p><b>Health Surveillance</b></p>	<p>The monitoring of workers for the purpose of identifying changes in health status due to occupational exposure to a vulnerability (threat), and includes biological monitoring.</p>										
<p><b>Hazardous Materials Identification System (HMIS)</b></p>	<p>A rating system developed by the American Coatings Association, which categorizes a chemical from 0 (low or Insignificant hazard) to 4 (high hazard). Four areas are categorized based on health, flammability and physical hazards, as well as personal protection.</p> <table border="1" data-bbox="1138 2145 1455 2456"> <tr> <td colspan="2">Chemical Name</td> </tr> <tr> <td>HEALTH</td> <td>0</td> </tr> <tr> <td>FLAMMABILITY</td> <td>0</td> </tr> <tr> <td>PHYSICAL HAZARD</td> <td>0</td> </tr> <tr> <td>PERSONAL PROTECTION</td> <td>0</td> </tr> </table>	Chemical Name		HEALTH	0	FLAMMABILITY	0	PHYSICAL HAZARD	0	PERSONAL PROTECTION	0
Chemical Name											
HEALTH	0										
FLAMMABILITY	0										
PHYSICAL HAZARD	0										
PERSONAL PROTECTION	0										
<p><b>Housekeeping</b></p>	<p>Maintaining the working environment in a tidy manner so that, in particular, access and movement is not hindered.</p>										



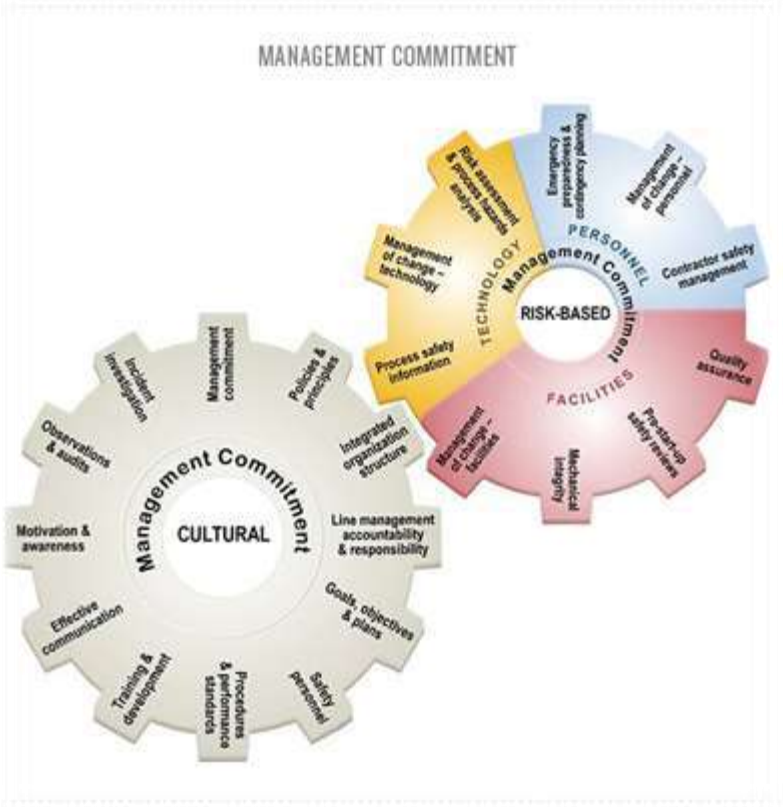
<b>HSE Management Review Committee (MRC)</b>	HSE Management Review Committee consists of Sectional ICs to meet quarterly to seek & analyze Performance of HSE System, Objective/ Targets and plan ahead accordingly.
<b>HSE Management System</b>	The part of the overall management system that includes organizational structure, planning activities, responsibilities, practices, procedures, processes, and resources for developing, implementing, achieving, reviewing and maintaining the HSE policy.
<b>HSE Objective</b>	Overall HSE goal, arising from the HSE policy, that an organization sets itself to achieve, which is quantified where practicable.
<b>HSE Performance</b>	Measurable results of the HSE management system, related to an organization's control of its HSE aspects, based on its HSE policy, objectives and targets.
<b>HSE Plan</b>	A description of the means of achieving HSE objectives, generally it includes set of HSE Monitoring Plans; HIRA Plan; Emergency Drills Plan; Training Plan; Waste Disposal Plan; Emergency Response Plan, etc.
<b>HSE Policy</b>	Statement by the organization of its intentions and principles in relation to its overall HSE performance which provides a framework for action and for the setting of its HSE objectives and targets.
<b>HSE Target</b>	Detailed performance requirement, applicable to the organization or parts thereof, that arises from the HSE objectives and that needs to be set and met in.
<b>Immediately Dangerous to Life and Health (IDLH)</b>	Any condition that (a) poses an immediate or delayed threat to life; or (b) would cause an irreversible adverse health effect; or (c) would interfere with an individual's ability to escape unaided from a confined space. The level of contaminant that would pose an IDLH atmosphere is substance specific.
<b>Inerting</b>	The displacement of an atmosphere in a confined space by a noncombustible gas such as nitrogen, to such an extent that the resulting atmosphere will not support combustion or life. This condition results in an IDLH (oxygen deficient) atmosphere. Inert confined space entries are not normally done by company personnel.
<b>In-Service Welding</b>	The hazardous practice of welding on equipment (e.g., tank, pipe, vessel, exchanger, etc.) which has not been purged (gas free) and has not been removed from service through conventional methods. This includes but is not limited to grinding, burning or welding.
<b>Interested Party</b>	Individual or group concerned with or affected by the HSE performance of an organization.
<b>Irritant</b>	A chemical that causes reddening, swelling and pain short of actual tissue damage. Irritants are not corrosive. Their inflammatory effect is reversible.
<b>Job Vulnerabilities / Hazard Analysis (JVA / JHA)</b>	The process of carefully studying and recording each step of a job, identifying existing or potential job vulnerabilities / hazards (both safety and health), and determining the control measures to reduce or eliminate the impact.
<b>Journey Management</b>	The planned movement of people and equipment from one place to another place including communications, route, schedule stops, hazard warnings, provisioning, breakdown and other contingencies.
<b>Just Cause</b>	Good or fair reason(s) for discipline.
<b>Lifecycle</b>	It refers to the consecutive and interlinked stages of a product system from the acquisition of materials to end-of-life disposal. The E&P lifecycle includes all associated activities, products, and services and may include procured materials and services as well as end-of-life treatment, decommissioning, and disposal.
<b>Line Break</b>	The intentional opening of a process system that may contain flammable, corrosive, or toxic material or a material under pressure or temperature such that an unplanned opening of the system may result in injury to workers. Examples include spreading flanges, opening exchangers, pulling pumps, cold cutting pipe, etc. Line break, depending on equipment used, could be cold work or hot work.
<b>Life Cycle Perspective</b>	A life cycle perspective includes consideration of the HSE vulnerabilities (threats & opportunities) of an organization's reservoirs, materials, activities, products, and services that it can control or influence. Stages in a life cycle include acquisition of raw materials, design, production, transportation/delivery, use, end of life treatment, and final disposal.
<b>Light Intensity</b>	To assess whether lighting is sufficient in workplace, following light intensity ranges are used. Employees should understand the effects of lighting on their health and safety. In particular, they need to understand visual fatigue: its causes, prevention, symptoms, and recovery techniques.



## Terms & Definitions: OGDCL's Integrated HSE System Manual

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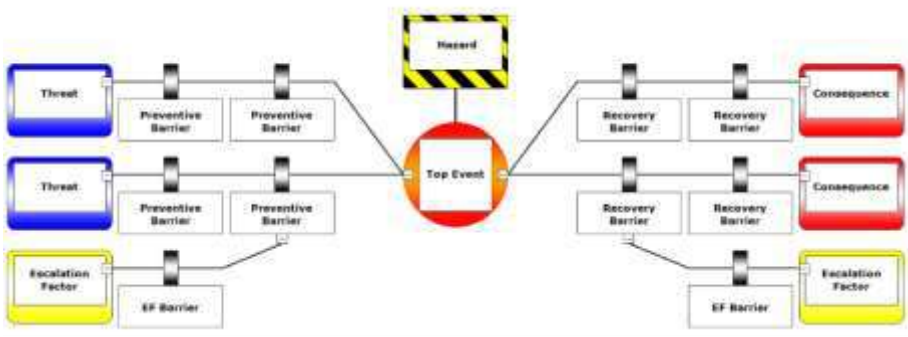
	Task/ Area	Range of Luminance (Lux)
	Emergency lighting (at floor or tread levels) in exits, exit routes, stairs, and underground walkways	At least 10 (on average)
	Simple visual tasks e.g. lobby area; washrooms; loading into trucks	30 – 100
	Medium visual tasks e.g. bookkeeping; filing; material receiving and packing areas	300 – 1000
	More visually demanding tasks e.g. QC/ inspection; proofreading; workshops/ machine work	3000 – 10000
<b>MSDS</b>	Material Safety Data Sheet which refers to the purchased material. (also called PSDS in case of selling of the material).	
<b>Mounted Enclosure</b>	Small enough to prevent complete physical entry (e.g., cabinet, junction box, analyzer enclosure, etc.).	
<b>Non-Pressurized Building Containing Enclosure(s)</b>	Building containing purged or pressurized equipment (e.g., analyzer building, blend building, etc.)	
<b>Outsource</b>	When an organization makes an arrangement with an outside organization to perform part of a function or process, it is referred to as outsourcing. To outsource means to ask an external organization to perform part of a function or process normally done in-house.	
<b>Oxidizer</b>	A chemical that initiates or promotes combustion in other materials causing fire through the release of oxygen or other gases.	
<b>Participation</b>	Involvement in decision-making.	
<b>PDCA Cycle</b>	PDCA (Plan–Do–Check–Act or Plan–Do–Check–Adjust) an iterative four-step management method used in business for the control and continuous improvement of processes and products. It is also known as the Deming Wheel, Shewhart Cycle, Control Circle/Cycle, or Plan–Do–Study–Act (PDSA).	
<b>Permit to Work (PTW) System</b>	A permit-to-work system is a formal written system used to control certain types of work that are potentially hazardous. A permit-to-work is a document which specifies the work to be done and the precautions to be taken. Permits-to-work form an essential part of safe systems of work for many maintenance activities. They allow work to start only after safe procedures have been defined and they provide a clear record that all foreseeable vulnerabilities / hazards have been considered.	
<b>Personal Protective Equipment (PPE)</b>	<p><i>Category A: Basic PPE i.e. a) Coverall / Dangri, b) Warm Jacket / Leather Jacket, c) Safety Shoes, d) Safety Glasses, e) Hard Hat, f) Ear Muffs and g) Cotton Gloves.</i></p> <p><i>Category B: Specific PPE i.e. a) Gloves (Leather, Chemical Resistant, and Latex), b) Face Shields (Welding Shields and Goggles), c) Flame Resistant Clothes, d) Long Safety Shoes, e) Gas Mask, f) Chemical Apron and f) Safety Harness.</i></p> <p><i>Category C: Emergency PPE i.e. complete Turnout Gear/Fire Kit (Fire Suit), SCBA, Air Purifying Respirator (APR), and Safety Vests/Clothing with Reflective Material designed for high nighttime visibility.</i></p>	
<b>Prevention of Incidents</b>	Use of processes, practices, materials or products that avoid, reduce or control incidents, which may include engineering (design) controls, reduction of hazards/ risks, isolation of hazards/ risks, administrative controls and use of PPE.	
<b>Prevention of Pollution</b>	Use of processes, practices, materials or products that avoid, reduce or control pollution, which may include recycling, treatment, process changes, control mechanisms, efficient use of resources and material substitution.	
<b>Pressurized Building Containing Pneumatic Controls</b>	Pressurized building containing control equipment that has the potential to release purged air (e.g., pressurized control room).	
<b>Process Safety Information (PSI)</b>	Physical, chemical, and toxicological information related to the chemicals, process, and equipment. It is used to document the configuration of a process, its characteristics, its limitations, and as data for process hazard analyses.	

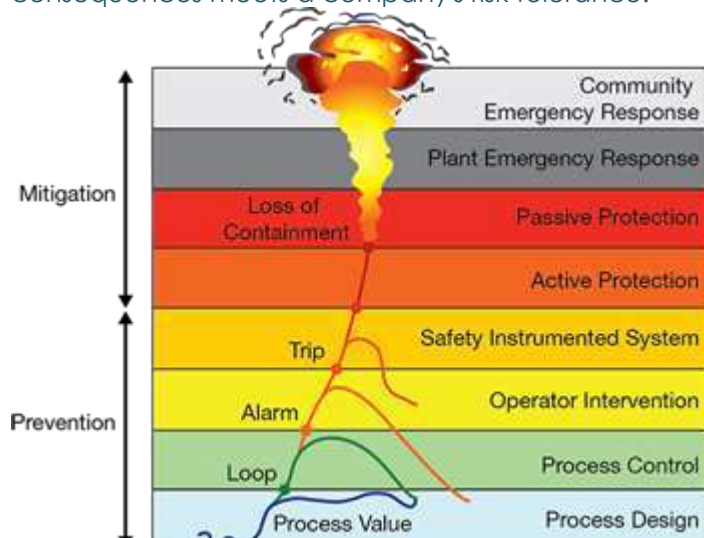
<p><b>Process Safety &amp; Risk Management (PSRM) Model</b></p>	 <p>The diagram illustrates the PSRM Model as three interlocking gears. The central gear is labeled 'RISK-BASED Management Commitment'. The three gears are:     <ul style="list-style-type: none"> <li><b>CULTURAL:</b> Includes Management Commitment, Policies &amp; Procedures, Integrated organization structure, Line management accountability &amp; responsibility, Goals, objectives &amp; plans, Safety personnel, Procedures &amp; performance standards, Training &amp; development, Effective communication, Motivation &amp; awareness, Observations &amp; audits, and Incident investigation.</li> <li><b>TECHNOLOGY:</b> Includes Risk assessment &amp; analysis, Management of change - technology, Process safety information, and Emergency preparedness &amp; contingency planning.</li> <li><b>FACILITIES:</b> Includes Mechanical Integrity, Pre-startup safety reviews, Quality assurance, Contractor safety management, and Management of change - personnel.</li> </ul> </p>
<p><b>Process Hazard Analysis (PHA)</b></p>	<p>A process hazard analysis (PHA) (or process hazard evaluation) is a set of organized and systematic assessments of the potential vulnerabilities (threats / hazards) associated with an industrial process. The techniques include Checklist; What-If; HazId; HazOp; Process Hazards Review (PHR); Failure Modes Effects and Analysis (FMEA); Layers of Protection Analysis (LOPA).</p>
<p><b>Product Safety Data Sheet (PSDS)</b></p>	<p>MSDS when prepared by the relevant team for our own products.</p>
<p><b>Pyrophoric</b></p>	<p>A chemical that will ignite spontaneously in or at a temperature of 103 F (54.4 C or below).</p>
<p><b>Reproductive Hazards</b></p>	<p>Chemicals that affect the reproductive capabilities of males, females and a developing fetus.        Reproductive (M) – for males        Reproductive (F) – for females        Reproductive (D) – developmental hazard for fetus        Reproductive (S) – suspect, effects seen at levels not expected in industry</p>
<p><b>Sensitizer</b></p>	<p>A chemical that causes a substantial proportion of exposed people or animals to develop an allergic reaction in normal tissue after repeated exposure to the chemical.</p>
<p><b>Short Term Exposure Limit (STEL)</b></p>	<p>The maximum permissible concentration of a material, generally expressed in ppm in air, for a defined short period of time (typically 5 or 15 minutes, depending upon the country). This "concentration" is generally a time-weighted average over the period of exposure. These values, which may differ from country to country, are often backed up by regulation and therefore may be legally enforceable.</p>
<p><b>Simultaneous Operations (SIMOPS)</b></p>	<p>Simultaneous operations means different operations carried out by different teams or companies in same location with possibilities of impacts or interferences between substances, material or personal which can cause undesirable circumstances.</p>
<p><b>Toolbox Talk Program</b></p>	<p>Toolbox talks are a program developed by OGDCL to bring a HSE culture into its working environment. Instead of lengthy, somewhat rigid formal training sessions, employees take part in a 10-15 minute relaxed safety briefing. These talks take place directly in the workplace, whether it be a manufacturing floor or at a construction site.</p>
<p><b>Unstable (Reactive) Chemical</b></p>	<p>A chemical that reacts with water to release a gas that is either flammable or presents a health hazard.</p>
<p><b>Vesicant</b></p>	<p>A chemical which, if it can escape from the vein, causes extensive tissue damage, with vesicle formation or blistering.</p>

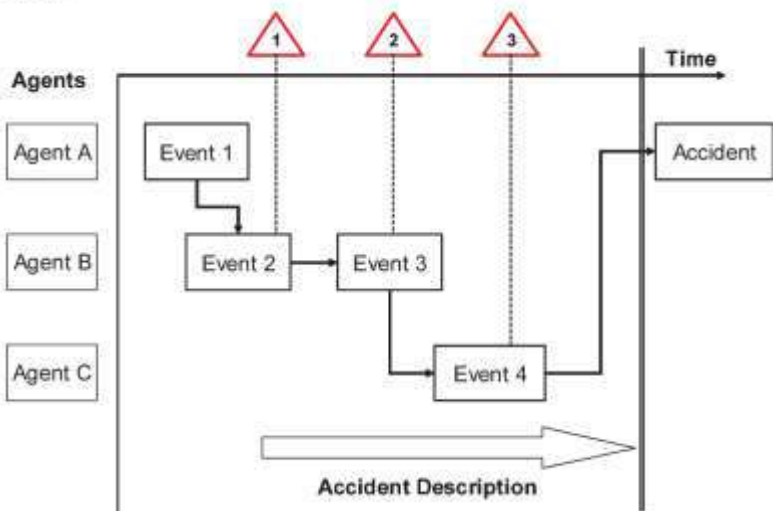
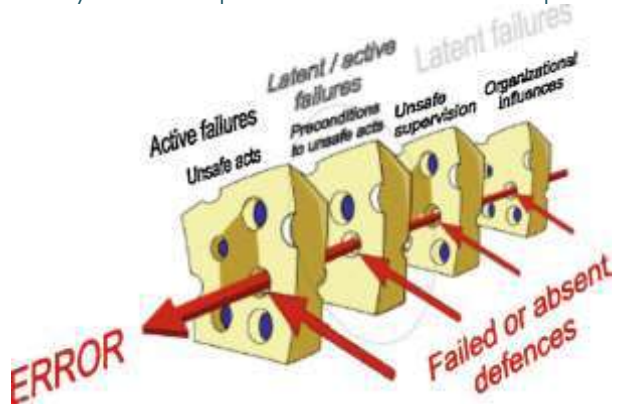


<b>Walk-in Enclosure</b>	Similar to mounted enclosure, but large enough to allow complete physical entry (e.g., walk-in compressor control equipment).
<b>Workplace</b>	A workplace is a place where an organization's work is performed. A place is an organization's workplace only if it is under its control, at least to some extent.
<b>Worker</b>	Person performing work or work-related activities that are under the control of the organization.
<b>Xenobiotic</b>	A chemical (or, more generally, a chemical mix) which is not a normal component of the organism which is exposed to it. Xenobiotics, therefore, include most drugs (other than those compounds which naturally occur in the organism), as well as other foreign substances.

**INCIDENT INVESTIGATION**


<b>Bowtie Diagram</b>	<p>A 'bowtie' is a diagram that visualizes the risks and multiple plausible scenarios in an easy to understand picture. The diagram is shaped like a bow-tie, creating a clear differentiation between proactive and reactive risk management.</p>  <p>The diagram illustrates a central 'Top Event' (red circle) leading to a 'Hazard' (yellow and black striped box). To the left, 'Threats' (blue boxes) and 'Escalation Factors' (yellow boxes) lead to 'Preventive Barriers' (white boxes). To the right, 'Recovery Barriers' (white boxes) lead to 'Consequences' (red boxes) and 'Escalation Factors' (yellow boxes).</p>
<b>Controlled Activity</b>	This is an activity in a work environment (as a condition of employment i.e. physical location, equipment, material or vehicle) related to OGDCL workforce member where OGDCL can set HSE policies, standards and procedures (PSP) and directly supervise and enforce its application. Incidents arising from controlled activities are reported, investigated and tracked.
<b>Continual improvement</b>	Process of enhancing the HSE management system to achieve improvements in overall HSE performance in line with organization's HSE policy.
<b>Contributing Surface Cause</b>	Major but not the root level cause of an incident (implicating or has potential to implicate) an injury or illness e.g. in case of a fall from a ladder contributing surface causes may be a) slippery floor, chemical leak, broken valve and/or untrained worker indicating <i>unsafe condition</i> and b) person did not inspect, ignored the vulnerability (hazard), failed to report the vulnerability (hazard) and/or himself created the vulnerability (hazard) indicating <i>unsafe behavior</i> .
<b>Corrective &amp; Preventive Action Request (CPR)</b>	An HSE System Tool/Form for continuous improvement to timely document an issue or an emerging issue to enable focus on systematic investigation of discrepancies (violation, failures and/or deviations) in an attempt to prevent their recurrence (for corrective action) or to prevent occurrence (for preventive action).
<b>Design Root Cause</b>	Root level cause of an incident (implicating or has potential to implicate) an injury or illness e.g. in case of a fall from a ladder primary surface causes may be a) nonexistence of maintenance plan, flawed inspection plan and/or nonexistence of implementation strategy indicating <i>unsafe condition</i> and b) failing to provide tools, inadequate supervision, non-enforcement of rules and/or inconsistent training of the person indicating <i>unsafe behavior</i> .
<b>Dangerous Occurrence</b>	Readily identifiable event with potential to cause an accident or disease to persons at work and the public or of significant actual or potential material damage. (Also see <i>Near Hit</i> .)
<b>Fatality</b>	Death of workforce member caused by a work related incident, regardless of the time intervening between injury and death.
<b>First Aid Case</b>	Work related injuries or illnesses that involve a single treatment of minor bruises, cuts, burns, scratches etc. and not requiring medical care of the level to take the patient to the Hospital. This includes injuries / illnesses that require minor treatment, e.g. any one-time treatment, cleansing, application of bandages / band-aids, treatment of minor scratches, cuts, burns, splinters, etc.

<b>Line Of Fire Injuries</b>	Line of fire injuries occur when the path of a moving object or the release of hazardous energy (to be taken as a harms-way) intersects with an individual's body.
<b>Layers of Protection Analysis (LOPA)</b>	<p>A method used to evaluate high-consequence scenarios determining if the combination of probability of occurrence and severity of consequences meets a company's risk tolerance.</p> 
<b>Loss of Primary Containment (LOPC)</b>	An unplanned or uncontrolled release of any material from primary containment, including non-toxic and non-flammable materials (e.g. steam, hot condensate, nitrogen, compressed CO2 or compressed air).
<b>Lost Workday (Time) Injury (LWI o LTI)</b>	A work related injury or illness which results in the OGDCL's or contractor's workforce member declared medically unfit to attend duty on the next calendar day (24 hrs) after the day of injury. The criteria "24 hours" include rest days, weekend days, scheduled holidays, public holidays or subsequent days after ceasing employment; However, if medical practitioner declares that the injured person is fit to attend office within 24 hours, then the injury shall <u>not</u> be LWI or LTI.
<b>Monitored Activity</b>	This is an activity where OGDCL can influence but cannot set HSE policies, standards and procedures (PSP) and cannot directly supervise and enforce its application. Incidents arising from monitored activities are reported, investigated (where possible) and tracked.
<b>Near Hit/ Near Miss</b>	An unplanned event that do not result in injury, illness, or damage – but has the potential to do so. Only a fortunate break in the chain of events prevents an injury, fatality or damage. Human error is commonly an initiating event, a faulty process or system invariably permits or compounds the harm, and is the focus of improvement. Other familiar terms for these events is a “close call”, “dangerous occurrence”, or in the case of moving objects, “near collision”.
<b>Occupational Health Illness</b>	Any illness suffered due to occupational matter like Noise Induced Hearing Loss, Food Poisoning, Musculoskeletal Disorder, etc.
<b>Opportunity</b>	A circumstance or a set of circumstances that could lead to the improvement of HSE performance.
<b>Medical Treatment Case (MTC)</b>	An injury severe enough to require treatment by a medical practitioner (a physician or nurse), but does not cause the worker to miss any work.
<b>Permanent Partial Disability (PPD)</b>	Any work related injury or illness which results in complete loss, or permanent loss of use, of any part(s) of the body or any permanent impairment of function or parts of body, regardless of any pre-existing disability of the injured member of impaired body function. A PPD is not related to the ability of the injured person to do is normal work, e.g. it is classified as a PPD if he has lost a finger, toe, arm, limb, etc. but (upon recovery) is still able to do his normal work or any other work that permits for the partial disability.
<b>Permanent Total Disability (PTD)</b>	Any work-related injury or illness, which permanently incapacitates an employee from doing any work and results in termination of employment.
<b>Primary Containment</b>	A tank, vessel, pipe, transport vessel or equipment intended to serve as the primary container for, or used for the transfer of, a material. Primary containers may be designed with secondary containment systems to contain or control a release from the primary containment.
<b>Primary Surface Cause</b>	Most superficial level of cause of an incident (implicating or has potential to implicate) an injury or illness e.g. in case of a fall from a ladder primary surface causes may be defective ladder indicating <i>unsafe condition</i> and hurriedness of the person indicating <i>unsafe behavior</i> .
<b>Process Safety Incident</b>	An undesirable event / condition, generally traceable through a trip or alarm via the instrumentation circuit e.g. an unplanned or uncontrolled

	<p>Loss of Primary Containment (LOPC) from a process, or an undesired event or condition that, under slightly different circumstances, could have resulted in a LOPC.</p>
<p><b>Restricted Workday Case (RWC):</b></p>	<p>A RWC is a work related injury or illness which results in the OGDCL's or contractor's workforce member being unable; (1) to perform one or more routine duties, or (2) to work the full day on, or the next calendar day after the day of injury/illness. A RWC occurs when the injured person is temporarily assigned to do other, less strenuous work (than the normal job) e.g. an injured maintenance technician doing light office work. This also includes situations where the worker does perform his routine duties but for less period of time than normal shift timings because of restriction of work.</p>
<p><b>Root Cause Analysis (RCA)</b></p>	<p>A structured process that uncovers the physical, human, and latent causes of any undesirable event in the workplace.</p>
<p><b>STOP Card</b></p>	<p>Influenced by STOP (Safety, Training, Observation and Program) Card, an HSE management tool proposed by DuPont and adopted by OGDCL. By encouraging all the employees to observe, identify and intervene the unsafe acts or accident symptom at workplace, it aims at "instantly" eliminating the hidden dangers and reducing occurrence of accident through small behavior based "on-spot talks" so that job/work can resume safely.</p>
<p><b>Swim Lane Diagram or STEP (Sequential Timed Event Plot) Diagram</b></p>	<p>Tool used to analyze an accident by connecting events to indicate how they prompted a final result. It enables the investigator to build a graphical timeline and utilize it for further accident assessments techniques.</p> 
<p><b>Swiss Cheese Model</b></p>	<p>A simplified model used to illustrate analyses of major accidents and catastrophic systems failures by exhibiting multiple, smaller failures leading up to the actual hazard. Each slice of cheese represents a safety barrier or precaution relevant to a particular hazard.</p> 
<p><b>UBUC</b></p>	<p>Unsafe Behavior Unsafe Condition.</p>
<p><b>Uncontrolled Activity</b></p>	<p>If an activity is not controlled or monitored, it is an uncontrolled activity. This is an activity where OGDCL does not set or influence HSE policies, standards and procedures (PSP) and does not supervise HSE performance. Incidents arising from uncontrolled activities are neither reported, investigated or tracked; although these incidents should be assessed for potential learning that could be applied within OGDCL.</p>

**RISK MANAGEMENT**

<p><b>ALARP</b> (As Low As Reasonably Practicable)</p>	<p>Fundamental principle is that the residual risk shall be reduced as far as reasonably practicable as any additional cost involved in reducing the risk further would not be proportionate to the benefit gained.</p>
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<b>Barrier</b> (Hazards Control Hierarchy)	Functional grouping of safeguards or controls selected to prevent a major accident or limit the consequences.
<b>Enterprise Risk Management (ERM)</b>	ERM is a way to effectively manage risk across the organization through the use of a common risk management framework. This framework can vary widely among organizations but typically involves people, rules, and tools.
<b>Hazard</b>	Any process/operation/activity related event or gap in the protection efforts or source that could potentially cause damage and give opportunity for improvement.
<b>Hazard Communication (HAZCOM)</b>	Disseminating safety information about hazards in a workplace.
<b>Hazards Control Hierarchy (Barriers)</b>	<ul style="list-style-type: none"> <li>✘ Elimination is removal of hazard by eliminating a requirement to carry out a task, use of particular equipment or use of a chemical.</li> <li>✘ Substitution is replacement of the material; plant; equipment; process; or work practice with a less hazardous one.</li> <li>✘ Engineering controls reduce the reliance of human factors; engineering controls can be redesign of equipment, redesign of process or increase of automation. Engineering controls also include change in layout, ventilation, guards, enclosures, firewalls etc.</li> <li>✘ Administrative controls are the procedural aspects, such as planned and preventive maintenance, HSE awareness events, Standard Operating Procedures (SOPs), work permit system, job hazards analysis and competence of personnel.</li> <li>✘ Personal Protective Equipment (PPE) is the last and might be the least effective method as it relies on human behavior.</li> </ul> <div style="text-align: center; margin-top: 10px;">  </div>
<b>Hazard Identification (HAZID)</b>	A study by a multi-disciplinary team to identify potential hazards.
<b>Hazard and Operability Study (HAZOP)</b>	A study by a multi-disciplinary team to identify hazards and operability problems, including causes, consequences, safeguards and remedial actions.
<b>HIRA Plan</b>	Formal plan to carry out hazards identification and risk assessment of an oil & gas installation or office building.
<b>HIRA Team</b>	Team of appropriate domain professionals (subject matter experts) trained on hazards identification & risk assessment methodologies.
<b>Individual Risk</b>	Risk to which an individual is exposed during a defined period of time.
<b>Inherently Safer Design</b>	Design which eliminates or reduces major accidents through measures that are permanent/ inseparable from the design.
<b>Risk (Rating)</b>	Numerical value of an impact as combination of an incident-likelihood and consequence-severity within a 5x5 risk matrix.
<b>Risk Assessment</b>	Overall process of estimating the magnitude of impact and deciding whether or not it is significant.
<b>Risk Criteria</b>	Terms of reference which evaluates the significance of a risk as Low = 1-6; Medium = 7-12; High = 13-20; Intolerable = 21-25.
<b>Risk Dashboard</b>	Graphical presentation of the risks.
<b>Risk Management</b>	System to eliminate or mitigate the risks.
<b>Risk Matrix</b>	A visualization tool for Enterprise Risk Management (ERM). Also known as Risk Heat Map or Risk Heat Chart, it shows risk likelihood on the horizontal axis (X) and risk impact on the vertical axis (Y).
<b>Risk Owner</b>	Entity accountable as well as authoritative to manage a risk.
<b>Risk Register</b>	Record used to identify applicable hazards to assess risks.
<b>Risk Source</b>	Element which has potential to give rise to a risk.
<b>Risk Tolerance</b>	Readiness to bear a risk after risk treatment.
<b>Risk Treatment</b>	Controlling, avoiding or transferring the risk.
<b>Significant Risk</b>	Intolerable or high risk.



Preamble

Terms & Definitions

# Context

Leadership

Planning

Support

Operation

Performance Evaluation

Improvement



**Reference Standards**  
ISO14001:2015 & ISO45001:2018  
Clause 4.1: Understanding the organization and its context  
Clause 4.2: Understanding the needs & expectations of interested parties  
Clause 4.3: Determining the scope of the EMS & H&SMS  
Clause 4.4: HSE management system  
PSM (22 Elements) Model  
-Context (before assessing risks)

### This Section's Objectives

- Help understand OGDCL's particular context/ infrastructure.
- Clarify the needs and expectations of interested parties.
- Determine the scope of HSE System in OGDCL.
- Provides a concise portal to establish and maintain HSE System.





### 3.1 Context: Understanding OGDCL's Core Activities

OGM/P-HSE-3.1(08) Revision Number 8

Original Issue: June 25, 2007  
This Issue: March 14, 2022

**Updated By:**  
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**Approved By:**  
**Syed Khalid Siraj Subhani**  
Managing Director, OGDCL

#### Change/ Revision Log

#	Description of Change
1.	Amended: Projects activities (engineering, procurement, construction & commissioning)

#### Associated Documents Approval & Issue

Related Document/ Record	Initiated by	Reviewed by	Checked/ Verified / Approved by
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### 3.1.1 General

In order to establish, implement, maintain and continue to improve OGDCL's HSE Management System, this Manual shall act as the core document. This Manual covers the management of HSE affairs of the current and planned activities at its operational (field) locations and office buildings, which are:

- ▶ Projects activities (*engineering, procurement, construction & commissioning*)
- ▶ Exploration and Development activities (*drilling, geological services, geological field survey and seismic operations*)
- ▶ Production and Plant operations
- ▶ Office building administration

**External context** is the external environment (issues) in which OGDCL seeks to achieve its objectives. This includes the cultural, social, political, legal, regulatory, financial, technological, economic, natural and competitive environment – whether international, national, regional or local; key drivers and trends that will have an impact upon objectives and the relationships with and perceptions and values of external stakeholders.

**Internal context** is the internal environment (issues) in which OGDCL seeks to achieve its objectives. This includes governance, organizational structure, roles and accountabilities, policies, objectives, strategies, capabilities, resources, standards, the perceptions and values of internal stakeholders, information systems, the organization's culture and contractual relationships.

The context (framework) of OGDCL activities is given as below as internal and external issues:

### 3.1.2 Internal and External Issues

	<b>Internal Issues</b> (Environmental Conditions)	<b>External Issues</b> (Environmental Conditions)
<ul style="list-style-type: none"> <li>• <b>Projects activities</b> (Engineering, procurement, construction &amp; commissioning)</li> <li>• <b>Exploration and Development activities</b> (Drilling, geological services, geological field survey and seismic operations)</li> <li>• <b>Production and Plant Operations</b></li> <li>• <b>Office Building Administration</b> (Maintenance, IT/ communication, security, catering, medical and transportation service)</li> </ul>	<ul style="list-style-type: none"> <li>• Occupational Health of Employees</li> <li>• Compensation to the injured or to the family of deceased Employee</li> <li>• Effluents/ Produced Water Management</li> <li>• Solid Waste Management</li> <li>• Camp Wastewater Management</li> <li>• Hazardous Waste Management</li> <li>• Air (Stack) Emissions Monitoring</li> <li>• Flare/ Vent Controls &amp; Monitoring</li> <li>• Oil/ Chemicals Spillage Management</li> <li>• Noise Control</li> <li>• Energy Conservation</li> <li>• Natural Resources Management</li> </ul>	<ul style="list-style-type: none"> <li>• Contracts</li> <li>• Licenses; Government/ Regulatory Approvals</li> <li>• RoW Management</li> <li>• Water Management</li> <li>• Flora and Fauna Management</li> <li>• Solid Waste / Debris Management</li> <li>• Site Restoration</li> <li>• Land Disputes</li> <li>• Social complaints &amp; compensations</li> <li>• Overflow/ Seepage from pits</li> <li>• Impact of Flare/ Venting</li> <li>• Disposal of Drill cuttings</li> <li>• Well Site Restoration</li> </ul>

### 3.1.3 Needs and Expectations of OGDCL's Interested Parties

	<b>Interested Party</b>	<b>Requirement</b>	<b>Compliance Obligation</b>
<b>Projects activities</b> (Engineering, procurement, construction & commissioning)	Ministry of Petroleum & Natural Resources	Lease/ NOC Produced Water Management Flare/Vent Management	Lease/ NOC Compliance of DGPC Guidelines for Operational SHE Management 1996

## Context: OGDCL's Integrated HSE System Manual

Controlled Copy Do Not Duplicate For Internal Use Only

<ul style="list-style-type: none"> <li>• <b>Exploration and Development activities</b> (Drilling, geological services, geological field survey and seismic operations)</li> <li>• <b>Production and Plant Operations</b></li> <li>• <b>Office Building Administration</b> (Maintenance, IT/ communication, security, catering, medical and transportation service)</li> </ul>	Central Inspectorate of Mines (CIM) Ministry of Labor and Manpower	Consolidated Mines Rules 1952, and Oil & Gas (Safety in Drilling & Production) 1974 Regulations of Mines Act 1923	Regulatory Compliance
	Oil and Gas Regulatory Authority (OGRA)	License for LPG Extraction and Storage	NOC/ Approval/ Fitness
	CBA/ National Industrial Relations Commission (Optional)	Industrial Relations Act 2012 (Optional)	Memorandum of Settlement (MoS)
		Essential Services Maintenance Act 1952 (Optional)	Order workforce in to remain in specified areas
	PNRA	PNA Guidelines	Certified Radiography Tests; Compliance dose limits
	Contractors	PPRA Rules	Compliance of TORs and OGDCLs HSE System
	Environment Protection Agencies (EPAs)	PEPA/ Provincial Env. Act	NOC/Environment al Approval/ NEQS Compliance
	Provincial Explosive Department	Storage of Oil/ Explosives Inspection/ Boiler Inspection	Fitness Certificate
	Landowners/ Local community/ NGOs	Land Management/ Compensation as per contract	Compliance of Land Management/ CSR Policy
	JV Partners	DGPC Petroleum Concession Agreement (PCA)	Compliance of Terms & Conditions of PCA
Oil Refineries/ Gas Transmitting Companies/ OGRA Licensed LPG Marketing Companies	COSA/ GSA/ LSA	Compliance of Terms & Conditions of COSA/ GSA/ LSA	
	Insurance Companies	Premium and service charges as per insurance coverage w.r.t. the specific capital reserve for "self-insurance" of rigs, buildings, wells, plants, pipelines, workmen compensation, vehicle repair and losses for our products.	
	Federal/ Capital/ Provincial/ City/ Development Authorities, District Administration, Municipal Corporations & Utilities Supply/ Services Companies	Necessary Permits/ NOCs/ Licenses under the prevailing laws related to land, building, water, electricity, gas, IT/ network/ communication, etc.	
	Shareholders/ Investors	Shareholder dividends, meetings, reports, and disclosure requirements under SECP.	

**Note:-**  
*Each Location must develop its own Context and maintain this documented information for the sake of achieving clarity of the audit scope during the certificate/ compliance/ surveillance audits.*





**Reference Standards**  
 ISO14001:2015 & ISO45001:2018  
 Clause 5.1 Leadership and Commitment  
 Clause 5.2 HSE & ERM Policy  
 Clause 5.3: Organizational Roles, Responsibilities and Authorities  
PSM (22 Elements) Model  
**Management Commitment:** Management is responsible for safety of personnel and protection of company property. Management will direct the establishment and implementation of safety programs through participation in various safety committees and conducting plant safety audits. Management should have specific, quantifiable, personal safety goals/targets and implementation plans, which must be stewarded regularly.  
**Line Management Accountability and Responsibility:** The purpose of this element is to delegate HSE responsibility and accountability to each level of the organization. Line supervisors and managers are totally responsible and accountable for safety as well as cost, quality and productivity.  
**Policies and Principles:** To improve safety, a deliberate safety policy must be established and applied daily by each member of the work force, whether manager, supervisor, or contractor employee. Top management must establish the policy that will spell out the principles that are to govern all decisions regarding safety. Without such a policy, safety tends to be pushed aside when other concerns become pressing.  
**Safety Personnel:** This element highlights the main responsibilities of safety personnel so that all members of line organization understand the role and place of safety personnel in the organization.  
**Integrated Organization for Safety:** The purpose of the overall safety organization is to mobilize all available talent in the interest of safety, health, and environmental protection. It does not, in any way, relieve individual members of the line organization of their safety responsibilities. Various committees are staffed principally by members of the line organization supplemented by safety staff members and other specialists.  
**Emergency Preparedness and Contingency Planning:** The intent of this element is in-depth planning for potential emergencies ensuring effective response by site personnel. The outcome of these efforts is mitigation of the impact of incidents on personnel, environment / facilities and prompt control of emergency.

**This Section's Objectives**

- Bestow OGDCL's leadership by accepting responsibility and showing commitment for the HSE and Enterprise Risk Management System.
- Letting leadership to establish and communicate an HSE and Risk Management policies.
- Facilitate leadership by assigning and delegating HSE roles, responsibilities and authorities.
- Crisis Management.
- Defining HSE Structure & Authorities.

**Associated Documents**

- OGDCL's HSE Policy Statement & Commitment
- OGDCL's Enterprise Risk Management (ERM) Policy
- OGDCL's Life Saving Golden Rules

**Applicable Documents**

- OGDCL Safety Handbook For Oil & Gas Exploration Leases (Seismic Surveys)
- OGDCL Safety Handbook For Oil & Gas Well Drilling and Servicing Operations
- OGDCL Safety Handbook For Oil & Gas Development and Production Leases
- HSE Pledge Handbook For Contractors & Service Companies
- EMT Duty Roster
- LMT Duty Roster
- Location's Emergency Drill Report



- HSE & ERM Policy Statements**  
OGM/P-HSE-4.1
- The Lifesaving Golden Rules**  
OGM/P-HSE-4.2
- Process Safety Fundamental (PSFs)**  
OGM/P-HSE-4.3
- Roles, Responsibilities, Accountabilities, and Authorities**  
OGM/P-HSE-4.4
- Crisis Management**  
OGM/P-HSE-4.5
- Structure**  
OGM/P-HSE-4.6

**IMPORTANT:-** IT IS EVERYBODY'S RESPONSIBILITY TO ENSURE THAT THE OGDCL'S HSE MANAGEMENT SYSTEM IS IN PLACE.



## 4.1 HSE & ERM Policy Statements

OGM/P-HSE-4.1(08) Revision Number 8

Original Issue: June 25, 2007  
This Issue: March 14, 2022

**Updated By:**  
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**Approved By:**  
**Syed Khalid Siraj Subhani**  
Managing Director, OGDCL

### Change/ Revision Log

#	Description of Change
1	HSE Policy signed by MD/ CEO.
2	Enterprise Risk Management (ERM) Policy signed by MD/ CEO.
3	Amended 4.1.2.3: Policy statements shall include commitment to manage all applicable risks essential for business continuity directly resulting in the continual improvement in the management and performance of all strategic (business) units.
4	Amended 4.1.2.5: Respective functional EDs shall be responsible that workforce members under their jurisdiction follow HSE & ERM Policies; GM HSEQ shall impart awareness & monitor compliance.

### Associated Documents Approval & Issue

Related Document/ Record	Initiated by	Reviewed by	Approved by
OGDCL's HSE Policy	Manager HSEQ	GM HSEQ	CEO/ MD
OGDCL's Enterprise Risk Management (ERM) Policy	Manager HSEQ	GM HSEQ	CEO/ MD

### 4.1.1 General

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- ☐ This procedure presents general framework related to OGDCL's Health, Safety, and Environmental (HSE) and Enterprise Risk Management (ERM) Policies (given at the end of this Section). This framework needs to be adapted to consider all the state of affairs of OGDCL collectively so as to produce unique policies to be equally applicable in:
  - ▣ Engineering/ project operations
  - ▣ Exploration, including seismic techniques and geological surveys;
  - ▣ Drilling of exploratory wells and geological services;
  - ▣ Drilling and development of production wells; and
  - ▣ Treatment of oil and processing of natural gas to yield marketable products.

### 4.1.2 Policy Protocol

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#### 4.1.2.1 Purpose and Scope

- ☐ The purpose of this policy protocol is to instill the management to establish HSE and Enterprise Risk Management (ERM) Statements & Commitments that are appropriate to its core activities i.e. oil and gas exploration and production and to be appropriate to the nature, scale and occupational health, safety, and environmental Impact (Risk)s of its primary activities, products and services involving all strategic (business) units.

#### 4.1.2.2 Role of the Executive Committee/ MD

- ☐ OGDCL's HSE and Enterprise Risk Management (ERM) Policy Statements and Commitments shall be taken as a pledge by MD & CEO on behalf of BOD that the company is willing to integrate occupational health, safety, and environment factors into its business decisions wherever the company would operate by:
  - a) making investments which continue to improve its occupational health, safety, and environment performance and
  - b) by assessing, managing and controlling occupational health, safety, and environment Impact (Risk)s associated with its current and planned activities.
- ☐ Management (Executive Committee Members) should be involved during the development, reviewing and updating these policy statements and commitments.
- ☐ While MD & CEO shall be involved during the approving the contents and signing these policy statements and commitments
- ☐ Details of the involvement of management may be documented on the reverse or transpose of the policy page to signify that they concur and are committed to the policy statement.

#### 4.1.2.3 Salient Features of Policies

- ☐ Policy statements shall include commitment to manage all applicable risks essential for business continuity directly resulting in the continual improvement in the management and performance of all strategic (business) units.
- ☐ Policy statements shall also include commitment to comply with relevant legislation and regulations, and with other requirements to which OGDCL subscribes.

#### 4.1.2.4 Implementation of Policy

- ☐ The implementation of these policies shall be consistent across all operating departments. The communication of these policies to all employees shall be taken as an essential stage of implementation. BOD recommends a common approach through the use of policy leaflets, posters and internal meetings.



- ☐ BOD also empowers MD & CEO to establish, update and endorse the cascaded documents like HSE System Manual and Guidelines.

#### **4.1.2.5 Responsibility for Implementation and Compliance Monitoring**

- ☐ Respective functional EDs shall be responsible that workforce members under their jurisdiction follow HSE & ERM Policies; GM HSEQ shall impart awareness & monitor compliance.

#### **4.1.2.6 Revision of Policy Statement and Commitment**

- ☐ Top management shall delegate responsibility for the periodic review and updation of the policy to HSEQ Department. During the review, management shall ensure that these policies remain aligned with the Code of Corporate Governance.
- ☐ The policy statements and commitments shall be reviewed on annual basis and approved/signed if any improvement(s) are recommended. In addition, on change of top management, the development, review, updation, approval and re-signing of the policy statements and commitments shall be made without any delay.

#### **4.1.2.7 Distribution of Policy**

- ☐ The policy statements and commitments shall be written in such a manner so that it can be informative to a wide audience. BOD recommends that these policies statements and commitments along with a personally signed letter from MD & CEO explaining the top management's intention and commitment with respect to occupational health, safety & environment and enterprise risk management be distributed to the following stakeholders:
  - a) DGPC
  - b) Management of the operating fields;
  - c) Heads of relevant statutory bodies;
  - d) Major customers;
  - e) JV Partners;
  - f) PPEPCA members;
  - g) Stock exchanges where OGDCL is listed; and
  - h) Other interested parties.
- ☐ Distribution of these policy statements and commitments shall be documented in addition to its availability on OGDCL's official website. Distribution of the policy to other interested parties who may request a copy shall also be monitored.

#### **4.1.3 Document Controller**

- ☐ HSE Policy documentation shall be controlled by HSEQ Department.



## **Oil & Gas Development Company Limited Occupational Health, Safety and Environment Policy Statement and Commitment**

As a responsible Oil and Gas E&P company, we are committed to embrace Health, Safety and Environment (HSE) in all our activities. The emphasis on HSE management is crucial to our operational requirement and to maintain market repute. In carrying out our multidimensional activities, we also ensure welfare of indigenous communities, protection of ecosystems and environment. As we continue to avail exploration and production opportunities on a sound foundation of technical and financial prudence, we intend to:

- Exhibit visible leadership at each level and ensure necessary resources, trainings and infrastructure are in place for aiming HSE excellence.
- Identify hazards and ensure effective controls to manage operational risks.
- Ensure that our entities meet or exceed applicable HSE laws, regulations, standards and other requirements.
- Set objectives and targets to safeguard humans & assets, protect environment and conserve energy & natural resources.
- Ensure that Contingency Plans are in place for business continuity.
- Provide employees with self-assured methods & practices, authority to stop unsafe work & motivation through rewards and recognition.
- Employ contractors and service companies who aspire to the high HSE standards at all times, and recognize that HSE is everyone's responsibility.
- Improve HSE system by continually focusing on Leading Indicators and disseminating lessons learned from Lagging Indicators.
- Assess HSE KPIs regularly & share performance accordingly.

Through observance of this policy, we aim to assist in protecting the environment and the overall wellbeing of our stakeholders, specifically our employees, clients, shareholders, partners, contractors, subcontractors, service companies and communities.

**Managing Director/ CEO**





## Oil & Gas Development Company Limited OGDCL's Enterprise Risk Management (ERM) Policy

OGDCL's Board of Directors oversee Enterprise Risk Management (ERM) Policy Framework of the Company to ensure that controlled environment is established and maintained, encompassing OGDCL operations, financial reporting and compliance activities. Board's Risk Management Committee (B-RMC) assists the Board in fulfilling its responsibilities in this regard by reviewing, monitoring and controlling Company's operational, strategic & external risks as follows:

- Approve resources for the formulation of ERM Policy Framework required for the Company' business continuity and alignment with the Company's mission statement, strategic business plan, HSE policy statement & commitment and legal & regulatory compliance.
- Review the assessment of following fundamental Corporate E&P Sector based risks (but not limited to), provide updates to the Board on quarterly basis to ensure that the Company implements sound internal controls/ barriers through a transparent process of identification, measurement, and monitoring:
  - ⊕ *Impact of depleting production fields on the Company's portfolio of hydrocarbon balance recoverable reserves;*
  - ⊕ *Potential for the new production fields to yield significantly lower production volumes than initially estimated disrupting the Company's revenue forecast;*
  - ⊕ *Overall cost of business interruptions due to impact of natural disasters, IT failures, insufficient technologies & internal controls/ barriers, and accidents on the volumes of production and integrity of assets;*
  - ⊕ *Assess scenarios where the Company cannot safely commence or continue its operations on the facilities due to potential security threat, loss of control or access to the facilities due to instability in the area.*
  - ⊕ *Oversee the security requirements on moving and non-moving locations of OGDCL including planning of security arrangements for OGDCL projects.*
  - ⊕ *Determine impact in terms of loss of production and revenues due to loss of access to the facilities, loss of equipment, cost of rescue & recovery, and other costs associated with law enforcement agencies (LEAs).*
  - ⊕ *Assess financial implications due to project delays, outsourcing, long-term loans & receivables, supply off-take, etc. on future investments and growth.*
- Review the impact of external growth opportunities, strategic alliances, potential diversification projects, acquisitions, or divestment and make recommendations on appropriate option(s) to the Board.
- Evaluate special cases where risks fall outside locally published E&P guidelines and thresholds like risks of unconventional shale gas development projects, drilling offshore wildcat (exploratory) wells, etc. and make recommendations on appropriate option(s) to the Board.
- Advice to ascertain viability of development of workable risk management measures to enable renewable-energy-shift to offset the adverse greenhouse effects and global changes in the climate.
- Assess potential options to minimize the risks of natural disasters and accidents in both avoiding the risks and mitigating the consequences with increased focus on trainings & awareness, risks & crisis management protocols, and inspections & audits.
- Encourage to develop a risk-aware-culture as an integral part of day-to-day management on sustainable basis.
- Measure ERM related KPIs with the intention to instill continual improvement.
- Review ERM Policy as and when required.

**Managing Director/ CEO**



## 4.2 OGDCL's Lifesaving Golden Rules

OGM/P-HSE-4.2(08) Revision Number 8

Original Issue: June 25, 2007  
This Issue: March 14, 2022

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### Change/ Revision Log

#	Description of Change
1	<i>Reviewed, no change suggested.</i>

### Associated Documents Approval & Issue

Related Document/ Record	Initiated by	Reviewed by	Approved by
OGDCL's Life Saving Golden Rules	Manger HSEQ	GM HSEQ	MD/ CEO





Oil & Gas Development Company Limited  
Occupational Health, Safety, and Environment

## **Lifesaving Golden Rules**

**Lifesaving Golden Rules** are used as policy guidelines provide practical support in the application of OGDCL's HSE Management System (HSE-MS). They are aimed at personnel, both employees and contractors, working at field locations/ sites who carry out, or are responsible for, activities with particular potential to cause serious injuries or incidents, especially fatalities.

*Criterion for the selection of **Lifesaving Golden Rules** is based on critical operational areas and incidents trend over the past ten years in OGDCL.*

**Lifesaving Golden Rules**, therefore, are for use at all worksites to remind everyone to keep people safe at field locations/ sites. They must be followed and can help field personnel to:

- Formulate standardized operating procedures and work instructions
- Perform risk assessment
- Check barriers and controls are in place before work starts
- Make part of toolbox talks and pre-work planning
- Facilitate inspections and walkthroughs

If these **Lifesaving Golden Rules** are NOT followed in letter & spirit, all unsafe work (behaviors and conditions) must be STOPPED! With the **Stop Work Authority**, anyone working within the OGDCL sites, as either an employee or contractor, is empowered to interrupt an activity whenever he observes an unsafe behavior or an unsafe condition.

**Lifesaving Golden Rules** must become part of our way of approaching and conducting any working activity in each tier as follows:-

### **Top and Middle Management**

- Provide adequate resources to support the continued implementation of **Lifesaving Golden Rules**.
- Demonstrate their personal commitment, leadership and accountability.
- Empower all employees to intervene and to stop activities anywhere or at any time when **Lifesaving Golden Rules** are not correctly applied.

### **Area and Location Management**

- Ensure all job activities are adequately planned, assessed and executed in terms of risk assessment.
- Ensure all personnel are adequately informed, trained and have all the necessary equipment to perform the work in a safe manner.

### **Supervisors**

- Ensure that work conditions are safe.
- Ensure, leading by example, that their teams know, and
- Observe the rules and that they comply with them before starting, during and at the end of a working activity.

### **Workers**

- Be responsible for the safety of themselves and that of their co-workers.
- Be aware that compliance is mandatory.
- Immediately report to their supervisor/person in charge, about any unsafe event (i.e. accident, near hit/ miss, unsafe act, unsafe condition) that occurs at the work site.

## Lifesaving Golden Rule 1 – Hydrocarbon safety

Disciplined framework for managing the integrity of operating systems and processes that handle hydrocarbons and other hazardous substances to prevent unplanned releases which could result in incidents.



### PLAN

- The basis of design of a facility or process, permanent or temporary, which transports, produces, stores, uses or disposes of hydrocarbon must be reviewed at least every five years utilizing a process risk assessment methodology such as HazOp – Hazards Operability (but cannot be limited to) or on as & when required basis within this period.
- Take into account the actual changes (or the changes that can reasonably be expected during the operations lifetime) in a workshop format led by an experienced Chairperson from independent party, Custodian from process/ project team, Secretary from HSEQ domain and concerned Discipline Engineers/ Sector Experts.

### READY?

- Have you performed basis of design of a facility or process employing risk assessment?
- Is effectiveness/ suitability of existing and potential barriers or internal controls considered?
- Are drawings/ as-built drawings (e.g. process and instrumentation diagrams, process flow diagrams, layout drawings, isometrics, etc.) prepared/ updated?

### GO!

- Check, verify and validate the efficacy of process controls and barriers/ internal controls.
- Up to date documentation/ arrangements for achieving safe operating limits and ensure availability to O&M personnel.
- Ensure placement of conscious labeling on equipment, storage vessels, containers, tanks and pipelines carrying or containing hydrocarbons or other hazardous material as per appropriate international standards.
- Ensure provision of an emergency response plan which includes means of escape; emergency response teams; appropriate safe refuge and assembly areas; and emergency response equipment for spillage containment, fires, explosions, burns, etc.

## Lifesaving Golden Rule 2 – Explosives safety

Controls and monitoring of the reliability of explosives' storage, handling, transportation and usage ensure the seismic and wireline crew safety.



### PLAN

- Every consignment containing explosives must include original Material Safety Data Sheet (MSDS); If MSDS of any explosive is not included, the Location InCharge should immediately contact the Rep. of supplier, manufacturer or importer to get the MSDS (before final payments) and maintain record.
- MSDS of explosives must be readily accessible to all concerned workforce members in their work areas.
- Storage of explosives must comply with local government regulations. Storage sites must be located at safe distances from public buildings, factories & houses. The site to have a good road access.
- The explosives must be kept/stored in the magazine. Dynamite and detonators must always be stored in a separate magazine.

**READY?**

- Is an up-to-date inventory of the quantities and types of explosives maintained on site?
- Are all explosive operations being conducted under a Hot Work Permit?
- Are all personnel involved in explosives operation certified and trained for explosive handling by third party and understand MSDS?
- Are the explosive storage containers:
  - Designed and constructed specifically for the purpose of storing explosives?
  - Kept locked at all times, without the possibility of unauthorized access to keys?
  - Have proper ventilation?
  - Have proper external warning labels and markings attached?
  - Provided with no electrical wiring or else explosion proof electrical (EXP) wiring?

**GO!**

- Inside the containers, separate explosives by type, size etc. and stack so that the oldest stock is used first.
- Install a suitable Lightning Arrestor on each magazine before storing the explosives.
- Smoking, matches, lights and spark producing devices such as sulfuric acids, petroleum to be not be allowed at any distance where explosives are stored and handled.
- Following rules to be followed during explosives transportation:
  - Must not be conducted in any vehicle that is carrying passengers.
  - Must only be transported as per approved procedure and as packaged by the supplier or service contractor.
  - All such vehicles, containers and boxes to display proper warning labels.
- Following controls to be ensured during drilling operations:
  - For *wireline operations*, the wireline cable must be rigged such that it does not contact any facility wiring.
  - For *drilling rig operations*, checks must be made and continuously verified to ensure that no voltage exists between the facility, casing or wellhead, wireline cable armor and the logging unit.
  - *Prior to explosive operations*, the logging unit must be prepared by isolating electrical circuits and removing the electrical isolation/safety key.
- Maintain a current inventory record of explosives on daily basis with issue & return of explosives signed for by each individual.

**Lifesaving Golden Rule 3 – Working at height**

**Controls and monitoring of the reliability of equipment and protection systems during work at height activities ensure the workers safety.**



**PLAN**

- Avoid physically working at height i.e. 06 feet (02 meters) or higher above the ground and consider a safe feasible alternative.
- Consider fall prevention systems rather than fall protection systems.
- Ensure that fall protection systems (e.g., full body safety harness, shock absorbing lanyards) are periodically inspected and maintained by an Authorized Person.
- Ensure that arrangements for emergency rescue at height are in place.

**READY?**

- Is the PTW in place, completed with the risk assessment for each work at height activity?
- Are the work surfaces and holes adequately protected from fall of personnel and objects?
- Are the scaffolds built according to the vendor manual/specifications or a specific project done by an Authorized Engineer?
- Are scaffolds, portable ladders, portable and mobile platforms inspected by an Authorized Person prior to use and equipped with a valid tag/panel certifying the inspection?
- Are personnel working at height provided awareness on safety?
- Are the PPE for the required task, in good condition and worn by all people?

**GO!**

- Only Authorized Workers to access the scaffolds, portable ladders, portable and mobile platforms.
- No permission to erect or carry scaffolds, portable ladders, portable and mobile platforms near live overhead electrical cables, or equipment.

**IMPORTANT:-** IT IS EVERYBODY'S RESPONSIBILITY TO ENSURE THAT THE OGDCL'S HSE MANAGEMENT SYSTEM IS IN PLACE.

## Lifesaving Golden Rule 4 – Dropped object

Controls and monitoring of the reliability of equipment and protection systems involving height/ high overhead structures.



### PLAN

- Risk assessment of a drilling rig to consider all objects that have the potential to drop.
- All permanently installed equipment suspended more than 2 meters (6 feet) above ground be reviewed for applicability of proper securing mechanism.

### READY?

- Do the high-level workspaces have no loose or redundant equipment or material?
- Is a Drop Object Register developed and periodic inspection of all items recorded?
- Are personnel working on or under high-level workspaces provided awareness on safety?
- Are the securing mechanisms for the suspended equipment/tools in good conditions?

### GO!

- Only Authorized Workers to access the areas where objects have potential to drop.
- Ensure equipment/tools be carried aloft and returned to ground level using an effective means of preventing them from falling.

## Lifesaving Golden Rule 5 – Energized systems

Implementation of procedures, controls and specialized personnel guarantee safety during activities where energized systems are present.



### PLAN

- Verify that a specific isolation procedure is in place for process fluids, hydraulic, pneumatic, thermal, chemical, electrical, mechanical systems and/ or radiation.
- Each job shall be risk assessed and performed accordingly.
- Ensure that the permit to work refers the specific equipment.

### READY?

- Are isolation checks completed in the PTW?
- Have you verified that no stored energy or other hazards remain prior to start your job, and that the energy isolation is properly done?
- Are the PPE for the required task, in good condition and worn by all people?

### GO!

- Do not carry out unauthorized activities. Follow the provisions of the permit to work.
- Use lockout and tagout (LOTO) devices to communicate isolation and to prevent non-authorized operations.
- Ensure periodic monitoring is carried out.
- Ensure that the job specific area is barricaded, safety signs posted and emergency rescue in place.

## Lifesaving Golden Rule 6 – Fire safety

**Fire risk must be assessed and control measures such as procedures and active/passive fire protection systems implemented.**



### PLAN

- Ensure that a risk assessment is performed considering fire hazards.
- Ensure the use of a relevant PTW.
- Ensure that a Fire Emergency Response Plan is developed and all personnel are aware.
- Plan firefighting awareness of the workers.
- Periodically inspect and maintain the fire prevention and protection measures.

### READY?

- Are workplaces equipped with fire & gas detection system and firefighting arrangements?
- Are sources of ignition under control or isolated/ removed?
- Are escape routes and muster points clearly marked and kept easily accessible at all time?

### GO!

- Handle and store flammable materials and products properly.
- Ensure that workers do not smoke.
- Ensure that workers do not perform horseplay with any naked flames/ non-explosion proof equipment.
- Keep all areas clean and tidy.

## Lifesaving Golden Rule 7 – Toxic gases

**Procedures, staff training, specific collective and personal protective equipment are required to work in the presence of toxic gases.**



### PLAN

- Ensure that the operating procedures, work instructions and Emergency Response Plan (ERP) have been developed considering the risks related to toxic gas release.
- Ensure that everybody is informed on toxic gas risk and properly trained on their specific role during emergencies, and on collective/personal protective equipment.
- Ensure that each worker has both a personal toxic gas detector and a proper breathing escaping apparatus (*full face mask / hood with specific filter / air bottle*).
- Post safety signs and any other means, warning of the potential presence of toxic gas.

### READY?

- Are you authorized to enter a toxic gas classified area?
- Is the Emergency Response Team (ERT) present on site and alerted?

### GO!

- Always wear personal detection devices when working in an area where there is or could be the presence of toxic gas and ensure breathing escaping apparatus arrangement as a support exclusively during emergency.



## Lifesaving Golden Rule 8 – Lifting operation

**Lifting operations properly planned, implemented and monitored, prevent the workers risk of falling or being crushed or struck.**



### PLAN

- Plan the lift with a specific risk assessment to avoid crane overturning, load falling from the crane and load or machine striking someone or any other identified hazard especially related to wind speed and elevated structures.
- Always inspect and maintain lifting & hoisting equipment/ machines and accessories as per manufacturer's instructions and site procedure requirement: check and record damages, color code, Safe Working Load (SWL) and certificate.
- Lifting authority be involved in all activities.
- Personnel lifts shall be done only with man-rated equipment and under a PTW.
- Plan to ensure that the minimum clearance distance from the energized power lines is 10 feet for up to 50 KV load and 15 feet for over 50 to 200 KV load.
- When the carriage of personnel by crane is required, the man riding basket must be suitably tested and have a valid third party test certificate and clearly marked "Man Riding Only" and "Load-bearing Capacity" on it. All wire ropes and other attached lifting equipment must also have a valid certificate. Crane hooks must be fitted with safety latches or equivalent. Man riding basket shall be used for carrying single person only who must be properly secured by a safety harness.

### READY?

- Is lifting equipment certified by a Third Party in accordance with relevant local legislation or international standards and regularly maintained according to the planned schedule?
- Are all persons engaged in lifting and hoisting operations competent for that role and supervised at all times?
- Are lifting and hoisting equipment, machines and accessories (cranes, forklifts, slings, handles, hooks, baskets, etc.) in good condition according to national legislation and international best practices?
- Have you verified that the lifting area is marked out to prohibit unauthorized access?
- Are the PPE identified in the specific risk assessment for the required task, in good condition and worn by all people?

### GO!

- Always ensure the presence of a banksman during the entire lifting operation and avoid unplanned blind lifts.
- Never allow personnel to be under or close to suspended loads for any reason.
- Ensure that the lifting operator keeps the machine/equipment under control at all time.
- No crane to travel with a suspended load.

## Lifesaving Golden Rule 9 – Confined space

**Atmospheric testing, specific training on confined space activities, implementation of dedicated emergency procedures, are mandatory to work safely in a confined space.**



### PLAN

- Each job shall be risk assessed and all hazards and controls shall be identified and implemented.
- Plan specific training for all persons engaged in confined spaces activities.

## READY?

- Are Confined Space checks completed in conjunction with and referred to in the PTW?
- Did you verify that the confined space is positively isolated from all possible sources of hazards?
- Have Qualified and Authorized Personnel tested and recorded the atmosphere inside the confined space as designated in the permit?
- Is the Emergency Response and Rescue Plan prepared and tested? Is the ERT ready in location and communication means ready and tested?
- Are the PPE identified in the specific risk assessment for the required task, in good condition and worn by all people?

## GO!

- Ensure testing of atmospheres inside confined space is conducted, verified and repeated.
- Suspend the work if Emergency Response Team (ERT) and/or means of communications are unavailable on site.
- Suspend the work if a Dedicated Qualified Attendant (Watcher) is not present close to the confined space.
- Suspend the work if there is no specific PTW for the activity.
- Suspend the work if Rescue Equipment are not in place.
- Ensure electrical lighting for use in confined spaces not to exceed 24 volts. Powered hand tools used in confined spaces shall, be air operated. Where this is not possible, all such tools shall be equipped with a deadman's switch.

## Lifesaving Golden Rule 10 – Management of change

Any plant/organizational change must be identified, assessed and authorized by the responsible of the work place.



### PLAN

- Identify, analyze and assess any change or deviation to plant or facility's design, work procedures/practices and organization.
- Support any change, in particular overriding/disabling/change of a safety critical element, with a specific risk assessment.

### READY?

- Is the change, in particular deviations from mandatory requirements, duly structured, documented and approved by an Authorized Person?
- Is the change properly recorded and tracked?

### GO!

- Communicate any change to all concerned personnel and keep track of the identified and implemented actions.

## Lifesaving Golden Rule 11 – Driving safety

Driving behavior and recommendations for proper vehicle management reduce the risk of accidents.



### PLAN

- Always ensure that the driver is in good physical condition.
- Drivers shall be Certified and Authorized for driving the allocated vehicle.

- For all routine journeys, Journey Management Plan shall be readily available in vehicles with predetermined risks especially considering hazardous situations;
  - where paved roads are not available/ off road driving conditions.
  - routes with security threats, dangerous intersections, sharp turns, landslide areas, slippery conditions, and/ or blind-spots.
  - areas with potentially limited cellular phone coverage.
  - indistinct stopovers.
  - environmentally protected areas, wildlife sanctuaries, etc.
  - transportation of heavy/ fragile/ hazardous material or equipment.
  - night travel or any other high rated risk aspect.
- However for the non-routine journeys, Journey Management Plan shall be chalked out on situational basis, accordingly.

**READY?**

- Is your vehicle in good condition and regularly maintained?
- Are seat belts fastened and appropriate shoes worn?
- Are you free from the influence of any drugs, etc.?
- Are loads properly secured and within the capacity of the vehicle?
- Are you sufficiently rested to drive a vehicle?

**GO!**

- Adopt defensive behavior in respect of other road users.
- Respect speed limits, adjusting your speed according to road and weather conditions, local legislation and Company rules.
- When you drive, do not use any mobile phone and respect the daily maximum driving hours and rest period.

**Lifesaving Golden Rule 12 – Permit to work**

**Work permit is an essential and mandatory management tool to be adopted for non-routine or dangerous activities.**



**PLAN**

- A PTW system must be in place with the relevant supporting procedures and systematically implemented.
- Simultaneous/concurrent activities shall be planned and subjected to risk assessment and PTW in order to eliminate/reduce interferential risks.
- Non-routine and high-risk activities shall be planned and subjected to risk assessment and PTW.
- Ensure that all personnel receive proper training on using the PTW system.

**READY?**

- Is the PTW discussed in dedicated safety/ pre-job meetings?
- Have all personnel working under a PTW received the necessary information about its contents?
- Have you verified that all requirements specified in the PTW are implemented on site before commencement of job?

**GO!**

- Post copy of PTW in the job area.
- Suspend and re-assess your work if a change occurs in the scope of the work, tools, equipment, personnel, shift change or any other condition of the PTW.
- Conduct special safety audits of PTW system.

## Lifesaving Golden Rule 13 – Excavation safety

Soil characterization, protected excavation areas and correct use of machinery, guarantee the workers safety.



### PLAN

- A soil survey shall be carried out and all the risks shall be identified and assessed.
- Always consider underground services in the area, those shall be identified, marked and isolated (if necessary).
- Plan specific training for all personnel involved in excavation works.

### READY?

- Do you have a valid excavation related PTW?
- Has the site been inspected by an Authorized Person?
- Are the PPE identified in the specific risk assessment for the required task, in good condition and worn by all people?

### GO!

- Effectively shore, slope, bench, barricade and sign all excavations.
- Provide suitable entry and exit point when working in trenches, considering any possible emergency and weather condition.
- Excavated material must be kept at least 3 feet (1 meter) away from the edge of the excavation.
- Personnel to keep clear of machinery whilst it is in operation, minimum distance of 5 meters.
- Ground and environmental conditions to be continuously monitored for change.



**Managing Director/ CEO**



### 4.3 OGDCL's Process Safety Fundamental (PSFs)

OGM/P-HSE-4.3(00) Revision Number 0

Original Issue: March 14, 2022  
This Issue: --

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#### Change/ Revision Log

#	Description of Change
1	New procedure.

#### Associated Documents Approval & Issue

Related Document/ Record	Initiated by	Reviewed by	Checked/ Verified / Approved by
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Oil & Gas Development Company Limited  
Occupational Health, Safety, and Environment  
**Process Safety Fundamentals (PSFs)**

OGDCL's Process Safety Fundamentals (PSFs) are derived from IOGP as a set of basic principles for front-line workers, supervisors, and managers that emphasize existing good practices to prevent fatalities from Process Safety Events. Preventing Process Safety Events is important because they can escalate into catastrophic events.

Data reported by IOGP Members over a period of last ten years shows that +125 people lost their lives in +50 Process Safety Events (PSEs).

Analysis of the process safety related fatal incidents was conducted by the team with the aim of determining what types of potential PSFs were a factor in the incidents and how, if they had been implemented effectively, they might have prevented or mitigated the fatal consequences of these incidents.

The analysis considered a broad range of potential PSFs influenced by both the information on the fatal incidents provided by IOGP members and members experience. Each fatal PSE was reviewed against the list of potential PSFs and linked to one or more of the PSFs. By determining which of the PSFs could be linked to either the highest number of fatal incidents or number of fatalities allowed a shortlist of PSFs to be identified which eventually became the 10 IOGP PSFs.

Therefore the following PSFs should be launched in OGDCL in a way that enables and empowers the frontline workers to openly voice and report these dilemmas without fear of criticism or reprisal. Only by bringing these issues into the HSE meetings, the PSM issues can be addressed. PSFs are not intended to be seen as 'another set of rules', and it is strongly advised that they are not associated with disciplinary measures for non-conformance.



### We respect hazards

- We improve our understanding of process safety hazards at our location and our roles in controlling them.
- We are vigilant about the potential impacts of uncontrolled process safety hazards.
- We discuss process safety hazards before starting a task.
- We bring forward process safety hazards to be included in activity risk assessments.



### We apply procedures

- We use operating and maintenance procedures, even if we are familiar with the task.
- We discuss the key steps within a critical procedure before starting it.
- We pause before key steps and check readiness to progress.
- We stop, inform supervision and avoid workarounds if procedures are missing, unclear, unsafe, or cannot be followed.
- We take time to become familiar with, and practice, emergency procedures.



### We sustain barriers

- We discuss the purpose of hardware and human barriers at our location.
- We evaluate how our tasks could impact process safety barriers.
- We speak up when barriers don't feel adequate.
- We perform our roles in maintaining barrier health and alert supervision to our concerns.
- We use an approval process for operations with degraded barriers.



### We stay within operating limits

- We discuss and use the approved operating limits for our location.
- We escalate where we cannot work within operating limits.
- We alert supervision if an alarm response action is unclear or the time to respond is inadequate.
- We obtain formal approval before changing operating limits.
- We confirm that potential for overpressure from temporary pressure sources has been addressed.



### We maintain safe isolation

- We use isolation plans for the specific task, based on up-to-date information.
- We raise isolation concerns before the task starts and challenge when isolation plans cannot be executed.
- We check for residual pressure or process material before breaking containment.
- We monitor the integrity of isolations regularly and stop to reassess when change could affect an isolation integrity.
- We confirm leak-tightness before, during, and after reinstating equipment.



### We walk the line

- We use up-to-date documentation (e.g., Piping and Instrumentation Diagrams) that accurately reflect installed systems and equipment.
- We physically confirm the system is ready for the intended activity (e.g., valve positions, line up of relief devices, etc.).
- We alert supervision to identified documentation and readiness issues before operation.





### We control ignition sources

- We identify, eliminate, or control the full range of potential ignition sources during task risk assessments and during job preparation and execution.
- We minimise and challenge ignition sources even in "non-hazardous" areas.
- We eliminate ignition sources during breaking containment and start-up and shutdown operations.



### We recognise change

- We look for and speak up about change.
- We discuss changes and involve others to identify the need for management of change (MOC).
- We review the MOC process for guidance on what triggers an MOC.
- We discuss and seek advice on change that occurs gradually over time.



### We stop if the unexpected occurs

- We discuss the work plan and what signals would tell us it is proceeding as expected.
- We pause and ask questions when signals and conditions are not as expected.
- We stop and alert supervision if the activity is not proceeding as expected.



### We watch for weak signals

- We proactively look for indicators or signals that suggest future problems.
- We speak up about potential issues even if we are not sure they are important.
- We persistently explore the causes of changing indicators or unusual situations.



**Managing Director/ CEO**



## 4.4 HSE Roles, Responsibilities, Accountabilities, and Authorities

OGM/P-HSE-4.4(08) Revision Number 8)

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### Change/ Revision Log

#	Description of Change
1	Amended: HSE roles of top and line management streamlined in the perspective of revised/ new procedures.

### Associated Documents Approval & Issue

Related Document/ Record	Initiated by	Reviewed by	Approved by
HSE Job Descriptions	Manager HSEQ	GM HSE	ED HR → MD / CEO



**Top Management:**

- Top management demonstrates leadership and commitment to the HSE management system by **ensuring active participation of workers**, and where they exist, workers' representatives, using consultation and the identification and removal of obstacles or barriers to participation.
- Top management **promulgates HSE and Risk Management policies after exhibiting & fulfilling its commitment to participation, i.e. the involvement of workers**, and where they exist, workers' representatives, in the decision-making processes pertaining to the HSE management system.

**Line Management:**

- Successful **handling of HSE matters** is a Line Responsibility requiring the active participation of all levels of management and supervision. Line management is to ensure that the workforce is competent and have the necessary authority and resources to perform their duties safely and environment consciously; Location management and all Sectional ICs are to ensure the implementation and compliance of HSE system at their respective locations in a diligent manner through positive participation and conceding to the HSE directives.
- Line management is responsible for **establishing, implementing and maintaining processes for participation** [including consultation] in the developing, planning, implementation, evaluation and actions for improvement of the HSE management system by workers at all applicable levels and functions, and where they exist, workers' representatives.
- Line management shall take into account the outputs of consultation with workers, and where they exist, workers' representatives to finalize the **HSE Objectives**.
- Line management shall provide, as applicable, access by workers, and where they exist, workers' representatives to **relevant documented information**.
- Line management is required to ensure that **relevant audit findings** are reported to relevant workers, and where they exist, workers' representatives and relevant interested parties.
- Line management is required to communicate its **management review results** to **relevant workers**, and where they exist, workers' representatives and relevant interested parties.
- Line management is required to communicate the **results of continual improvement** to its **relevant workers**, and where they exist, workers' representatives.

**HSE:**

- **Role of HSE Representatives is to ADVICE & TRAIN the line management and MONITOR & AUDIT the compliance levels of HSE management system.**

**Workforce Members:**

- Participate in the formulation of HSE and Risk Management policies & HSE objectives.
- Get involved in HSE initiatives and training sessions, actively.
- Be logically responsible for their own safety and that of their colleagues and protection of the environment.
- Be sincerely accountable to line management for complying with relevant requirements of the OGDCL's Integrated HSE Management System (HSE MS).
- Deal with HSE consequences [Impact (Risk)s] according to their specific job situation.
- Enforce HSE requirements in their routine & non-routine activities on preemptive basis.
- Report & analyze non-compliance, incidents and implement recommendations to prevent reoccurrence.
- Participate positively during assessments, reviews and audits to analyze gaps.
- Provide feedback, identify gaps and contribute to the continuous improvement of HSE management system.

**4.4.1 Corporate Level**

Detailed HSE related roles and responsibilities in perspective of PDCA cycle are given below:

PDCA Cycle	MD & CEO/ COO	Executive Directors
<b>LEADERSHIP</b> HSE Policy Statement, Objectives and Goals; Role, Responsibilities & Authorities and Crisis Management	<ul style="list-style-type: none"> <li>• Endorsing corporate level HSE and ERM Policy Statements, Lifesaving Golden Rules, Objectives and Goals in the light of OGDCL's context and ensuring their communication and implementation at all levels of the organization.</li> <li>• Endorsing a corporate level framework like HSE Management System and Process Safety &amp; Risk Management (PSRM) Model by which HSE roles, responsibilities &amp; authorities can be cascaded.</li> <li>• Nominating EMT Chairman, liaise with Chairman BOD/ Risk Management Committee (RMC/) Ministry of Energy (Petroleum Division) to share incident update, take decisions after assessing the overall implications of crisis situation &amp; ordering the deactivation of EMT after receiving necessary information.</li> </ul>	<ul style="list-style-type: none"> <li>• Ensuring HSE and ERM Policies are communicated and implemented at relevant Directorate down the stream.</li> <li>• Provide adequate resources at Department level to support the continued implementation of Lifesaving Golden Rules. Demonstrate their personal commitment, leadership and accountability.</li> <li>• Ensuring corporate goals related to HSE are translated into Directorate level targets.</li> <li>• Ensuring HSE roles, responsibilities &amp; authorities related to HSE System are known to the concerned personnel for implementation.</li> <li>• Provide adequate resources at Directorate level to support the continued implementation of Lifesaving Golden Rules. Demonstrate their personal commitment, leadership and accountability.</li> <li>• Performing EMT Chairman Role and coordinate any post-incident recovery planning necessary.</li> </ul>
<b>PLANNING</b> Health, Safety Environment Vulnerabilities Identification & Impact (Risk) assessment; Legal & Other Requirements; HSE Objectives & Management Program	<ul style="list-style-type: none"> <li>• To act as <u>Chairman Corporate Risk Management Team</u>.</li> <li>• Ensuring HSE Management System caters vulnerabilities (threats &amp; opportunities) identification &amp; Impact (Risk) assessment process.</li> <li>• Ensuring Corporate HSE Objectives &amp; Management Programs addresses the significant Impact (Risk)s.</li> <li>• Ensure legal &amp; other requirements are determined for each Function.</li> </ul>	<ul style="list-style-type: none"> <li>• To act as <u>Member Corporate Risk Management Team</u>.</li> <li>• Ensuring relevant Directorate participates in the vulnerabilities (threats &amp; opportunities) identification &amp; Impact (Risk) assessment process.</li> <li>• Ensuring Directorate's HSE Objectives &amp; Management Programs addresses the significant Impact (Risk)s.</li> <li>• Ensure Directorate is in compliance with the applicable legal &amp; other requirements.</li> </ul>
<b>SUPPORT</b> Training, Awareness & Competence Communication & Consultation HSE System Documentation & Data Control; Control of Records	<ul style="list-style-type: none"> <li>• Ensuring plan for achieving HSE objectives and targets are being communicated and implemented.</li> <li>• Ensuring necessary resources (financial or otherwise) are available with all Directorates to achieve corporate and local HSE goals.</li> <li>• Ensuring training and development system is in place to inculcate safe and environment friendly behaviors among the workforce.</li> </ul>	<ul style="list-style-type: none"> <li>• Ensuring Directorate's plan for achieving HSE objectives and targets are being communicated and implemented.</li> <li>• Ensuring necessary resources (financial or otherwise) are available with concerned HODs to achieve corporate and local HSE goals.</li> <li>• Ensuring training and development system is in place to inculcate safe and environment friendly behaviors among the Directorate's workforce.</li> </ul>

**IMPORTANT:-** IT IS EVERYBODY'S RESPONSIBILITY TO ENSURE THAT THE OGDCL'S HSE MANAGEMENT SYSTEM IS IN PLACE.





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OPERATION Operational Controls	<ul style="list-style-type: none"> <li> Ensuring accident and pollution prevention technologies are opted at the decision making levels.</li> <li> Ensuring accidents and pollution prevention measures are taken on preemptive basis by the concerned line/ functional management.</li> <li> Ensuring that emergency preparedness and response arrangements are effective all across the organization.</li> </ul>	<ul style="list-style-type: none"> <li> Ensuring accident and pollution prevention technologies are opted at the decision making levels in the Directorate.</li> <li> Ensuring accidents and pollution prevention measures are taken on preemptive basis by the concerned line/ functional management.</li> <li> Ensuring suppliers' selection criterion strictly calls for HSE compliance standards.</li> <li> Ensuring that emergency preparedness and response arrangements are effective in the Directorate.</li> </ul>
PERFORMANCE EVALUATION HSE Monitoring, Measurement & Compliance Evaluation Internal HSE Audit, Management Review	<ul style="list-style-type: none"> <li> Ensuring appraisal and disciplinary codes are monitored against the requirements of the HSE Management System.</li> <li> Ensuring internal HSE audit function conducts result oriented effective audits.</li> <li> Motivating staff by owning direct commitment to HSE &amp; ERM Policies, encouraging HSEQ Awareness Events, Reward &amp; Recognition Programs and Management Walk Around (MWA).</li> <li> In case of any incident / near hit/ miss where willful violation of OGDCL HSE policies, standards, protocols and procedures is considered to have taken place MD / CEO in consultation with HOD HSE and HOD Discipline shall constitute, where deem necessary, a Fair Treatment Assessment Committee for taking up necessary corrective, preventive and punitive actions.</li> <li> Call an Annual Corporate HSE Management Review (Meeting) during the end of each Year to be attended by all Functional Heads (EDs and HODs) as a minimum; otherwise to conduct HSE Performance Reviews by any other suitable means.</li> <li> Ensuring HSE-related decisions from the corporate level management review meetings are implemented.</li> </ul>	<ul style="list-style-type: none"> <li> Motivating staff by owning direct commitment to HSE and ERM policies and procedures.</li> <li> Participating in Corporate Annual Management Walk Around (MWA) For Hazards Hunting &amp; Reporting emphasizing HSE commitment and visibility by Leadership.</li> <li> Ensuring appraisal and disciplinary codes are monitored in the Directorate against the requirements of the HSE Management System.</li> <li> Ensuring internal HSE audit function conducts result oriented effective audits of the various function of the Directorate.</li> <li> Ensuring that active participation and involvement in HSE is there at all levels through the unit level HSE Monitoring Plans.</li> <li> Approving HSEQ Awareness Events and Reward &amp; Recognition Programs.</li> <li> Participate in Corporate/ Directorate's HSE Management Review (Meeting).</li> <li> Ensuring HSE-related decisions from the unit level management review meetings are implemented.</li> </ul>
IMPROVEMENT Opportunities For Continual Improvement; Formal Incident Investigation; Management (Control) of Change	<ul style="list-style-type: none"> <li> Ensuring necessary resources and decision space is there to avail opportunities for improvement especially from near hit/ miss, formal incident investigations and MoC process.</li> </ul>	<ul style="list-style-type: none"> <li> Investigate incidents where assigned by MD/ CEO.</li> <li> Providing all necessary resources to avail opportunities for improvement especially from near hit/ miss, by conducting formal incident investigations and timely enabling MoC process.</li> </ul>

### 4.4.2 Directorate Level

PDCA Cycle	General Managers/ Head of Departments	Area Managers
LEADERSHIP HSE Policy Statement, Objectives and Goals; Role, Responsibilities & Authorities and Crisis Management	<ul style="list-style-type: none"> <li> Ensuring HSE and ERM Policies are communicated and implemented at all levels within the concerned Department and Locations.</li> <li> Ensuring HSE roles, responsibilities &amp; authorities related to HSE System are communicated to the concerned personnel for implementation.</li> <li> Ensuring emergency and evacuation procedures are defined, rehearsed, followed and updated.</li> <li> Ensure that incident is timely reported to EMT Chairman and regulatory authorities.</li> <li> Giving professional input to the EMT Members in finalizing the overall strategy for dealing with the incident, conducting deliberations on resumption of operational activities or otherwise and after deactivation of EMT, taking over the charge for controlling of recovery and/ or normal operations.</li> </ul>	<ul style="list-style-type: none"> <li> Ensuring HSE and ERM Policies are communicated and implemented at all levels within the concerned Locations.</li> <li> Ensuring HSE roles, responsibilities &amp; authorities related to HSE System are communicated to the concerned personnel for implementation.</li> <li> Following up that emergency and evacuation procedures are defined, rehearsed, followed and updated.</li> <li> Ensure that incident is timely reported to GM / HOD and regulatory authorities.</li> <li> Giving professional input to GM / HOD in finalizing the overall strategy for dealing with the incident, conducting deliberations on resumption of operational activities or otherwise and after deactivation of EMT, taking over the charge for controlling of recovery and/ or normal operations.</li> </ul>
PLANNING Health, Safety Environment Vulnerabilities identification & Impact (Risk) assessment; Legal & Other Requirements; HSE Objectives & Management Program	<ul style="list-style-type: none"> <li> <u>To act as Member Corporate Risk Management Team.</u></li> <li> Ensure vulnerabilities (threats &amp; opportunities) identification &amp; Impact (Risk) assessment are timely conducted and reviewed.</li> <li> Ensure HSE Objectives &amp; Management Programs to address the significant Impact (Risk)s are formulated and timely reviewed / followed-up .</li> <li> Ensure every unit / sub-unit is in compliance with applicable legal &amp; other requirements.</li> </ul>	<ul style="list-style-type: none"> <li> Participate in the process hazard analysis of respective units/ sub-units.</li> <li> Review Risk Registers of respective units/ sub-units.</li> <li> Reviewing performance update/ status of HSE Objectives &amp; Management Programs to address the significant Impact (Risk)s of respective units/ sub-units.</li> <li> Ensure unit / sub-unit is in compliance with applicable legal &amp; other requirements.</li> </ul>

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<p><b>SUPPORT</b> Training, Awareness &amp; Competence Communication &amp; Consultation HSE System Documentation &amp; Data Control; Control of Records</p>	<ul style="list-style-type: none"> <li>Ensuring that HSE related communication &amp; consultation process is effective.</li> <li>Ensuring distribution of HSE resources to the sites on behalf of top management.</li> <li>Ensuring HSE Training Need Assessment (TNA) is timely conducted.</li> <li>Ensuring adequate resources are in place and staff trained for accidents &amp; pollution prevention and emergency response.</li> <li>Coordinating the site occupation/ de-hiring/ restoration issues pertaining to community matters.</li> </ul>	<ul style="list-style-type: none"> <li>Ensuring adequacy of HazCom in order to keep workforce members safe by providing information about potential sources of injury, specifically, hazardous chemicals and emergency handling in the workplace.</li> <li>Check gaps regarding adequacy of resources and trained manpower for accidents &amp; pollution prevention and emergency response through TNA.</li> <li>Coordinating the site occupation/ de-hiring/ restoration issues pertaining to community matters.</li> </ul>
<p><b>OPERATION</b> Operational Controls</p>	<ul style="list-style-type: none"> <li>Approving relevant SOPs, Work Instructions, and Maintenance &amp; Calibration Programs.</li> <li>Ensuring no travel starts without Journey Management Plan (JMP).</li> <li>Ensuring waste management protocols are updated and followed.</li> <li>Reviewing Contractor's and Service Company's HSE performance and coordinate for improvement or otherwise.</li> </ul>	<ul style="list-style-type: none"> <li>Reviewing SOPs, Work Instructions, and Maintenance &amp; Calibration Programs for compliance.</li> <li>Ensuring implementation of HSE procedures, permits, JHAs/ JVAs, etc. in the E&amp;P lifecycle.</li> <li>Ensuring compliance of waste management protocols.</li> <li>Ensuring Journey Management Plans (JMPs) are timely developed and updated.</li> <li>Following-up Contractor's and Service Company's HSE performance and coordinate for improvement.</li> </ul>
<p><b>PERFORMANCE EVALUATION</b> HSE Monitoring, Measurement &amp; Compliance Evaluation Internal HSE Audit; Management Review</p>	<ul style="list-style-type: none"> <li>Participating in Annual Management Walk Around (MWA) For Hazards Hunting &amp; Reporting emphasizing HSE commitment and visibility by Leadership.</li> <li>Ensuring HSE Monitoring Plans are developed.</li> <li>Ensuring compliance against local laws and regulations at all levels is timely checked.</li> <li>Reviewing and monitoring cost and effort related to HSE matters on various projects, and take appropriate actions on serious resource concerns.</li> <li>Conducting, facilitating and reviewing HSE audits of critical nature.</li> <li>Ensuring database of key performance indicators is maintained: Key statistics are reported, reviewed and followed up on time.</li> <li>Harnessing efficacy of STOP Cards, HSEQ Awareness Events and Reward &amp; Recognition Programs.</li> <li>Participate in Corporate HSE Management Review Committee (HSE MRC).</li> </ul>	<ul style="list-style-type: none"> <li>Participating in Annual Management Walk Around (MWA) For Hazards Hunting &amp; Reporting emphasizing HSE commitment and visibility by Leadership.</li> <li>Ensuring HSE Monitoring Plans are followed &amp; implemented in letter and spirit.</li> <li>Ensuring compliance to local laws and regulations at all levels working under administrative control.</li> <li>Coordinate HSE audits and follow-up Action Plans.</li> <li>Ensuring timely reporting of key performance indicators.</li> <li>Act as an impetus to STOP Intervention Program, HSEQ Awareness Events and Reward &amp; Recognition Programs.</li> <li>Establishing Location HSE Management Review Committee (HSE MRC) to coordinate and control the activities of the HSE System being carried out by different functions and to periodically review and evaluate the performance of the HSE system.</li> </ul>
<p><b>IMPROVEMENT</b> Opportunities For Continual Improvement; Formal Incident Investigation; Management (Control) of Change</p>	<ul style="list-style-type: none"> <li>Investigate incidents where assigned or formulate team to investigate an incident.</li> <li>Prudently applying pertinent resources to avail opportunities for improvement especially from near hit/ miss, formal incident investigation and by actuating MoC process for all feasible projects and modification jobs.</li> </ul>	<ul style="list-style-type: none"> <li>Investigate incidents where assigned.</li> <li>Avail opportunities for improvement especially from near hit/ miss, formal incident investigation and by actuating MoC process for all feasible projects and modification jobs.</li> </ul>

### 4.4.3 Unit Level

#### 4.4.3.1 Location IC (Party Chief, Operation Manager, Field Manager)/Relievers

Responsibilities	Authorities	Accountabilities
<ol style="list-style-type: none"> <li>Understand and implement the company HSE &amp; ERM Policies and promote a positive culture based on improved HSE performance.</li> <li>Set a personal example with respect to HSE matters esp. through housekeeping.</li> <li>Ensure that all new employees are provided with a copy of the policy statement, receive such induction training as may be laid down in procedures, are issued with personal protective equipment as required.</li> <li>Ensure that he has received appropriate trainings on a) HSE b) regulatory requirements and c) operational controls for their level of management according to the competency guidelines.</li> <li>Supervise hazards identification and Impact (Risk) assessments.</li> <li>Integrate HSE Management System with the overall Management and appreciate the responsibilities of personnel under their authority and ensure that each employee knows his/ her responsibility and are equipped to play their part.</li> </ol>	<ol style="list-style-type: none"> <li>To act Chairman E-LMT</li> <li>To act as Chairman L-RMT.</li> <li>To investigate incidents where assigned.</li> <li>To review and approve following:               <ol style="list-style-type: none"> <li>Annual Onsite Vulnerabilities (Threats &amp; Opportunities) Identification and Impact (Risk) Assessment Plan</li> <li>Annual Onsite HSE Awareness Plan</li> <li>Onsite HSE Monitoring Plans</li> <li>Annual Onsite Waste Disposal Plan</li> <li>Annual Onsite Scenario-based Emergency Drill Plan</li> <li>Annual Internal HSE Audit Plan</li> <li>Annual OH Assessment /Fitness Tests (Trade-wise)Plan</li> </ol> </li> <li>Ensure compliance of above Plans, PTW, ERP, and Sectional SOPs.</li> <li>Convene quarterly HSE MRC meetings and review progress of each Section/ Department.</li> <li>Endorse/ approve permit to work (unless and until delegated to Shift IC/ Senior Officer).</li> <li>Can stop unsafe work and reprimand any employee for</li> </ol>	<p>Accountable to their direct line management through:</p> <ol style="list-style-type: none"> <li>Regular reporting to his Area Manager and HSE Department in H.O.</li> <li>Participation in the workplace inspections as per HSE Monitoring Plans.</li> <li>Review, approval and dissemination of vulnerabilities identified and Impact (Risk)s assessed.</li> <li>Setting and reporting on Targets and Key Performance Indicators</li> <li>Reviewing of CPR Log and CPR system for effective implementation</li> <li>Reviewing the effectiveness of HSE Trainings and ER Drills.</li> <li>Reviewing the fitness of workforce through Trade Tests.</li> <li>Ensure TNA of personnel is performed on annual basis.</li> <li>Review progress on HSE MRC meetings and own HSE performance of the unit.</li> </ol>

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<ol style="list-style-type: none"> <li>7. Ensure all employees and contractors/ sub-contractors / service companies are suitably trained/ competent to carry out the prescribed task and that the necessary licenses/ certificates of competence are in force and appropriate.</li> <li>8. Ensure safe storage, handling, usage and disposal of material.</li> <li>9. Ensure PPE compliance by workforce and by contractors/ sub-contractors / service companies.</li> <li>10. Provide written instructions for development of work methods outlining potential vulnerabilities (hazards) and precautions, and ensure they are complied with.</li> <li>11. Ensure the compliance of HSE Monitoring Plans.</li> <li>12. Formulate ERTs and ensure provision of adequate resources to them.</li> <li>13. Ensure Journey Management procedure is followed.</li> <li>14. Ensure Safety Training Observation Program (STOP) and implement the Hazard Hunt Program (HHP) as tool to highlight UBUC. <i>(Each fortnight, Location IC shall pay Observation Tour along with Location HSE Rep./ Sectional IC and fill-in the STOP Cards.)</i></li> <li>15. Ensure the Statutory Notices, hazardous cautions, HSE Policy, ERP and Appointed First Aiders are displayed and maintained in prominent locations.</li> <li>16. Ensure accident and near-hits reporting procedures are understood and complied with, and assist accident investigations where appropriate.</li> <li>17. Ensure MoC procedure is followed.</li> </ol>	<p>failing to discharge their HSE responsibilities.</p> <ol style="list-style-type: none"> <li>9. Evaluate the HSE performance of each Section / Department.</li> <li>10. Check and determine with Location HSE IC that each Contractor / Service Company is providing adequate training and supervision of its workforce.</li> <li>11. Review of CPR Log and ensure CPR system is effectively implemented and followed.</li> <li>12. To take disciplinary actions against HSE Management System violations.</li> </ol>	
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#### 4.4.3.2 Location Departmental/ Sectional ICs/ Relievers

Responsibilities	Authorities	Accountabilities
<ol style="list-style-type: none"> <li>1. Understand and implement the company HSE and ERM policies and promote a positive culture based on improved HSE performance.</li> <li>2. Set a personal example with respect to HSE matters esp. through housekeeping.</li> <li>3. Ensure that he has received appropriate trainings on a) HSE b) regulatory requirements and c) operational controls for their level of management according to the competency guidelines.</li> <li>4. Supervise hazards identification and Impact (Risk) assessments.</li> <li>5. Integrate HSE Management System with the overall Management and appreciate the responsibilities of personnel under their authority and ensure that each employee knows his/ her responsibility and are equipped to play their part.</li> <li>6. Ensure all employees and contractors/ sub-contractors / service companies are suitably trained/ competent to carry out the prescribed task and that the necessary licenses/ certificates of competence are in force and appropriate.</li> <li>7. Ensure safe storage, handling, usage and disposal of material.</li> <li>8. Implementation of Journey Management procedure through nominated/designated In-charge Transport.</li> <li>9. Ensure PPE compliance by workforce and by contractors/ sub-contractors / service companies.</li> <li>10. Provide written instructions for development of work methods</li> </ol>	<ol style="list-style-type: none"> <li>1. To review following as Member of Location Management Review Committee (MRC):               <ol style="list-style-type: none"> <li>a) Annual Onsite Vulnerabilities (Threats &amp; Opportunities) Identification and Impact (Risk) Assessment Plan</li> <li>b) Annual Onsite HSE Awareness Plan</li> <li>c) Onsite HSE Monitoring Plans</li> <li>d) Annual Onsite Waste Disposal Plan</li> <li>e) Annual Onsite Scenario-based Emergency Drill Plan</li> <li>f) Annual Internal HSE Audit Plan</li> <li>g) Annual OH Assessment /Fitness Tests (Trade-wise)Plan</li> </ol> </li> <li>2. Act as Approving Authority for the PTW (as representative of location management) for carrying out jobs in their operating areas.</li> <li>3. Can stop unsafe work and reprimand his subordinate for failing to discharge HSE responsibilities.</li> <li>4. Evaluate HSE performance of their subordinates.</li> <li>5. To investigate incidents where assigned.</li> </ol>	<p>Accountable to their direct line management through:</p> <ol style="list-style-type: none"> <li>a) Nominate suitable personnel for various roles within ERTs and ensure they have been properly trained.</li> <li>b) Regular reporting to Location IC and Department in H.O.</li> <li>c) Participation in their workplace inspections as per HSE Monitoring Plans.</li> <li>d) Submission of vulnerabilities identified and Impact (Risk)s assessed to HSE Section.</li> <li>e) Setting and reporting on Targets and Key Performance Indicators.</li> <li>f) Submitting Updated MSDS, SOP, Work Instructions, Forms.</li> <li>g) UBUC, Incidents are reported and investigated.</li> <li>h) Ensure job area has been inspected and all necessary precautions are taken up.</li> <li>i) Ensure timely certification / inspection of lifting-equipment, electrical installations, earth moving machinery, etc. from the relevant parties w.r.t. the Safety Monitoring Plan where required.</li> <li>j) All containers of hazardous chemicals / materials in the designated area are properly labeled and secured.</li> <li>k) Timely and rightly disposal of waste chemicals / containers / bottles.</li> <li>l) To keep record for waste disposal.</li> </ol>

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11. Ensure the compliance of HSE Monitoring Plans.
12. Formulate ERTs and ensure provision of adequate resources to them.
13. Ensure that all new employees are provided with a copy of the policy statement, receive such induction training as may be laid down in procedures, are issued with personal protective equipment as required.
14. Participate in Safety Training Observation Program (STOP) and Hazard Hunt Program (HHP) to highlight UBU. *(Each week one Sectional IC pays Observation Tour along with Location HSE Rep. and fill-in the STOP Cards.)*
15. Ensure the Statutory Notices, hazardous cautions, HSE Policy, ERP and Appointed First Aiders are displayed and maintained in prominent locations.
16. Ensure the basics HSE facts and figures be submitted (preferably through email) to HSEQ Department H.O. on daily basis.
17. Submit the consolidated HSE performance of working entity on the Monthly HSE Report.
18. Ensure to request a Fair Treatment Assessment process be activated in case of any incident / near hit/ miss where willful violation of OGDCL HSE policies, standards, protocols and procedures is considered to have taken place.
19. Ensure to participate in Daily HSE meetings at the start / end of each business day in each location. This meeting can either be conducted separately or as part of daily 'operations' meeting.
20. Ensure accident and near-hits reporting procedures are understood and complied with, and assist accident investigations where appropriate.
21. Ensure management of change (MoC) procedure is followed where required by formulating ECR Committee.
22. Ensure that First-hand information of an incident be transmitted to all concerned at Head Office within 01 hour of the incident through available communication channels like telephonically, cellular messaging, email, etc. and submit Preliminary Incident Report (PIR) on the prescribed format on immediate basis but not later than 12 hours.

#### 4.4.3.3 Location (Unit Level) HSE Officer/ Reliever

Responsibilities	Authorities	Accountabilities
<ol style="list-style-type: none"> <li>1. Educate personnel on the company HSE &amp; ERM Policy and promote a positive culture based on improved HSE performance.</li> <li>2. Act as Emergency Response Coordinator (ERC) in LMT during Emergency situations.</li> <li>3. Act as Secretary Location Risk Management Team (L-RMT).</li> <li>4. Participate in the emergency response planning process and develop ERPs, arrange / conduct and maintain record of fire and other emergency mockup drills.</li> <li>5. Coordinate to follow ERP and adequate "Notice to Employees" in areas where notices are usually posted.</li> <li>6. Develop Onsite HIRA Plan on quarterly basis and prepare Assessment Teams accordingly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Prepare Annual Onsite Scenario-based Emergency Drill Plan, provide training to emergency response teams and conduct drills accordingly.</li> <li>2. Prepare Annual Internal HSE Audit Plan and conduct internal audits.</li> <li>3. Stop the work if unsafe behavior/ condition observed resulting in serious incident.</li> <li>4. Conduct surveillance visits of the operations on regular basis to check compliance with the HSE system.</li> <li>5. Ensure that all new employees, visitors, sub-contractors / service companies, receive induction trainings and are issued with personal protective equipment as required.</li> <li>6. In the case of Hot Work Permit;</li> </ol>	<p>Accountable to their direct line management as:</p> <ol style="list-style-type: none"> <li>a) To immediately report HSEQ Department H.O. in case of an incident.</li> <li>b) To regularly report the Location's HSE Performance to HSEQ Department H.O.</li> <li>c) To keep updated compliance status on Regulatory Requirements and report HSEQ Department H.O.</li> <li>d) To monitor &amp; record the effectiveness of Toolbox (Safety) Talks.</li> <li>e) To act as Secretary of HSE Committee and take minutes of HSE Management Review Committee (MRC) Meetings.</li> <li>f) To ensure ERP is developed and reviewed regularly for all field activities.</li> </ol>

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<p>7. To provide technical review of vulnerabilities associated with various operations, methods, and purchased items and compile HSE Impact (Risk) Register after coordinating with other Sections.</p> <p>8. To provide technical review for Formulation of HSE objectives and action plans in collaboration with the sectional In-charge and to assist sections in meeting their HSE related responsibilities and objectives.</p> <p>9. To communicate the requirements laid down in JHA/JVA procedure to all employees and contractor's management and Assist other Sections in performing Job Vulnerabilities / Hazard Analysis (JVA / JHA) where required.</p> <p>10. Identify/ assess the training needs of the field personnel based on HSE management system to perform their activities safely and develop Annual Onsite HSE Awareness Plan.</p> <p>11. Prepare Onsite HSE Monitoring Plans and ensure HSE Monitoring Plans are followed.</p> <p>12. Participate in Safety Training Observation Program (STOP) and Hazard Hunt Program (HHP) to highlight UBUC. (On daily basis to pay Observation Tour and fill-in the STOP Cards.)</p> <p>13. Ensure Operating Departments have current copy of the related documents. Ensure STOP Cards and CPR Templates are available at designated places.</p> <p>14. Maintain an updated backup file of Hazardous chemicals / materials and MSDSs.</p> <p>15. To provide assistance to other departments / sections in the preparation of HSE operating procedures / work instructions.</p> <p>16. Prepare Annual Onsite Waste Disposal Plan and maintain record (copy) of waste disposal.</p> <p>17. Maintain a consolidated "List of Authorized Permit Issuing Authorities and Receiving Authorities" for various types of permits (duly signed by Location IC).</p> <p>18. Coordinate/ implement PTW system &amp; in case of Hot Work Permit</p> <p>a. Ensure that arrangements have been made for fighting any accidental fire.</p> <p>b. a standby Fireman has been assigned.</p> <p>19. To maintain record of document change requests and change control requisitions.</p> <p>20. Process Corrective &amp; Preventive Action Requests (CPRs) and STOP cards and maintain their Logs.</p> <p>21. Provide assistance in the implementation of change control protocols.</p>	<p>a) To check that the Authority has carried out the required tests.</p> <p>b) Adjoining area where the job has to be performed is safe from fire prevention point of view.</p> <p>7. In the case of Confined Space Entry Permit;</p> <p>a) To check that Authority has carried out the required explosivity and oxygen tests.</p> <p>b) Emergency equipment is available.</p> <p>c) Emergency rescue arrangements have been made.</p> <p>d) a standby Person has been assigned.</p> <p>8. In case of Electrical Work Permits;</p> <p>a) To verify that IC Electrical or his assigned representative has looked into the matter that all relevant electrical circuits have been suitably isolated and have been locked as per requirements.</p> <p>9. To investigate incidents where assigned.</p> <p>Note:- <i>In case HSE Representative is required to sign a permit at any stage, it would only be an act of endorsement that Permit Issuing Authority and Permit Receiving Authority both have taken all applicable safety measures against the Checklist prior to execution of safety critical job.</i></p>	<p>g) In case of any hot work ensure that a standby Fireman has been assigned.</p>
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**Note:-**

1) Execution of any civil works, 2) maintenance /troubleshooting of machines, equipment or apparatus, 3) plumbing, 4) grass cutting, 5) whitewash, 6) mess/ kitchen affairs, 7) refuse/ scrap storage, 8) handling local issues/ disputes etc. DO NOT come under the purview of HSE Section.

**4.4.3.4 Medical Representative**

Responsibilities	Authorities	Accountabilities
1. To prepare, review and execute Occupational Health Monitoring Plan of the Location.	1. To specify the nature of illness and injury after diagnosis/ examination.	Accountable to their sectional management through:
2. To prepare Annual OH Assessment /Fitness Tests (Trade-wise) Plan & perform tests of the Locations' workforce.	2. To carry out inspections of base camps, kitchen, dining facilities on regular basis and also check the quality of food and water treatment and advice accordingly.	a) Regular reporting to his Sectional IC.
3. To keep a copy of MSDS of all pertinent chemicals handled/ stocked/ used at Location.	3. To supervise the camp sanitation and also examine the food handlers and advice accordingly.	b) To perform inspections as per OH Monitoring Plan.
4. Trained to be able to supply basic first aid of minor injuries. He/ She		c) To maintain sufficient amount of medicines stock in the clinic.
		d) To ensure availability of polyvalent snake bite anti-venom along with snake bite kits.

**IMPORTANT:-** IT IS EVERYBODY'S RESPONSIBILITY TO ENSURE THAT THE OGDCL'S HSE MANAGEMENT SYSTEM IS IN PLACE.





<p>shall receive patients and also refer patients to clinics or government hospitals when necessary that provide emergency services.</p> <p>5. To maintain medical statistics of Location's workforce.</p> <p>6. Responsible for the medical welfare of Location's workforce on their health and hygiene.</p> <p>7. To segregate medical/ clinical waste as hazardous and plan disposal accordingly.</p> <p>8. To impart short awareness session on first aid, seasonal/ epidemic diseases and hygiene.</p>	<p>4. To advise job rotation of an injured or sick person if he is not satisfied with his health conditions.</p> <p>5. To respond swiftly to emergency calls.</p>	<p>e) To maintain and report personal medical record for each of the Location's workforce.</p>
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#### 4.4.3.5 Purchase Committee

- ▣ To ensure that specifications of emergency detection systems like F&G detection system i.e. flame/smoke detectors and toxic/combustible detectors, alarm systems conforms to the requirements of NFPA and purchased accordingly.
- ▣ To ensure that specifications of emergency response equipment such as ESD, fire extinguishers fire lorry, fire pump, hydrant system etc. meet the requirements of NFPA and purchased accordingly.
- ▣ To ensure that specifications of mechanical spares interacting with Fluid/Product such as bearings, valves, filters, etc. meet the requirements of ASME/ANSI standards and purchased accordingly.
- ▣ To ensure that specifications of mechanical spares exposed to external environment such as gauges, transmitters, switches, etc. are weatherproof & meet the requirements of ASME/ANSI standard and purchased accordingly.
- ▣ To ensure that specifications of chemicals, paints etc. includes non-toxicity, non-flammability, & environment friendliness, has MSDS, proper packing/labeling, and purchased accordingly.
- ▣ To ensure that specifications of computer products are energy rated and purchased accordingly.
- ▣ To ensure that specifications of electrical equipment and apparatus within Zone 0&1 are intrinsically safe & explosion proof and purchased accordingly.
- ▣ To ensure that specifications of electrical appliances for Zone 02 meet the desired ratings as per intended use and purchased accordingly.
- ▣ To ensure that specifications of Personal Protective Equipment (PPE) conform to OSHA guidelines, are suitable for intended use and of good quality and purchased accordingly.
- ▣ To ensure that specifications of housekeeping services/ machinery/ equipment meets hygiene & quality standards, environment friendliness and purchased accordingly.
- ▣ To ensure that specifications of piping and sanitation material include good quality & environmental friendliness and purchased accordingly.
- ▣ To ensure that specifications of food products meet hygienic & quality standards and purchased accordingly.
- ▣ To ensure that specifications of drinking water meet the requirements of WHO/ NDWQS (National Drinking Water Quality Standards) and purchased accordingly.
- ▣ To ensure that specifications of crockery, utensils, etc. meet quality & reliability standards, properly packed and purchased accordingly.
- ▣ To ensure that specifications of stationery items meet quality (recycled materials preferred) and purchased accordingly.
- ▣ To ensure that only the prescribed, licensed and valid to use medicines are purchased.
- ▣ To ensure that specifications of communication systems like walkie talkies, photocopiers etc. meet the requirements of hazardous area classification, environment friendliness and purchased accordingly.
- ▣ To ensure specifications of lube oils, gear oils, and transmission oils include desired API gravity, viscosity, fire resistance qualities and purchased accordingly.
- ▣ To ensure those brands of soaps, detergents, toothpastes etc. are purchased that are health and environment friendly.
- ▣ To ensure that EPA Certified Hazardous Waste Disposal Contractors are selected/ prequalified and given order.

#### Important Notes about Procurement Cases:

- ▣ OGDCL's Line management is to always ensure that the workforce is competent and have the necessary authority and resources to perform their duties safely and environment consciously. In doing so, line management shall involve in various purchase matters. Preparation of indents/TORs and performing technical assessments of such cases hence comes under the direct jurisdiction of User's/ Indenting Department.
- ▣ HSE Department shall extend its positive support or input (in terms of advice/guideline/value addition as promulgated by any regulator or standard or best practice) as and when required at any stage of the procurement; However it is pertinent to mention that HSE Department shall not and cannot be the custodian of any system, equipment, machinery, or other asset that is part of the operational requirement (except for few portable gadgets and consultancy services) and hence shall refrain indulging into any such procurement matter directly or indirectly.



## 4.5 Crisis Management

OGM/P-HSE-4.5(08) Revision Number 8

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### Change/ Revision Log

#	Description of Change
1.	Added: Emergency levels and subsequent actions (Section 4.4.3)
2.	Added: Potential Impact w.r.t. Asset/ Financial exhibited in USD replacing PKR.
3.	Added: Emergency Response Teams – roles & responsibilities.
4.	Amended: HR & Admin and Accounts & Finance roles merged; Also nomenclature of GM replaced with that of HOD.
5.	Amended: It is the prerogative of EMT Chairman to declare the actual level/ severity of crisis upon start. Also, he would judge in how much time the level/ severity of crisis can escalate and inform MD/ CEO accordingly.
6.	Amended: - Once EMT roles are clearly scheduled for the fortnight, the Duty Roster shall be posted at MD/ CEO Secretariat as well as GF Notice Board. - Once LMT roles are clearly scheduled for the fortnight, the Duty Roster shall be posted at Main Notice Board of site as well as camp area.
7.	Amended: Take decision for deactivation of LMT after receiving necessary information from the incident site and after assessing the integrity of assets, buildings, machinery, equipment, etc.
8.	Amended: On deactivating, EMT Chairman shall prepare a debrief with the help of Log and Record Keepers.
9.	Added: Appendix – E (Prompt EMT Checklist)
10.	Amended: Interactive Emergency Drills shall be conducted involving a particular location (esp. major / vital) with Head Office / OGTL on bi-annual basis.

### Associated Documents Approval & Issue

Related Document/ Record	Initiated by	Reviewed by	Checked/ Verified / Approved by
EMT Duty Roster	HSE Officer	Manager HSE	GM HSE
LMT Duty Roster	Location HSE Rep.	HSE MRC	Location InCharge
Location's Emergency Drill Report	Location HSE Rep.	Any Member, Location HSE MRC	Location InCharge

## 4.5.1 Purpose

- ☐ To provide methodology to proficiently respond during crisis situations on collective basis to safeguard the safety of OGDCL's personnel, environment and assets as our business priority would remain firstly people, followed by environment, and company assets.
- ☐ To categorically define roles to be taken by OGDCL-H.O.-based-management to provide structured and methodical assistance & response to emergencies related to or arising out of company operations at its office buildings and field locations.

## 4.5.2 Scope

- ☐ This procedure is applicable to all OGDCL facilities including office activities; medical centers; operational activities of exploration, drilling, production & plants and projects; logistics; bases stores; field gathering construction parties; engineering field parties; data libraries; etc.
- ☐ Although the procedure provides a framework of collective and seamless response at all units and sub-unit levels of OGDCL; yet it does not replace the Emergency Response (ER) Plans already in vogue at OGDCL locations as essential requirements of their operations.

## 4.5.3 Emergency Levels

- ☐ Emergency levels and subsequent actions are mentioned below:

### Emergency Level-1:

An emergency that can be controlled by the localized action at the affected area by the available personnel and resources. This level of emergency doesn't have immediate serious injuries, potential of fatality, major equipment loss, major loss of primary containment, large fire/ explosion, major vehicular incident and/ or major environment impact.

- **Emergency siren is NOT sounded at this stage.**
- **Mustering is NOT required.**
- **LMT is NOT activated; however, the situation is critically monitored by Location InCharge (Chairman LMT) for assessment of any further escalation potential.**
- **Work activities can be suspended temporarily in the localized area which is or likely to be affected.**

### Emergency Level-2:

An emergency situation which has potential to impact the affected site significantly and for which external support services may be required. It may result in serious injuries/ fatality, major equipment damage, major loss of primary containment, significant fire/ explosion, major vehicular incident, and/ or loss of controlled substance to the environment

- **In case of incident at field location: Emergency siren is sounded with intermittent tones of 10 seconds each with 5 seconds pause, repeated 3 times. Where available, emergency announcement through Public Address system may also be made. Emergency termination would be managed through siren with continuous tone for 120 seconds.**
- **In case of incident at an Office Building, Islamabad: Fire Alarm Bell is sounded for 20 seconds and/or Public Address (PA) system is used. Once emergency is over, ALL CLEAR to be announced and announcement on mega phone and Public Address (PA) system to be made twice.**
- **Mustering is required. However, LMT Chairman may further decide to evacuate to the Assembly Points designated outside the main gate. Employees are to wait for further instructions there.**
- **LMT is activated; however, EMT may be activated depending upon crisis level (severity) 3, 4, or 5**
- **All operations/ activities will be stopped.**

### 4.5.4 Emergency Scenarios-Consequence

Following are the probable emergency scenarios-consequence analysis (in conjunction with Risk Management Procedure) of OGDCL office buildings, Islamabad and field locations:

Scenarios	Consequences wrt Crisis Levels
i. Fire / Explosion / Blowout	<b>Catastrophic Crisis Level (5)</b> <ul style="list-style-type: none"> <li>■ Multiple Fatalities</li> <li>■ Massive Effect on Environment; Persistent Severe Environmental Damage or Severe Nuisance extending over a large area of commercial, communal or recreation use; Continuous excursions beyond allowable or regulatory limits</li> <li>■ <b>Loss of &gt; 10 Million USD</b></li> <li>■ Reputation issue (International Concern)</li> </ul>
ii. Roadside Accident	
iii. Oil Spillage	<b>Critical Crisis Level (4)</b> <ul style="list-style-type: none"> <li>■ Single Fatality</li> <li>■ Major Effect on Environment; Severe environmental damage; the company is required to take Extensive measures to restore the damaged environment; Intermittent excursions beyond allowable or regulatory limits</li> <li>■ <b>Loss of 2 – 10 Million USD</b></li> <li>■ Reputation issue (National Concern)</li> </ul>
iv. Gas Leakage	
v. Boiling Liquid Expanding Vapor Explosion (BLEVE)	
vi. Natural Disaster (Heavy Rains, Floods, Earthquake, etc.)	<b>Major Crisis Level (3)</b> <ul style="list-style-type: none"> <li>■ Multiple Injury Cases esp. Lost Time Injury(ies)</li> <li>■ Local Effect on Environment; Limited Discharges affecting the neighborhood or damaging local environment; Excursions beyond allowable or regulatory limits</li> <li>■ <b>Loss of 0.025 – 2 Million USD</b></li> <li>■ Reputation issue (Provincial / Regional Concern)</li> </ul>
vii. Terrorist Attack / Bomb Threat	
viii. Civil Unrest (Local Strike)	<b>Marginal Crisis Level (2)</b> <ul style="list-style-type: none"> <li>■ Medical Treatment Case(s)/ Restricted Workday Injury(ies)</li> <li>■ Minor Effect on Environment; Discharge or Contamination with no lasting effect; Rare excursions beyond allowable or regulatory limits</li> <li>■ <b>Loss up to 0.025 Million USD</b></li> <li>■ No substantial reputation issue (Local Concern)</li> </ul>
ix. Others	
	<b>Negligible Crisis Level (1)</b> <ul style="list-style-type: none"> <li>■ First Aid Case/ Near hit or miss</li> <li>■ Slight Effect of Environment; Slight Damage within the premises of the facility</li> <li>■ Nil</li> <li>■ No reputation issue</li> </ul>

### 4.5.5 Crisis Management Teams

There shall be two types of crisis management teams consisting of Core and Support Members:

- Emergency Management Team (EMT), Head Office
- Location Emergency Management Teams (LMTs)

Importance-wise role of EMT and LMTs shall be to:

- i. save lives;
- ii. minimize damage to the environment;
- iii. protect assets.

Additional roles shall be to manage:

- i. business continuity;
- ii. liability; &
- iii. reputation.

### 4.5.5.1 Emergency Management Team (EMT)

#### 4.5.5.1.1 EMT Structure

- ☐ Located at OGDCL House Islamabad, EMT shall be responsible for providing support and guidance in case of crisis at Islamabad Offices or other facilities. However in case of inaccessibility of H.O., EMT Room at OGTI Islamabad shall be activated. Both EMT Rooms shall be maintained by Admin. Department.
- ☐ Structure of EMT is tabulated below and also mentioned at Appendix-A.

Chairman/ Alternate		
ED (Production) / ED (Exploration) / ED(Petroserv) / ED (HR-Admin) or any other ED nominated by MD/CEO		
Core Member		Alternate Member
1	HOD (Production)	M (Production)
2	HOD (P&P)	M (P&P)
3	HOD (Exploration)	M (Exploration)
4	HOD (DO)	M (DO)
5	HOD (HSEQ)	M (HSEQ)
6	HOD (CA)	M (CA/ EC)
7	HOD (Security)	M (Security)
8	HOD (HR/ Admin)	M (HR/ Admin)
9	HOD (Medical Svc)	M (Medical Svc)
10	HOD (Commercial)	M (Commercial)
11	HOD (System)	M (System)
12	Log Keeper (Preferably from EMT Chairman's Directorate)	
13	Record Keeper (Preferably from HSEQ Deptt.)	
Support Member		Alternate Member
1	ED (Services)	GM (SCM)
2	ED (JV)	GM (JV)
3	HOD (Legal)	M (Legal)
4	HOD (CSR)	M (CSR)
5	HOD (Finance/ Accounts)	M (Finance/ Accounts)
6	HOD (OGTI)	M (OGTI)

- ☐ The Support positions may be called in on as-&-when-required-basis. Requirement for additional support functions as part of the incident response shall be dictated by the actual incident, and be at the discretion of EMT Chairman.

#### 4.5.5.1.2 EMT Activation Process

☐ EMT may be activated when an **Emergency Level-2** occurs after assessing actual and possible consequences as Crisis Level (Severity) 3, 4, or 5 at any OGDCL Facility.

- ☐ EMT shall be activated as follows:

**▣** In case of incident at an office building, Islamabad:

HOD (HR-Admin)/ HOD (Security)/ HOD (HSEQ) shall inform EMT Chairman for further information to MD/ CEO; once notified, MD/ CEO shall make a decision on the requirement for EMT activation.

**▣** In case of incident at field location:

- LMT Chairman shall immediately activate the LMT upon Emergency Level 2;
- LMT Chairman shall intimate the relevant Area Manager/ HOD;





- Relevant HOD shall inform EMT Chairman;
- EMT Chairman may activate the EMT depending upon Crisis Level (Severity) 3, 4, or 5;
- EMT Chairman shall further inform MD/ CEO about the situation;
- Once notified about the LMT activation, MD/ CEO shall make a decision on the requirement for EMT activation.

- ☐ It is the prerogative of EMT Chairman to declare the actual level/ severity of crisis upon start. Also, he would judge in how much time the level/ severity of crisis can escalate and inform MD/ CEO accordingly.
- ☐ EMT Chairman shall inform EMT Members telephonically or through electronic messaging application (either directly or through his team).
- ☐ During emergency, Admin. Member shall pass on instructions to spare the EMT Room; any ongoing meeting, seminar, training or other event shall be ceased to continue in the EMT Room at the time of emergency.

#### **4.5.5.1.3 EMT Duty Roster Requirements**

- ☐ A fortnightly EMT Duty Roster shall be issued by HSEQ Department H.O. to all EMT Members and transmitted to All OGDCL Locations.
- ☐ The Duty Roster shall show all the CONTACT DETAILS of EMT Members.
- ☐ EMT Duty Roster guidelines are as follows:
  - ▣ HSEQ Department shall be responsible for maintaining/ updating the overall Duty Roster;
  - ▣ All EMT positions shall remain filled at all times;
  - ▣ EMT Members shall ensure their presence on EMT callout.
  - ▣ In case of a change, the Core Member shall notify the Alternate Member and EMT Chairman;
  - ▣ All personnel "On Duty" (according to the Duty Roster) shall ensure they carry a mobile phone all times; &
  - ▣ All personnel on duty shall remain within 02 hours traveling time from the EMT Room and in a condition which permits them to carry out their emergency response duties.
- ☐ Once EMT roles are clearly scheduled for the fortnight, the Duty Roster shall be posted at MD/ CEO Secretariat as well as GF Notice Board.

#### **4.5.5.1.4 Roles of EMT After Activation**

(Prompt EMT Checklist specimen is given at Appendix-E)

##### **MD/CEO/ COO/ CFO**

- ▣ Upon receiving information from EMT Chairman, shall activate the EMT; however may nominate any ED to Chair the EMT irrespective of the Duty Roster; and based on the gravity of situation, may join the EMT proceedings anytime.
- ▣ Liaise with Chairman BOD/ Risk Management Committee (RMC/) Ministry of Energy (Petroleum Division) to share incident update;
- ▣ Take decisions after assessing the overall implications of crisis situation; &
- ▣ Ordering the deactivation of EMT after receiving necessary information.

##### **EMT Chairman**

(ED Production / ED Exploration / ED Petroserv / ED HR-Admin)

- ▣ Upon receiving information about an emergency, shall inform MD/ CEO for seeking consent on EMT activation;  
*(The preliminary incident information shall be passed on to EMT Chairman*
  - a) *by LMT Chairman through his Area Manager/ HOD, in case of field emergencies &*

b) by General Manager (Admin)/ General Manager (Security)/ General Manager (HSEQ) in case of emergencies in office buildings, Islamabad);

- ▣ Ensure that EMT Members have been informed to assemble at EMT Room telephonically or through electronic messaging application either directly or through his team;
- ▣ Nominate and ensure that one Officer as Log Keeper is present in the EMT on immediate basis (preferably from his own Directorate);
- ▣ After assembling at EMT Room, shall take briefing on the incident and decide to call requisite supporting members keeping in view the severity and nature of the incident;
- ▣ Establish immediate priorities referring to the relevant Emergency Response (ER) Plan; identify any additional resources required for managing the emergency from nearby locations, service companies, JV Partners, etc.;
- ▣ Assign responsibilities to the team members;
- ▣ Identify the external emergency services in consultation with the HSE/ Security /Admin /CA Member in order to manage/ control the incident e.g. Rescue 1122, fire brigade etc.;
- ▣ Ensure that decisions made to respond incident are timely communicated to LMT Chairman through respective HOD after due deliberation in the EMT proceedings;
- ▣ Inform MD/ CEO with the current (updated) information and efforts being made to control the incident for briefing BOD and Ministry of Energy (Petroleum Division) (if required) in following sequence;
  - ✓ Nature and status of emergency
  - ✓ Cause(s) of the incident in so far as this is known
  - ✓ Media/ press situation
  - ✓ Prognosis/ Projection (loss and other consequences)
  - ✓ Rescue operations
  - ✓ Consequences in terms of production & revenue
- ▣ Take progress report on tasks from each team member to remain updated;
- ▣ Summarize the update, set priorities in accordance with the evolving situation and allocate responsibilities for actions. Set the time for the next update;
- ▣ Liaison with the relatives or Next of Kin (NOK) of the affected employees through HR-Member;
- ▣ Advice Commercial/External Communication/JV Member for preparing response to relevant agencies/stakeholders (if required);
- ▣ Issue media & press statement(s) after review by Spokesperson (Company Secretary/ HOD Legal) and approval from MD/CEO;
- ▣ Take decision for deactivation of LMT after receiving necessary information from the incident site and after assessing the integrity of assets, buildings, machinery, equipment, etc.
- ▣ Co-ordinate any post-incident recovery planning necessary;
- ▣ Ensuring that the appropriate EMT Members remain available during the initial recovery planning phase; &
- ▣ Hand over recovery and/ or normal operations to the relevant HOD at a mutually agreed time/ phase.

#### **Log Keeper** (preferably from EMT Chairman's Directorate)

- ▣ Begin collection and analysis of data as soon as possible;
- ▣ Maintain a chronological log (pay special attention to times of significant activities & events) on electronic file & project on screen. Print incident log when complete and pass to EMT;
- ▣ If log is written on board only, photograph board before clearing;
- ▣ Proactively monitor all communication and record pertinent points as they arise;



- ▣ Recover documents and notes from all EMT Members on a regular basis;
- ▣ Maintain situation chart/map of incident in the EMT Room;
- ▣ File all official forms and reports;
- ▣ Review records for accuracy and completeness; &
- ▣ Provide incident documentation as requested.

### **Operational Members (HODs)**

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(Production / Process / Drilling / Exploration )

- ▣ Obtain all the relevant information regarding incident including but not limited to the following:
  - ✓ Nature and status of emergency
  - ✓ Casualties status
  - ✓ Assets damaged
  - ✓ Medical requirements
  - ✓ Initial environmental/ community/ nearby industries implications
- ▣ Responsible to inform EMT Chairman and reach EMT Room;
- ▣ Brief in depth, to the EMT Members, nature and severity of the incident and "AS IS" situation in the incident site;
- ▣ Give his technical input for shutting down operations, handling the emergency as per relevant Emergency Response (ER) Plan and finalize the additional resources (if required) from other locations to cope the situation and subsequent mobilization of additional technical and/ or operational support as decided in the EMT;
- ▣ Give professional input to the EMT Members in finalizing the overall strategy for dealing with the incident;
- ▣ Liaise with LMT Chairman on the effectiveness of actions being taken to control the emergency and subsequently apprise the EMT Members;
- ▣ Provide assistance regarding movement of technical staff and/ or equipment to the incident site;
- ▣ Ensure that incident is timely reported by Location IC to the regulatory authorities;
- ▣ Deliberate on resumption of operational activities or otherwise; &
- ▣ After deactivation of EMT, taking over the charge for controlling of recovery and/ or normal operations.

### **Admin Member (HOD-HR/Admin)**

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- ▣ Establish and keep EMT Room up to date and ensure that all the facilities mentioned in Appendix-B1 are readily available and functional;
- ▣ In case of H.O. emergency, gather complete detail of the incident to be shared with EMT Chairman and ensure safe evacuation (considering headcount & muster point assembly) in collaboration with HSE Member;
- ▣ Give his input for handling the situation referring to the relevant Emergency Response (ER) Plan through arranging additional resources from agencies like Rescue 1122, Fire brigade, civil aviation, etc. to cope with the situation;
- ▣ Coordinate and manage additional transport requirements at incident site; &
- ▣ Advice on matters related to Staff Union.
- ▣ Coordinate & inform the relatives or Next of Kin (NOK) of the affected employees; &
- ▣ Process compensation claims arising as a result of any incident.

### **HSE Member (HOD-HSE)**

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- ▣ Advice EMT Chairman on the workforce health, asset's safety and environmental repercussions in perspective of national/ provincial regulations;

- ▣ Nominate and ensure that one Officer as Record Keeper is present in the EMT on immediate basis;
- ▣ Liaise with IC HSE at incident site for safe evacuation;
- ▣ Evaluate the emergency for its short and long-term impact implications; &
- ▣ Advice EMT Members in deciding to call for any sort of internal/ external help in the light of relevant Emergency Response (ER) Plan.

**Record Keeper (preferably from HSEQ Deptt.)**

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- ▣ Remind EMT Chairman of outstanding issues or actions from the log;
- ▣ Maintain the issues and actions log;
- ▣ Organize incident documents in filing system;
- ▣ Establish copy/ duplication service, respond to requests;
- ▣ File all forms, reports and photos;
- ▣ Review records for accuracy and completeness;
- ▣ Provide documentation/ record as requested to EMT.
- ▣ Provide duplicating and copying services as requested;
- ▣ Store files for post incident use; &
- ▣ Take digital photos of status boards before they are cleaned and updated.

**Security Member (HOD-Security)**

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- ▣ Advice EMT Chairman on security related matters;
- ▣ Arrange extra security, if needed for the incident site;
- ▣ Liaise with the Security IC at the incident site;
- ▣ Liaise with the law enforcement agencies if required;
- ▣ Make EMT Room out of bound (except EMT Members) during EMT proceedings by deploying appropriate Security Guards;
- ▣ Ensure security arrangements for all personnel on board (POB);
- ▣ Evaluate immediate impact on local community in consultation with CSR Member;
- ▣ Provide relevant security information to EMT Members;
- ▣ Advice on the application of relevant Emergency Security Procedure/ Emergency Response (ER) Plan;
- ▣ Liaise with embassies/ foreign offices, in case incident involves expatriates.
- ▣ Ensure that accessibility of the incident premises is not allowed to irrelevant personnel (including media) without prior approval of EMT Chairman;
- ▣ Ensure that all necessary personnel receive appropriate security briefings and are properly qualified; &
- ▣ Ensure that security personnel do not take photographs/ digitally record the incident scene and interfere in the operational activities.

**Corporate Affair Member (HOD-CA)**

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- ▣ Deal with the print and electronic media during incident management and prepare press releases for review by Spokesperson (Company Secretary/ HOD Legal) and for approval of MD/ CEO;
- ▣ Coordinating media conferences and pre-briefing for the Spokesperson (Company Secretary/ HOD Legal);
- ▣ Monitoring media reports and subsequently informing the EMT Members accordingly; &
- ▣ Try to influence the print and electronic media to report in a responsible manner for the sake of company reputation. (Guidelines for Dealing with the Media are given at Appendix-F)



### **Commercial Member (HOD-Commercial)**

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- ▣ Collect information regarding oil and gas production, storage capacity and dispatch situation during incident management and inform EMT Members;
- ▣ Inform respective DG Oil or Gas, customers such as SNGPL, SSGS, Refineries, etc., if required (either directly or through EMT Chairman);
- ▣ Timely determine and implement product dispatch strategy in consultation with EMT Chairman; &
- ▣ Monitor/ control the bowsers' movement in accordance with the emergency situation.

### **Medical Services Member (HOD-Medical Services)**

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- ▣ Provide necessary medical expertise and advice to EMT Chairman;
- ▣ Establish contact with the on-duty Medical Doctor and provide expert medical advice;
- ▣ Assess the injured persons into those who need critical attention and immediate transport to the medical facility/ hospital and those with less serious injuries.
- ▣ Mobilize medical services (Doctors, Ambulances, and Paramedics) from other locations to the incident location;
- ▣ Maintain coordination with the Hospitals;
- ▣ Keep updates of the treatment being provided to the incident victims in hospitals and take feedback from hospitals for satisfactory treatment; &
- ▣ Give input for the press release regarding casualties/ injuries (fatalities, LTIs, RWIs, MTCs, etc.) and information to be provided to the Next of Kin (NOK) through HR Member.

### **System/Communication Member (CIO/ HOD-System)**

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- ▣ Ensure that necessary means of communication required to deal with the emergency situation are in operational condition in the EMT Room at all times;
- ▣ Mobilize system and communication resources to deal with the emergency;
- ▣ Ensure that the list of valid emergency contact numbers is maintained;
- ▣ Manage the actions of the Radio Room Operators and devise mechanism for receiving calls from locations/ external agencies during dealing with the emergency;
- ▣ Report regularly to EMT Chairman on the situation and level of calls received;
- ▣ Ensure that communication team is briefed on how to handle emergency communications and regularly check their performance for compliance;
- ▣ Ensure training of Radio Room Operator and Telephone Operators in such a way that they timely transmit relevant information during incident to the EMT Members.

Note: The updated lists of valid emergency contact numbers must be circulated to EMT Members, H.O. Radio Room and all locations Radio Room and both EMT Rooms. Ensure that a monthly exercise is carried out to maintain/ update the emergency numbers.

### **Support Members**

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**JV Member (ED-Services):** The main responsibility of Services Member is to apprise about the service companies, contractors engaged at the incident site and how to coordinate with them during emergency situation.

**JV Member (ED-JV):** The primary responsibility of JV Member is to communicate with JV Partners and apprise about emergency situation/ incident and seek their help (if required).

**Legal Member (HOD-Legal):** Advice EMT Chairman regarding prevailing





laws, regulations/ policies; alert EMT to any legal repercussions that may result from actions taken or decision made by company response personnel or contractors' and review media/ press releases before final release.

**CSR Member (HOD-CSR):** Evaluate the immediate impact of incident on local community in consultation with Security member; coordinate with local notables and district management in managing emergency; and take prompt actions to address the situation through Regional Coordinator (RC).

**Finance/Accounts Member (HOD-Finance/ Accounts):** Arrange for securing finances as & when directed by EMT and liaise with EMT Operational Members on financial resources required to support the emergency.

#### 4.5.5.1.5 EMT Deactivation Process

- ☐ EMT shall only be deactivated by MD/ CEO after determining that emergency response should cease and on receiving information from EMT Chairman that situation has been brought under control and normal recovery operations are in progress to restore the activities/ operations.
- ☐ On deactivating, EMT Chairman shall prepare a debrief with the help of Log and Record Keepers encapsulating the details of incident, responsive measures, highlighting the weaknesses/ shortcomings and lessons learned with recommendations to avoid recurrence.

#### 4.5.5.2 Location Emergency Management Team (LMT)

##### 4.5.5.2.1 LMT Structure

- ☐ The makeup and structure of Location Emergency Management Teams (LMTs) shall vary depending on the location and the nature of the operation. LMTs are headed by the relevant FMs/ PMs/ OMs/ PCs (e.g. for Qadirpur Field, the team be called QP-LMT; for Rig N1 → RN1-LMT; for SP-1 → SP1-LMT):

	<b>Seismic Parties</b>	<b>Drilling Rigs</b>	<b>Production Fields</b>	<b>Gas Processing Plants</b>
Chairman LMT	PC	OM	FM/ OM	FM/ PM
Crisis Mgt. Coordinator (CMC)	IC Maintenance	IC Maintenance	IC Maintenance	IC Maintenance
On Scene Coordinator (OSC)	IC Shift/ Drilling/ Shooting	IC Shift/ DO	IC Shift/ Production	IC Shift/ P&P
Emergency Response Coordinator (ERC)	HSE Rep.	HSE Rep.	HSE Rep.	HSE Rep.
Medical	Medical Rep.	Medical Rep.	Medical Rep.	Medical Rep.
Security	IC Security	IC Security	IC Security	IC Security
Administration	IC Admin.	IC Admin.	IC Admin.	IC Admin.

Note:

Relevant HOD shall ensure that the location management develops, maintains and ensures bridging of documents that clearly outlines the interface between the contractors ER Plan and OGDCL Location's ER Plan and act accordingly during the LMT proceedings.

- ☐ A designated Location Emergency Management Room (LMT Room/ ER Post) shall be established at every location and equipped with necessary facilities mentioned in Appendix B-2.

Note: LMT Room/ ER Post shall be dedicated for emergency preparedness and response purposes only.

#### 4.5.5.2.2 LMT Activation Process

☰ In the event of an **Emergency Level-2**, LMT shall be activated as follows:

- ▣ LMT Chairman shall immediately activate the LMT with intimation to the relevant Area Manager/ HOD who shall inform EMT Chairman for further information to MD/ CEO about the situation.
  - ▣ When activated, LMT shall provide field based technical, logistical, planning resources, security and community support and assistance to the on-ground emergency response teams handling immediate situation on incident site.
- ☰ LMT Chairman shall inform LMT Members telephonically/ walkie-talkie (portable, two-way radio transceiver) or through electronic messaging application (either directly or through his team).

#### 4.5.5.2.3 LMT Duty Roster Requirements

- ☰ A fortnightly LMT Duty Roster shall be issued by the Field HSEQ Section to all field members of LMT and transmitted to respective HODs and HSEQ Department H.O. The Duty Roster shall show all the CONTACT DETAILS of LMT Members.
- ☰ The LMT Duty Roster guidelines are as follows:
- ▣ Field HSE Representative shall be responsible for maintaining/ updating Emergency Response Team Duty Roster on fortnightly basis; &
  - ▣ All LMT positions shall remain filled at all times;
  - ▣ LMT members shall ensure their presence on LMT callout;
  - ▣ In case of a change, the Core Member shall notify the Alternate Member and LMT Chairman;
  - ▣ All personnel "On Duty" (according to the Duty Roster) shall ensure they carry a walkie-talkie (portable, two-way radio transceiver)
- ☰ Once LMT roles are clearly scheduled for the fortnight, the Duty Roster shall be posted at Main Notice Board of site as well as camp area.

#### 4.5.5.2.4 Roles of LMT After Activation

##### LMT Chairman

- ▣ In case of incident at any OGDCL location, shall immediately activate the LMT with intimation to the relevant Area Manager/ HOD who shall inform EMT Chairman;
- ▣ Ensure that LMT Members have been informed to assemble at LMT Room telephonically/ walkie-talkie (portable, two-way radio transceiver) or through electronic messaging application (either directly or through his team);
- ▣ Seek out incident details;
- ▣ Provide support while referring to the relevant Emergency Response (ER) Plan and adequate backup resourcing for the response operations;
- ▣ Inform, and obtain the necessary support and guidance from the Chairman of the EMT at Islamabad;
- ▣ Liaise with the On Scene Coordinator (OSC) at the affected area to arrange & provide tactical support;
- ▣ Inform & liaise with relevant local government (Commissioner, Deputy Commissioner, etc.), community and regulatory authorities (e.g. Police) as appropriate;
- ▣ Provide support to the affected area in the planning and implementation



of the recovery phase;

- Document all aspects of emergency response activities, decisions and communications; &
- Declare emergency clearance in consultation with EMT Chairman.

**Crisis Management Coordinator (CMC):** CMC is responsible for the immediate securing of the Operations as required by the nature of the incident and on instructions from the Chairman LMT. In the absence of Chairman LMT, he shall be the alternate Chairman.

**On Scene Coordinator (OSC):** OSC would be Operational Rep. and responsible for passing relevant information regarding the nature and status of the incident to the Chairman LMT. He shall also be responsible for updating the Chairman LMT of the actions being taken to control the incident.

**Emergency Response Coordinator (ERC):** ERC would be responsible for co-ordinating all firefighting and rescue efforts with the help of Onsite Emergency Response Team (ERT); Offsite Response Team (ORT); First Aid & Evacuation Team and Firefighting Team (Fire Section) and for passing updated information regarding the management of incident to the Chairman LMT. He shall also be responsible for advising the Chairman LMT of the additional actions to be taken to effectively & adequately respond to the incident. Emergency Response Teams will respond with their defined roles & responsibilities as follows:

<b>Rapid Response Team (RRT)</b>	<b>Emergency Response Team (ERT)</b>
RRT mainly comprises of the area-specific staff including operators, engineers or technician that shall be the first responder to the emergency.	An Onsite Emergency Response Team (ERT) deals all emergencies inside facilities; whereas an Offsite Emergency Response Team (ERT) deals all emergencies outside facilities. ERT is comprised of field employees as nominated by the respective Location InCharge. I/C Maintenance leads the ERT. ERT Roster shall be nominated fortnightly and circulated along with LMT roster. ERTs are trained in support functions (hose unreeling, assisting the firefighters etc.) and above basic level firefighting skills.
<ul style="list-style-type: none"> <li>• On witnessing an emergency, hearing the alarm or being informed of an accident or incident, would stay upwind &amp; clear of the affected location, give call on radio for Muster count; then follow further instructions to take emergency steps as per the defined procedures.</li> <li>• Would check out the "Area of Concern" as advised and report back with the findings immediately.</li> <li>• If there is a need of putting on the protective clothing, would put on Fire Suits &amp; Breathing Apparatus Sets etc.</li> <li>• On declaration of emergency, would assess the situation and provide prompt initial response to control the emergency (by using portable fire extinguishers, activation of deluge system, operating oscillating monitors, laying hose pipe, cooling the adjacent area if required, making casualty safe/ comfortable, isolating the source from safe distance etc.) after co-ordination with the Shift IC.</li> <li>• Would remain on site to meet the ERT and apprise them of the situation. If the situation warrants, the OSC may ask them for assistance.</li> </ul>	<ul style="list-style-type: none"> <li>• Once emergency is announced, all ERT members (except affected area ERT members) shall assemble at a designated point called "ER Post" (Emergency Response Post). ERT Lead shall be responsible to gather all members.</li> <li>• Members shall follow instructions of ERT Lead and OSC to provide firefighting or any required assistance by immediately putting on turnout suits, prepare Breathing Apparatus and equip themselves prior to entering and responding emergent situation.</li> <li>• Evacuate, provide necessary first aid to the affected people, rush them to Field Medical Center for further assistance and update ER Coordinator on nature of injuries and number of affected people.</li> <li>• Lay fire hoses and assist firefighting team connect them to nearest fire hydrant, operate fire monitor and other firefighting equipment along with firefighting team and give support to front-line firefighting team for arranging firefighting logistics like hoses, coupling, foam etc.</li> </ul>

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### First Aid & Evacuation Team

Members shall be trained and certified in basic first aid and CPR, nominated by different Sections.

- On hearing Emergency siren or being informed of an accident or incident proceed to their muster point and await directions from the Field doctor.
- When directed, take part in the evacuation & rescue by ensuring the safety of all concerned.
- Immediately put on their first aid jackets and prepare the first aid equipment.
- Ensure head count at each muster point and report to Medical Doctor

**Medical Rep.:** Medical Rep. is responsible for the timely treatment (by himself, his team and simultaneously liaison with nearby hospitals/ health facilities) of casualties resulting from an incident to lessen the probability of disabilities/fatalities; also responsible for managing and coordinating the efforts of Medical staff / First Aiders / Triage Team (Appendix G); & informing/ updating the Chairman LMT of the status and number of casualties.

**Security Rep.:** Security Rep. is responsible for maintaining the security of site during the emergency situations; advising Chairman LMT on the external security actions to be taken with assistance from Government agencies (Police, Rangers, others etc.) to effectively control and respond to the incident and liaison with external security agencies for advice and assistance.

**Admin Rep.:** Admin Rep. is responsible to ensure safe evacuation (considering headcount & muster point assembly) in collaboration with HSE; provide input for handling the emergency and finalize the additional resources required from other agencies like Rescue 1122, Fire brigade etc. to cope with the situation in consultation with ERC; coordinate and manage additional transport requirements at incident site; & advice on matters related to Staff Union.

Note: In case all LMT members are also affected in the incident, then Chairman LMT shall formulate an alternate team from the alternate members to handle such emergencies.

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### Support Members (as per availability)

- ▣ Location's InCharge Lab.
- ▣ Location's InCharge Material
- ▣ Location's InCharge Civil
- ▣ Location's InCharge TPT
- ▣ Location's InCharge System/ Communication
- ▣ Regional Coordinator (RC)

#### 4.5.5.2.5 LMT Deactivation Process

- ▣ LMT shall be deactivated by LMT Chairman after determining that the situation has been brought under control and normal recovery operations are in progress to restore the operations; however the consent of both HOD and EMT Chairman should be there to deactivate the LMT.
- ▣ On deactivating, LMT Chairman shall prepare a debrief encapsulating the details of incident, responsive measures, highlighting the weaknesses/ shortcomings and lessons learned with recommendations to avoid recurrence.

#### 4.5.5.2.6 Location's Emergency Preparedness

- ▣ At each location, potential hazardous situations and risks shall be evaluated to determine the requirements of Emergency Response (ER) Plan (including procedures, emergency equipment, controls, etc.).
- ▣ Location's ER Plan be developed, disseminated and personnel be made

aware through onsite awareness sessions.

- ☐ Location management shall be responsible for reviewing and revising ER Plan, particularly after each occurrence of incidents and emergencies.
- ☐ Emergency equipment shall include fire/ smoke/ heat/ toxic gas detection & alarm systems; emergency lighting and power; means of escape; safe refuges/ muster points; critical isolation valves, switches, and cut-outs; firefighting equipment; first aid equipment (including emergency showers, eyes wash stations, etc.); communication facilities, etc.
- ☐ Emergency equipment shall be tested at specified intervals for continuing operability and Risk Register be updated accordingly.
- ☐ An appropriate T-Card & Mustering System (or other modern/ reliable system) shall be established to facilitate easy identification of workforce's location during emergency situations.
- ☐ When performance of emergency equipment falls below desirable level, corrective or preventive actions shall be initiated, and appropriate objectives/ targets be established to ensure continuing operability of emergency equipment.
- ☐ Practical drills shall be carried out according to a predetermined schedule for all the probable emergency situations. Standardized template shall be used for recording the Emergency Drill Report (Appendix F).
- ☐ In the event of the emergency siren sounding, ALL PERMITS become INVALID and all WORK being carried out under them shall CEASE. Personnel within permanently occupied buildings / offices / rooms should seek direction from the Fire Wardens. Vehicles must be parked away from access ways, ignition switched off with keys left in the ignition and remain standby for the period of the emergency. Driver and passengers must exit the vehicle and proceed to the nearest safe Muster Point. Personnel within vessels and tanks shall move outside the vessel or tank, climb to ground level and then proceed to the designated Muster Point and stay there until directed otherwise by the Emergency Response Coordinator (ERC).
- ☐ When an emergency occurs, the affected work must cease and not re-start until such time as the work areas affected have been risk reassessed and the Area Manager / Location IC has verified that the effective controls (to prevent recurrence) are in place.

#### **4.5.6 Financial Approvals**

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- ☐ Special financial powers of MD/ CEO may be exercised where required to handle the emergencies as per relevant PPRA clause;
- ☐ If the financial amount exceeds the special powers delegated to MD / CEO, he may seek immediate financial approval from BoD.
- ☐ Financial powers already approved through delegation of powers to handle emergencies can be exercised by EMT Chairman, HODs, Area Managers and / or Location InCharges as per relevant PPRA clause; however for financial amount exceeding delegated authority, approval of MD / CEO to be immediately obtained.

#### **4.5.7. Communication, Training and Drills**

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- ☐ This procedure shall be communicated to all EMT/ LMT Members.
- ☐ All EMT/ LMT Members should retain a hardcopy copy of this procedure in their offices and residences.
- ☐ Electronic copy of this procedure shall be made available at all locations whether permanent or temporary, also placed on website.
- ☐ When required, copies of this procedure shall also be made available to the external public relief authorities, in order to plan the organization of emergency assistance through simulations and joint drills, as per the requirement of any management system adopted by the company.

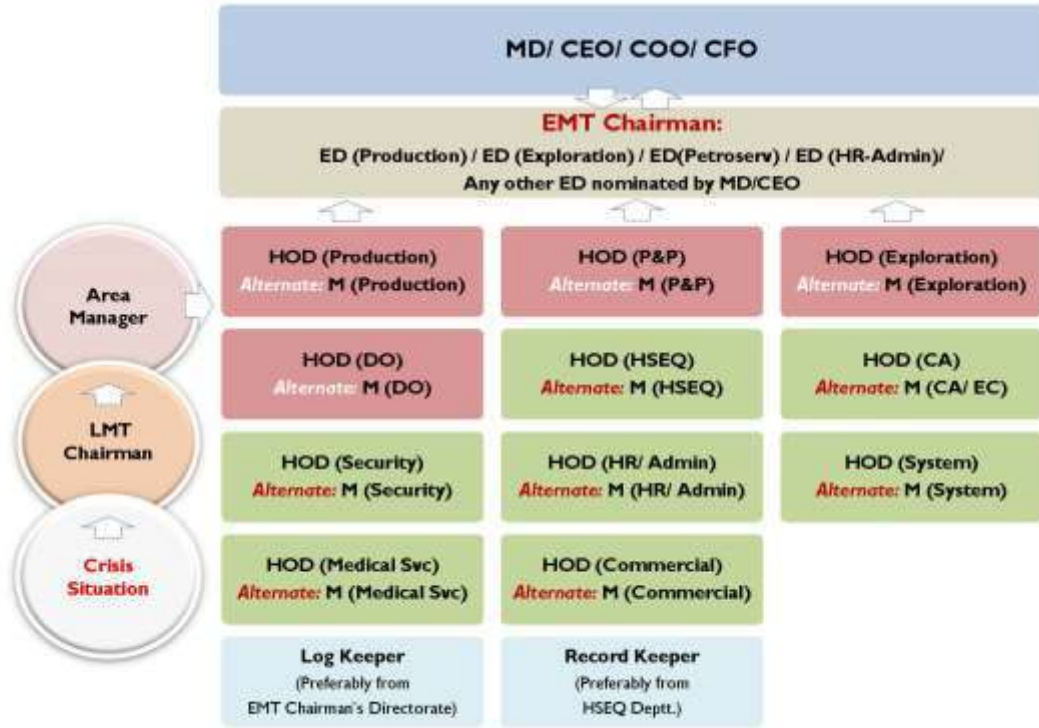




- ☐ Interactive emergency drills shall be conducted involving a particular location (esp. major / vital) with Head Office / OGTI on bi-annual basis.
  - ☐ Action plan containing recommendations for improvement shall be followed after each drill.
-

Appendix – A  
**Structure of EMT**

Core Members are rostered EMT members and expected to remain within 02 hours traveling time from the EMT Room throughout their duty period of fortnight.



## Appendix – B1 Facilities in EMT Room/ Alternate EMT Room

Committee/ Conference Room, on Ground Floor of OGDCL Head Office, Islamabad is the EMT Room. Cabinet, which has all necessary support facilities & equipment, is kept locked. Keys for the cabinet are kept with Manager Security and Admin at the main entrance.

While, the \_\_\_\_\_ Room, on \_\_\_\_\_ Floor of OGTI, I9, Islamabad, is the Alternate EMT Room.

The following information and hardware shall be contained in the EMT Room:

- ✓ Cabinet
- ✓ Presentation screen/ overhead projector
- ✓ Whiteboard and markers
- ✓ Causality information board
- ✓ Event status board
- ✓ Three direct telephone lines with each number allocated to specific members.
- ✓ 01 Desktop PCs with link to OGDCL Local Area Network (LAN) and printer
- ✓ LED TV with multiple news channel facility
- ✓ Video Conferencing Facility (VCF)
- ✓ Video recording facility
- ✓ Dedicated Fax Machine  
*(to be provided immediately by Communication Department at the time of EMT assembly)*
- ✓ Stationery (writing pads, pens etc.)
- ✓ Clock
- ✓ CCTV Cameras
- ✓ Telephone directories
- ✓ Maps, charts and facility specific general arrangements drawings
- ✓ Display boards for: Personnel, Summary of Events
- ✓ Updated copies of Emergency Response Plans (Locations)
- ✓ Maps of Sindh, Baluchistan, Khyber Pakhtunkhwa (KPK) and Punjab, Map of Pakistan

### Note-1:

EMT-Admin Member shall make formal monthly regular checks of the EMT Room Cabinet to ensure that the information is current and up-to-date. Also ensure that backup data is available and being updated on daily basis in both EMT Rooms.

### Note-2:

EMT-Communication/ System Member shall ensure that hardware as mentioned above is functional round the clock.



Appendix – B2  
**Facilities in LMT Room/ Alternate LMT Room (ER Post)**

The following facilities are contained in the LMT Room:

- ✓ Cabinet
- ✓ Presentation screen/ overhead projector
- ✓ Whiteboard and markers
- ✓ One direct telephone line
- ✓ 01 Desktop PCs with link to Local Area Network (LAN) and printer
- ✓ LED TV with multiple news channel facility
- ✓ Video Conferencing Facility (VCF)
- ✓ Dedicated Fax Machine  
*(to be provided immediately by Communication Department at the time of EMT assembly)*
- ✓ Stationery (writing pads, pens etc.)
- ✓ Clock

The following minimum information is contained in the LMT Room (ER Post):

- ✓ Updated copy of approved Emergency Response Plan.
- ✓ Updated list of emergency response equipment, with locations on-and-off-site.
- ✓ Updated list of employees in the event counting is necessary.
- ✓ Emergency communication equipment.
- ✓ Facility's layout and community maps, including roads, evacuation routes and the locations of community facilities nearby.
- ✓ PFDs, P&IDs, utility drawings, including;
  - a) fire, water, & electric systems and
  - b) storage, usage and transportation location of explosives, hydrocarbons, and other flammable & toxic materials.
- ✓ List of contact numbers for key emergency and management personnel, local emergency response officials, and government agencies.
- ✓ Appropriate reference materials, including specific emergency plans (like helipad coordinates for medievac/ evacuation purposes, contractors/ service companies bridging documents, etc.).

Note:

LMT-Admin Member shall:

- make formal monthly regular checks of the LMT Room Cabinet to ensure that the information/ resources are current and up-to-date.
- ensure that valid emergency contact lists and EMT/ LMT Duty Rosters are made available in the LMT Room. Also ensure that backup data is available and being updated regularly.

LMT Room/ ER Post shall be dedicated for emergency preparedness and response purposes only.



## Appendix – C1 Template EMT Duty Roster

From: \_\_dd/mm/yy\_\_ to \_\_dd/mm/yy\_\_

#	Role	Designation			Contact No	
1.	Chairman/ Alternate	ED (Production) / ED (Exploration) / ED(Petroserv) / ED (HR-Admin) / Any other ED nominated by MD/CEO				
#	Role	Designation	Contact No	Role	Designation	Contact No
2.	Core Member-I	HOD (Production)		Alternate Member	M (Production)	
3.	Core Member-II	HOD (P&P)		Alternate Member	M (P&P)	
4.	Core Member-III	HOD (Exploration)		Alternate Member	M (Exploration)	
5.	Core Member-IV	HOD (DO)		Alternate Member	M (DO)	
6.	Core Member-V	HOD (HSEQ)		Alternate Member	M (HSEQ)	
7.	Core Member-VI	HOD (CA)		Alternate Member	M (CA/ EC)	
8.	Core Member-VII	HOD (Security)		Alternate Member	M (Security)	
9.	Core Member-VIII	HOD (HR/ Admin)		Alternate Member	M (HR/ Admin)	
10.	Core Member-IX	HOD (Medical Svc)		Alternate Member	M (Medical Svc)	
11.	Core Member-X	HOD (Commercial)		Alternate Member	M (Commercial)	
12.	Core Member-XI	HOD (System)		Alternate Member	M (System)	
13.	Log Keeper	Preferably from EMT Chairman's Directorate				
14.	Record Keeper	Preferably from HSEQ Deptt.				
#	Role	Designation	Contact No	Role	Designation	Contact No
1.	Support Member-I	ED (Services)		Alternate Member	HOD (SCM)	
2.	Support Member-II	ED (JV)		Alternate Member	HOD (JV)	
3.	Support Member-III	HOD (Legal)		Alternate Member	M (Legal)	
4.	Support Member-IV	HOD (CSR)		Alternate Member	M (CSR)	
5.	Support Member-V	HOD (Finance/ Accounts)		Alternate Member	M (Finance/ Accounts)	
6.	Support Member-VI	HOD (OGTI)		Alternate Member	M (OGTI)	



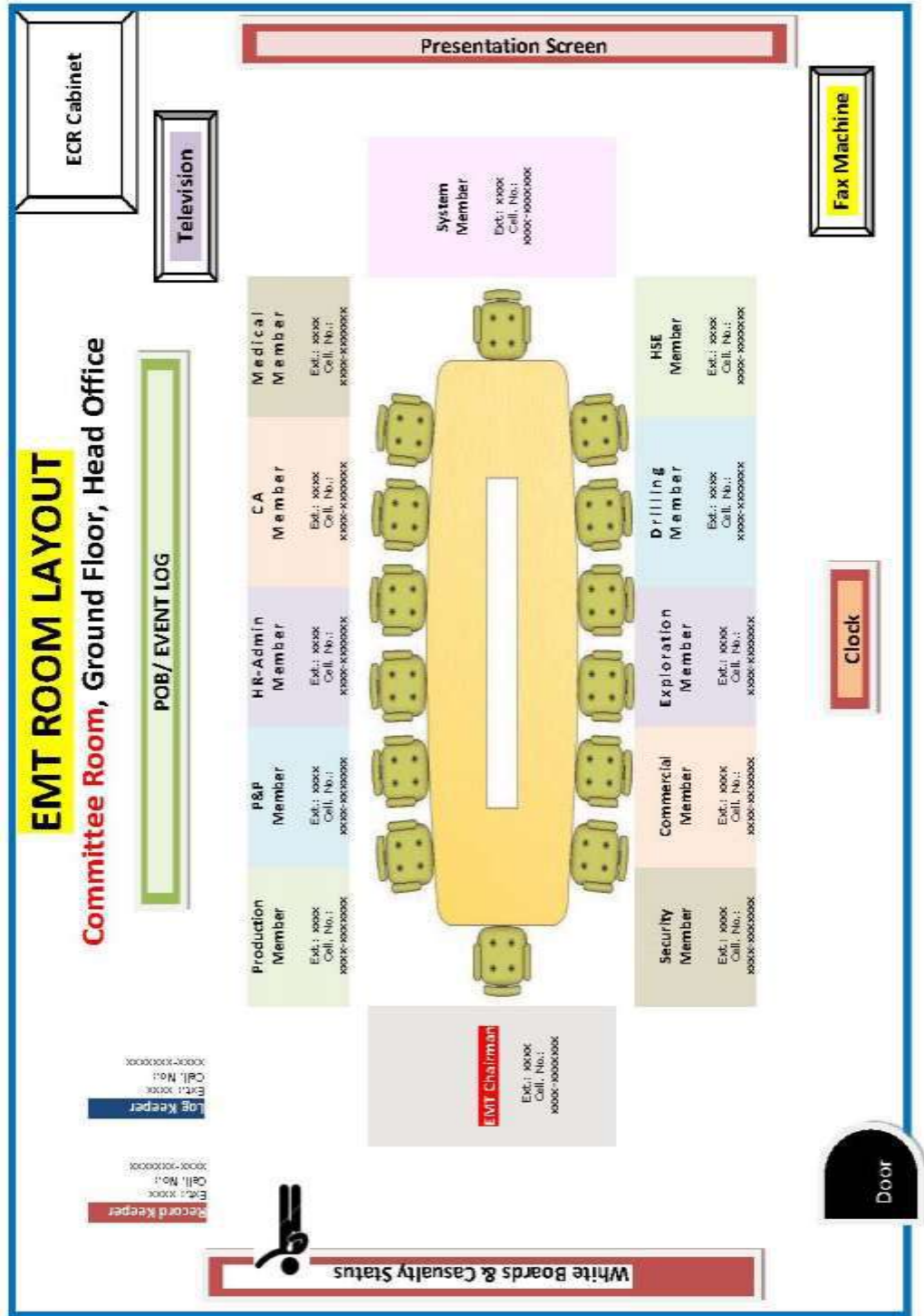


## Appendix – C2 Template (Production Facility) LMT Duty Roster

From: \_\_dd/mm/yy\_\_ to \_\_dd/mm/yy\_\_

#	Role	Designation	Contact Nos		
1.	Chairman/ Alternate	Location InCharge/ Reliever			
Core Members				Alternate Members	
#	Role	Designation	Contact No	Designation	Contact No
2.	Crisis Mgt. Coordinator (CMC)	InCharge Maintenance		Maintenance Rep.	
3.	On Scene Coordinator (OSC)	InCharge Production/ P&P		Production/ P&P Rep.	
4.	Emergency Response Coordinator (ERC)	InCharge HSE		HSE Rep.	
5.	Medical	InCharge Medical		Medical Rep.	
6.	Security	InCharge Security		Security Rep.	
7.	Administration	InCharge Admin.		Admin Rep.	
Support Members				Alternate Members	
#	Role	Designation	Contact No	Designation	Contact No
1.	Support Member-I	InCharge Lab.		Lab. Rep.	
2.	Support Member-II	InCharge Material		Material Rep.	
3.	Support Member-III	InCharge Civil		Civil Rep.	
4.	Support Member-IV	InCharge TPT		TPT Rep.	
5.	Support Member-V	InCharge System/ Communication		System/ Communication Rep.	
6.	Support Member-VI	Regional Coordinator		RC Rep.	

Appendix - D  
**EMT Layout**





Appendix – E  
**Specimen Prompt EMT Checklist**

		Responsibilities of EMT												
		MD/ CEO	EMT Chairman	HR-Admin	Security	Process-Production	HSE	Drilling	Exploration	Medical	JV	SCM	Accounts-Finance	Systems-Communication
<b>Actions</b>														
1.	Obtain list of personnel on Board (POB) at the time of accident.		✘											
2.	Appoint a Log Keeper and ensure that an adequate time log of all events and activities is maintained.		✘											
3.	Determine the need and activate, as necessary, the Support Teams.		✘											
4.	Maintain a contact with LMT Leader to update the status of emergency.		✘											
5.	Update MD/ CEO with current info for onward communication to BOD/ GoP and JVPs (If necessary).		✘											
6.	Ensure through LMT to isolate the affected process(es).		✘			✘								
7.	Device an action plan to minimize the impacts at the incident site.		✘			✘								
8.	Determine overall strategy in consultation with EMT's relevant Operations Member and LMT before starting recovery activities.		✘			✘								
9.	Determine all risks associated with rehabilitation activities and ensure through LMT that all necessary controls are taken prior to startup of recovery activities.		✘			✘								
10.	Determine the need for additional support from local authorities such as fire brigades, medical aid, ambulances, police, army and provincial civil authorities to start search and rescue activities.			✘				✘						
11.	Update the Coordination Support Team for any press releases.													
12.	Get the names and conditions of casualties (if required) and initiate contact with the immediate families and relevant high commissions in the case of expatriate staff.			✘										
13.	Assess the need for possible medevac and accordingly plan for mobilizing medical aid either by air or road, also explore the utilization of nearby airstrip for possible medevac activities.			✘					✘					
14.	Identify a list of stakeholders and seek to notify these stakeholders through EMT members.		✘		✘	✘								
15.	Ensure through LMT that the incident location is protected and		✘		✘	✘								









Appendix – F  
**Guidelines for Dealing with the Media**

- Determine the facts.
- Decide what you want to say.
- Determine your audience.
- Prepare press release or stand-by statement.
- Have core spokesperson's training in media techniques.
- Provide the basic facts and refuse to speculate or hypothesis.
- Beware of making any statement that shall commit the Company to unspecified compensation payments.
- Do not answer any question if you do not have all the facts - do offer to come back with a response.
- Return all calls from the media - recognize reporter's deadlines.
- Ensure, within reason that experts (scientists, engineers, etc.) are available if needed to deal with specialist press interest and see that they receive appropriate media training.
- Do not announce names of people killed or injured in incidents unless the Next of Kin (NOK) have been informed first.
- Indicate that the company intends to make searching enquiries and take any remedial action necessary, e.g. "An internal enquiry is part of our normal procedure in such incidents. We shall take any follow up action that is necessary to ensure that this should not happen again".
- Always express concern for casualties and other affected.
- The press can be used positively in reassuring the community. Ask the media for their help in getting messages across.
- Keep EMT / LMT informed of communications.
- Log all telephone calls.
- Consider whether community relations are affected after an incident and initiate appropriate action.



Appendix – G  
**Location's Emergency Drill Report**

Time Alarm Sounded:	Time Drill Concluded:	Time to Evacuate:
Type of Drill:	Notification / Alert Method:	Weather Conditions:
Emergency Level:	Exact Location of Drill:	Distance From LMT Room / ER Post:
No. of Participants:	Situation at Start of Drill:	Situation after Drill:
Name of Participant/ Team	Emergency Role Assigned	Response Time
Positive Points:		
Problems Encountered:		
Extenuating Circumstances/ Identified Factors / Special Conditions Simulate:		
Lessons Learned for Improvement:		

Attach to this form a list of all staff who participated in the drill, and any visitors participating.



## Appendix – H Triage System

- Triage system shall be used in a scene of an accident, in order to sort injured persons into those who need critical attention and immediate transport to the medical facility/hospital and those with less serious injuries.
- Triage should be started before transportation becomes available.
- Upon completion of the initial assessment by Medical Rep., each injured person may be labeled to identify the priority of his requirement for medical treatment and transport from the emergency scene.
- Field medical staff/ first aiders/ triage team should be trained & fully prepared to carry out rapid assessment of the injured persons to timely identify emergency treatment based upon severity of the injuries.
- At its most primitive, injured persons may be simply marked with the colored flagging tape or with marker pens as color codes defined below or pre-printed cards for medical care purpose known as a triage tags may also be applied:
  - ∞ **Red**—IMMEDIATE (MOST URGENT) attention required by the injured.
  - ∞ **Orange**—URGENT attention required by the injured.
  - ∞ **Yellow**—AS SOON AS POSSIBLE attention required by the injured.
  - ∞ **Green**—attention required by the injured AS & WHEN AVAILABLE.
  - ∞ **Blue**—NON-URGENT attention required by the injured.



## 4.6 Structure: HSE Functional Setup

OGM/P-HSE-4.6(08) Revision Number 8

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**Updated By:**

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**Approved By:**

**Syed Khalid Siraj Subhani**  
Managing Director, OGDCL

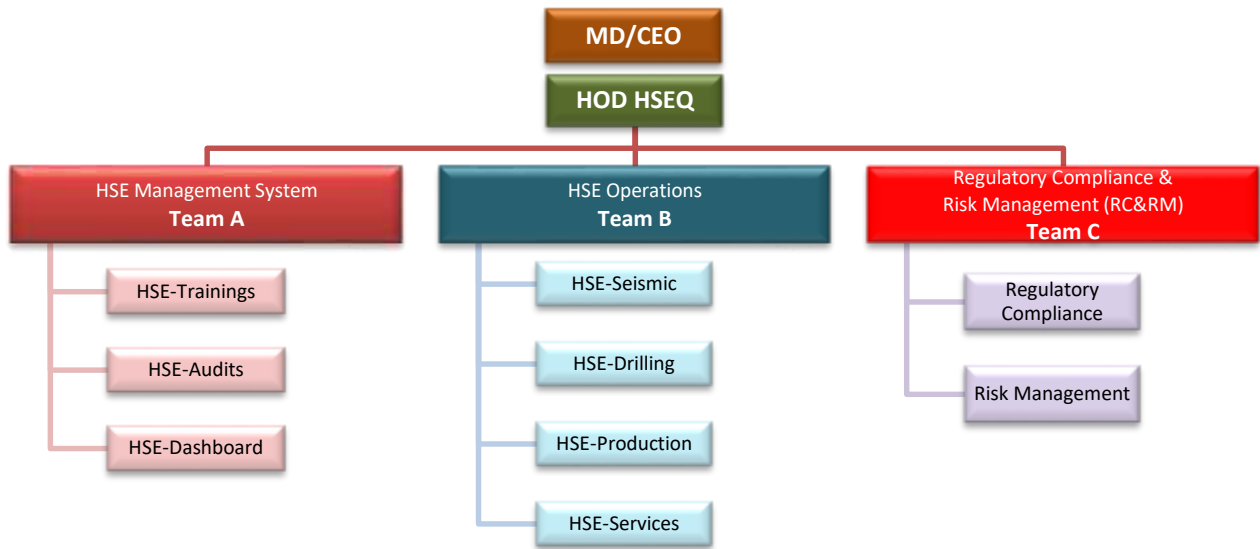
### Change/ Revision Log

#	Description of Change
1	Added: Roles of HSE MS, HSE Operations and RC&RM.

### Associated Documents Approval & Issue

Related Document/ Record	Initiated by	Reviewed by	Checked/ Verified / Approved by
HSE Organogram/ Functional Set up Chart	Manager HSEQ	GM HSEQ	MD / CEO

**Corporate HSE Setup**

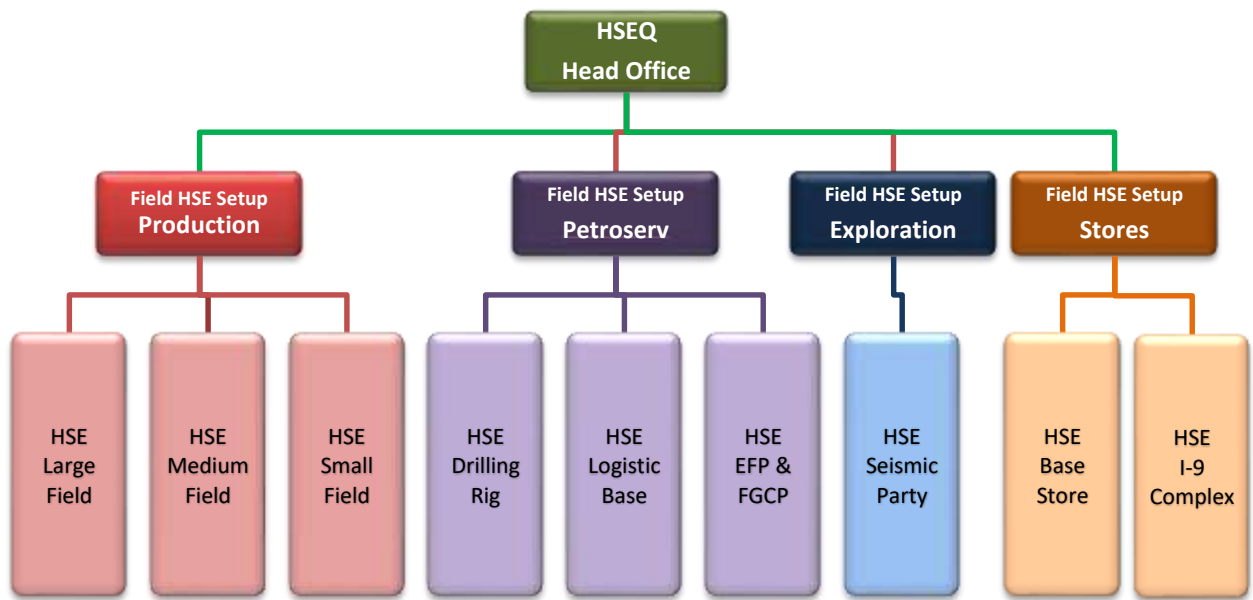


HSE Management System	HSE Operations	RC&RM
<ul style="list-style-type: none"> <li>Overseeing HSE Operations of exploration &amp; production activities w.r.t. HSE MS.</li> <li>Providing assistance to help develop capabilities of subordinates to enable them to perform their jobs effectively and efficiently.</li> <li>Appraising performance of subordinates reporting to the position and providing ongoing feedback to GM HSEQ in an objective and effective manner.</li> <li>Participating in the activities of local, state and industry for the exchange and development of ideas and best practices relating to HSE issues.</li> <li>Working as Editor-In-Chief of HSEQ Newsletter.</li> <li>Reviewing the effectiveness of HSEQ system related documentation and revise them accordingly.</li> <li>Based on TNA, coordinating formulation of Annual Training Planner.</li> <li>Developing/ updating HSE Training Modules and impart major training sessions to implement/ improve HSE system.</li> <li>Initiating cases for ISO 45001, ISO 45001 and other relevant Certifications.</li> <li>Preparing Terms of References (TORs) for hiring services of Certification Body to accomplish ISO 45001, ISO 45001 and other relevant Certifications.</li> <li>Participating in technical and financial bids evaluation and processing ISO 45001, ISO 45001 and other relevant Certifications case file.</li> <li>Vetting LOI/ Service Order for hiring services of Certification Body to accomplish ISO 45001, ISO 45001 and other relevant Certifications.</li> <li>Arranging/ coordinating Stage-I, Stage-II and Surveillance Audits.</li> <li>Reviewing Stage-I, Stage-II and Surveillance Audit Reports.</li> <li>Assisting line management in formulating suitable Action Plan against the major/ minor non-compliances and observations.</li> <li>Developing Annual Internal HSE Audit Planner (Schedule) and corresponding Internal HSE Audit Plans.</li> <li>Arranging/ coordinating Internal HSE Auditing courses.</li> <li>Maintaining List of qualified Internal HSE Auditors.</li> <li>Arranging/ coordinating Internal &amp; Follow-up HSE Audits.</li> <li>Reviewing Internal &amp; Follow-up HSE Audit Reports.</li> <li>Reviewing and disseminating Safety Alerts.</li> </ul>	<ul style="list-style-type: none"> <li>Guiding HSE teams in measuring the compliance of applicable regulatory and other applicable requirements.</li> <li>Facilitating line management to achieve compliance of applicable regulatory requirements on proactive basis, facilitate visits of regulatory authorities and coordinate with the relevant functions for the implementation of observations.</li> <li>Guiding HSEQ teams in the development &amp; implementation of HSE system (policies &amp; procedures) and to encourage sharing/ adopting best industrial practices.</li> <li>Providing feedback for the improvement of HSE system related procedures, handbooks, etc.</li> <li>Coordinating/ performing risk assessment studies and reviewing risk registers.</li> <li>Participating in process hazards analysis/ studies as a team with line management and review associated reports for the follow-up purposes.</li> <li>Performing/ coordinating HSE monitoring activities according to the updated/ approved plans, gauging their effectiveness and follow-up corrective measures.</li> <li>Coordinating with line management that occupational health assessment (trade tests) of employees is timely carried out.</li> <li>Performing/ coordinating incidents investigation and preparing/ reviewing incidents reports.</li> <li>Preparing Safety Alerts after occurrence of an incident or when there is a current or emerging HSE issue that needs immediate corrective &amp; preventive action.</li> <li>Guiding HSE teams to oversee measures taken to control the recurrence of incidents and follow up to verify the effectiveness of actions taken.</li> <li>Working in close liaison with line management to ensure HSE protocols for management of contractors and service companies are followed.</li> <li>Preparing/ revising/ updating Fortnightly Emergency Management Team (EMT) Duty Roster.</li> <li>Ensuring Fortnightly Locations Emergency Management Team (LMT) Duty Rosters are timely shared with HO.</li> <li>Coordinating with line management for the implementation of Environment Management Plan (EMP) and engaging the services of Independent Monitoring Consultant (IMC), where obligatory.</li> <li>Ensuring Locations HSE MRC Meetings are convened in true perspective of PDCA Cycle.</li> <li>Working in close liaison with line management to ensure that no modification job is commenced without the Change Management/ Control Protocols (MoC).</li> <li>Conducting Internal &amp; Follow-up HSE Audits as per Internal HSE Audit Planner (Schedule).</li> <li>Coordinating Hazards Hunt Program, HSE Awareness Events and Reward &amp; Recognition Programs.</li> <li>Liaising with Joint Venture Partners in TCMS/ OCMs/ FCMs and learn from their experiences to adopt good organizational/ industry practices.</li> </ul>	<ul style="list-style-type: none"> <li>Reviewing/assessing legal &amp; regulatory compliance of all operational areas in the company with respect to occupational health, safety and environment.</li> <li>Reporting overall compliance status of applicable legal &amp; regulatory requirements to the Board.</li> <li>Preparing/reviewing/updating risk management policies, procedure, practices and system.</li> <li>Maintaining Risk Registers of the company for all applicable functions.</li> <li>Consolidating Risk Registers, developing Corporate Risk Register and Dashboard considering a) operational, b) strategic and c) external risks.</li> <li>Ensuring quarterly updating of Corporate Risk Register by getting inputs from all stakeholders.</li> <li>Ensuring that the identified, especially the significant corporate risks, controls and objectives/ action plans are communicated to BOD and other stakeholders.</li> <li>Ensuring that line management timely implements sound internal controls (after assessing viable options) to avoid above operational risks.</li> <li>Conducting/coordinating Crisis Management (mockup) drills as risk mitigation strategy.</li> <li>Conducting/coordinating trainings on regulatory compliance and risk management.</li> <li>Examining the scope and requirement of environmental studies and representing company in the technical sessions/public consultations (hearings) for acquiring NOCs.</li> <li>Maintaining/ updating logs of NOCs.</li> <li>Acting as liaison between the company and governmental agencies such as CIM, EPA, or similar state, federal and international agencies.</li> <li>Appraising performance of subordinates reporting to the position and providing ongoing feedback to the GM HSEQ in an objective and effective manner.</li> <li>Providing assistance to help develop capabilities of subordinates to enable them to perform their jobs effectively and efficiently.</li> </ul>





## Field HSE Setup



### Location IC (EFP/ FGCP/ Seismic Party/ Drilling Rig/ Production Field/ Plant)





Preamble

Terms & Definitions

Context

Leadership

## Planning

Support

Operation

Performance Evaluation

Improvement

### Reference Standards

ISO14001:2015 & ISO45001:2018

Clause 6.1: Actions to address vulnerabilities associated with threats and opportunities.

Clause 6.2: HSE objectives and planning to achieve them.

#### PSM (22 Elements) Model

**Process Safety Information:** It provides a foundation for identifying and understanding the hazards involved in the process. It ensures that PSM goals of HSE are achieved by providing process safety documentation. A PSI package shall be prepared for each process unit. Documents of the PSI package should be maintained up to date for the life of each process unit.

**Risk Assessment and Process Hazard Analysis:** A systematic and comprehensive study to identify and evaluate the significant hazards of the process and the safeguards associated with Highly Hazardous Processes (HHP) and Lower Hazard Operations (LHO). Process Hazard Analysis systematically identifies the safety hazards such as potential for fires, explosions and / or release of toxic materials, and is a well-defined program to remove or lower these hazards.

**Goals, Objectives and Plans:** The purpose of this element is to provide guidelines for establishing realistic, achievable and quantifiable safety goals and objectives. Managing safety, like managing other aspects of a business, includes setting of performance goals and objectives which should be Specific, Measurable, Attainable, Result Oriented, Time Bound (SMART) and within the sphere of influence of the person and group who is to be held accountable for achievement.

### This Section's Objectives

- ▣ Develop processes and prepare plans to establish HSE System.
- ▣ Identify significant HSE vulnerabilities, threats, opportunities and associated Impact.
- ▣ Study HSE vulnerabilities, threats, opportunities and identify compliance obligations.
- ▣ Address HSE vulnerabilities, threats, opportunities and associated Impact in the light of human rights, operational controls and applicable laws & regulations
- ▣ Set SMART HSE objectives/ targets for all relevant areas to prevent incidents and pollution.
- ▣ Establish management programs to achieve objectives/ targets and evaluate results.



### Associated Documents

- ▣ HSE Risk Assessment Plan
- ▣ HSE Risk Assessment Register
- ▣ Job Vulnerability/ Hazard Analysis (JVA/ JHA)
- ▣ HSE Objective and Management Plan
- ▣ Annual HSE Activity Plan

### Applicable Documents

- ▣ Regulatory Requirement Matrix



### Enterprise Risk Management

OGM/P-HSE-5.1

### Job Vulnerability /Hazard Analysis

OGM/P-HSE-5.2

### Legal & Other Requirements

OGM/P-HSE-5.3

### Objectives & Management Program

OGM/P-HSE-5.4





# Planning: OGDCL's Integrated HSE System Manual

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## 5.1 Enterprise Risk Management (ERM)

OGM/P-HSE-5.1(08) Revision Number 8

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**Updated By:**

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**Approved By:**

**Syed Khalid Siraj Subhani**  
Managing Director, OGDCL

### Change/ Revision Log

#	Description of Change
1	Modified: Potential Impact w.r.t. Asset/ Financial exhibited in USD replacing PKR.
2	Modified: Incident Probability in terms of frequency rationalized.
3	Added: Area Management to examine Final Risk Register and give feedback accordingly.
4	Added: Risk Dashboard to encompass prioritized risks.
5	Added: Occupational Hazards (Appendix-D).
6	Added: Process Risk Management Team and process risk management.

### Associated Documents Approval & Issue

Related Document/ Record	Initiated by	Reviewed by	Checked/ Verified / Approved by
OGF – HSE – 001 Hazards Identification & Risk Assessment (HIRA) Plan	Location HSE IC	Location HSE MRC	Location IC
OGF – HSE – 002 Risk Register (Template)	Location HSE IC	Location HSE MRC	Location IC



## 5.1.1 Purpose

- The purpose of this procedure is to provide a system to manage risks to as low as reasonably practicable (ALARP) by identifying the risks (identification phase), analyzing the risks (analysis phase), evaluating the risks (evaluation phase), implementing the effective controls/barriers (treatment phase), communicating the risks (communication phase), and reviewing the risks (review phase).

## 5.1.2 Definitions

<b>ALARP</b> (As Low As Reasonably Practicable)	Principle is that the residual risk be reduced as far as reasonably practicable as any additional cost involved in reducing the risk further would not be proportionate to the benefit gained.
<b>Barrier</b> (Hazards Control Hierarchy)	Functional grouping of safeguards or controls selected to prevent a major accident or limit the consequences.
<b>Enterprise Risk Management</b> (ERM)	ERM is a way to effectively manage risk across the organization through the use of a common risk management framework. This framework can vary widely among organizations but typically involves people, rules, and tools.
<b>Hazard</b>	Any process/operation/activity related event or gap in the protection efforts or source that could potentially cause damage and give opportunity for improvement.
<b>Hazard Communication</b> (HAZCOM)	Disseminating safety information about hazards in a workplace.
<b>Hazards Control Hierarchy</b> (Barriers)	<ul style="list-style-type: none"> <li>☒ Elimination is removal of hazard by eliminating a requirement to carry out a task, use of particular equipment or use of a chemical.</li> <li>☒ Substitution is replacement of the material; plant; equipment; process; or work practice with a less hazardous one.</li> <li>☒ Engineering controls reduce the reliance of human factors; engineering controls can be redesign of equipment, redesign of process or increase of automation. Engineering controls also include change in layout, ventilation, guards, enclosures, firewalls etc.</li> <li>☒ Administrative controls are the procedural aspects, such as planned and preventive maintenance, HSE awareness events, Standard Operating Procedures (SOPs), work permit system, job hazards analysis and competence of personnel.</li> <li>☒ Personal Protective Equipment (PPE) is the last and might be the least effective method as it relies on human behavior.</li> </ul>
<b>Hazard Identification</b> (HAZID)	A study by a multi-disciplinary team to identify potential hazards.
<b>Hazard and Operability Study</b> (HAZOP)	A study by a multi-disciplinary team to identify hazards and operability problems, including causes, consequences, safeguards and remedial actions.
<b>HIRA Plan</b>	Formal plan to carry out hazards identification and risk assessment of an oil & gas installation or office building.
<b>HIRA Team</b>	Team of appropriate domain professionals (subject matter experts) trained on hazards identification & risk assessment methodologies.
<b>Individual Risk</b>	Risk to which an individual is exposed during a defined period of time.
<b>Inherently Safer Design</b>	Design which eliminates or reduces major accidents through measures that are permanent/ inseparable from the design.
<b>Residual Risk</b>	Residual risk is the amount of risk that remains after controls are accounted for.
<b>Risk</b> (Rating)	Numerical value of an impact as combination of an incident-likelihood and consequence-severity within a 5x5 risk matrix.
<b>Risk Appetite</b>	Level of risk an organization is prepared to accept in pursuit of its objectives, before action is deemed necessary to reduce the risk.
<b>Risk Assessment</b>	Overall process of estimating the magnitude of impact and deciding whether or not it is significant.
<b>Risk Criteria</b>	Terms of reference which evaluates the significance of a risk as Low = 1-6; Medium = 7-12; High = 13-20; Intolerable = 21-25.
<b>Risk Dashboard</b>	Graphical presentation of the risks.
<b>Risk Management</b>	System to eliminate or mitigate the risks.
<b>Risk Matrix</b>	A visualization tool for Enterprise Risk Management (ERM). Also known as Risk Heat Map or Risk Heat Chart, it shows risk likelihood on the horizontal axis (X) and risk impact on the vertical axis (Y).







<b>Risk Owner</b>	Entity accountable as well as authoritative to manage a risk.
<b>Risk Register</b>	Record used to identify applicable hazards to assess risks.
<b>Risk Source</b>	Element which has potential to give rise to a risk.
<b>Risk Tolerance</b>	Readiness to bear a risk after risk treatment.
<b>Risk Treatment</b>	Controlling, avoiding or transferring the risk.
<b>Significant Risk</b>	Intolerable or high risk.

**5.1.3 Structure of OGDCL's Enterprise Risk Management (ERM)**

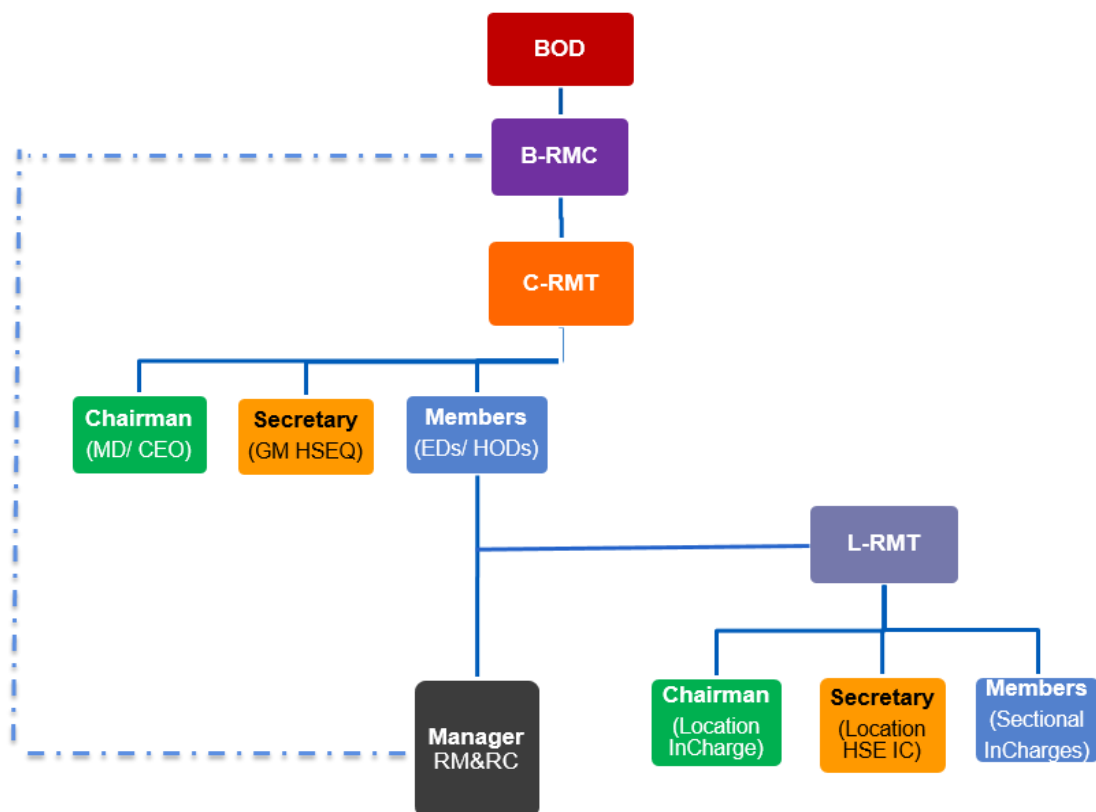
- OGDCL's Enterprise Risk Management (ERM) shall be governed by ERM Policy which is placed at Section 4.1 titled *HSE & ERM Policy Statements*.
- OGDCL's Enterprise Risk Management (ERM) Teams shall be constituted as follows;

Team	Chairman	Secretary	Members
<b>Corporate Risk Management Team (C-RMT)</b>	MD/ CEO/ COO/ CFO	GM HSEQ	EDs/ GMs/ HODs
<b>Location Risk Management Team (L-RMT)</b>	Location InCharge	Location HSE InCharge	Location Sectional InCharges
<b>Process Risk Management Team</b>	Experienced Chairperson from an Independent Party	HSEQ Representative	<ul style="list-style-type: none"> <li>Process/ Project Representative</li> <li>Discipline Engineers</li> <li>Sector Expert</li> </ul>

*However, HIRA Team(s) to carry out hazards identification & risk assessment activities.*

- Management shall ensure provision of requisite resources for the training and development of these teams on risk & crisis management.

**Structure of Enterprise Risk Management (ERM)**



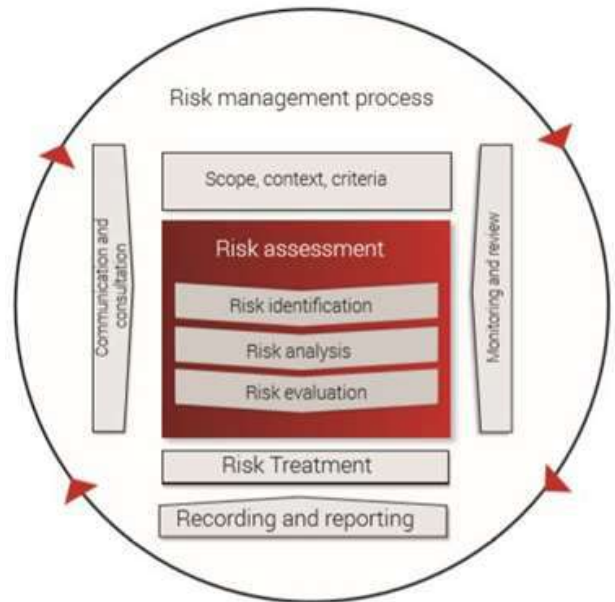


Roles & Responsibilities of Corporate Risk Management Team (C-RMT)		
Chairman	Secretary	Members
<ul style="list-style-type: none"> <li>Constitute C-RMT and ensure provision of requisite resources for the training and development of C-RMT on Risk &amp; Crisis Management.</li> <li>Ensure corporate risk assessment is carried out by C-RMT each quarter as per Risk Criterion and endorse the overall corporate risks.</li> <li>Ensure Risk Treatment is prioritized by C-RMT/ each Directorate by controlling (mitigating/ minimizing) the HIGH risks through interim controls/ barriers and strategic decision making, whereas INTOLERABLE risks by stopping the activity until risks have been reduced or transferred through an outsourced services.</li> <li>Ensure Corporate Risk Register include a Risk Dashboard to provide high level visibility, comprehension and significant risks along with controls are presented in the C-RMT Meetings by Secretary C-RMT.</li> <li>Ensure risks and controls are timely communicated through distribution of Corporate Risk Register to all Directorates by Secretary C-RMT.</li> <li>Ensure Risk Register is reviewed and updated on quarterly basis in the C-RMT Meetings and when there is a change in the nature of operations/ processes/ activities.</li> <li>Ensure timely formulation of short &amp; long term objectives/ action plans to mitigate/ minimize the significant corporate level risks.</li> </ul>	<ul style="list-style-type: none"> <li>Arrange trainings for the C-RMT on Risk &amp; Crisis Management based on training need assessment (TNA).</li> <li>Based on Locations' Risk Registers and inputs from Members C-RMT, update Corporate Risk Register and Risk Dashboard.</li> <li>Ensure quarterly updating of Corporate's Risk Register by getting inputs from all stakeholders.</li> <li>Conduct short awareness sessions/ convene C-RMT Meeting to communicate the documented (approved) risks and controls to all HODs on quarterly basis after the B-RMC Meetings.</li> <li>Circulate agenda related to C-RMT Meetings.</li> <li>Ensure to develop/ update Risk Dashboard and deliver a presentation on Enterprise Risk Management to provide high level visibility/ comprehension in the B-RMC and C-RMT Meetings.</li> <li>Assist Members C-RMT in the formulation of short &amp; long term objectives/ targets to mitigate/ minimize the significant corporate level risks.</li> <li>Track progress on objectives and action plans to reduce significant corporate risks.</li> </ul>	<ul style="list-style-type: none"> <li>Participate in the specific trainings on Risk &amp; Crisis Management.</li> <li>Oversee risk assessment by focusing on Risk Sources like Man, Machine, Material, Method, Product, Record, and Legal Framework pertaining to their own Directorate.</li> <li>Carry out corporate risk assessment each quarter as per Risk Criterion pertaining to their own Directorate..</li> <li>Crosscheck/ review the overall corporate risk assessment process.</li> <li>Treat Directorate's risks by controlling (mitigating/ minimizing) the HIGH risks through interim controls/ barriers and strategic decision making, whereas INTOLERABLE risks by stopping the activity until risks have been reduced or transferred through an outsourced services.</li> <li>Further communicate Directorate's approved risks and controls to all units'/ sub unit's teams.</li> <li>Provide inputs to Corporate Risk Register in the L-RMT Meetings on quarterly basis and when there is a change in the nature of operations/ processes/ activities.</li> <li>Ensure timely mitigation on the agreed objectives and action plans to reduce significant corporate risks.</li> </ul>
Roles & Responsibilities of Location Risk Management Team (L-RMT)		
Chairman	Secretary	Members
<ul style="list-style-type: none"> <li>Constitute Hazard Identification &amp; Risk Assessment (HIRA) Teams, circulate Quarterly HIRA Plan and provide requisite resources for the training and development of L-RMT on Risk &amp; Crisis Management.</li> <li>Ensure location's risk assessment is carried out by assigning ratings to each activity as per Risk Criterion (Low = 1-6; Medium = 7-12; High = 13-20; Intolerable = 21-25).</li> <li>Ensure Risk Register is timely compiled for circulation.</li> <li>Ensure Risk Treatment is prioritized by controlling (mitigating/ minimizing) the HIGH risks through interim controls/ barriers and strategic decision making, whereas INTOLERABLE risks by stopping the activity until risks have been reduced or transferred through an outsourced services.</li> <li>Ensure Location's Risk Register include a Risk Dashboard to provide high level visibility, comprehension and significant risks are presented in the L-RMT/ HSE MRC Meetings.</li> <li>Ensure hazards, risks and controls are communicated through distribution of Risk Register; Toolbox Talk; HAZCOM (signboard/poster/color-coding); training/ awareness session; safety bulletins; safety alerts; circulars, etc.</li> <li>Ensure Risk Register is reviewed on quarterly basis in the L-RMT/ HSE MRC Meetings and when there is a change in the nature of operations/ processes/ activities.</li> <li>Ensure timely formulation of short &amp; long term objectives/ targets to mitigate/ minimize the significant level risks.</li> </ul>	<ul style="list-style-type: none"> <li>Arrange specific trainings for the HIRA Teams on Risk &amp; Crisis Management.</li> <li>Based upon the inputs provided by HIRA Teams, compile hazards, risks and controls objectively in the Risk Register.</li> <li>Quarterly update Locations' Risk Register by getting inputs from all stakeholders.</li> <li>Conduct short awareness sessions/ convene L-RMT Meeting/ HSE MRC Meeting to communicate the documented (approved) hazards, risks and controls to all Sectional InCharges.</li> <li>Circulate agenda related to L-RMT/ HSE MRC Meetings.</li> <li>Develop Risk Dashboard and deliver a presentation on Risk Management to provide high level visibility/ comprehension in the L-RMT/ HSE MRC Meetings.</li> <li>Assist location's management in the formulation of short &amp; long term objectives/ targets to mitigate/ minimize the significant risks.</li> <li>Timely submit update Locations' Risk Register to all concerned at, H.O.</li> </ul>	<ul style="list-style-type: none"> <li>Participate in the specific trainings on Risk &amp; Crisis Management.</li> <li>Initiate location's risk assessment by visiting the areas as per HIRA Plan focusing on Risk Sources like Man, Machine, Material, Method, Product, Record, and Legal Framework.</li> <li>Carry out location's risk assessment by assigning ratings to each activity as per Risk Criterion (Low = 1-6; Medium = 7-12; High = 13-20; Intolerable = 21-25).</li> <li>Treat risks by controlling (mitigating/ minimizing) the HIGH risks through interim controls/ barriers and strategic decision making, whereas INTOLERABLE risks by stopping the activity until risks have been reduced or transferred through an outsourced services.</li> <li>Further communicate hazards, risks and controls to the employees, contractors and service companies working within their area of operations / processes / activities.</li> <li>Provide inputs to Location's Risk Register in the L-RMT/ HSE MRC Meetings on quarterly basis and when there is a change in the nature of operations/ processes/ activities.</li> </ul>



### 5.1.4 Risk Management Process

- ☐ After establishing context, risk management process shall comprise of following phases:
  - 4.1 Risk Identification Phase
  - 4.2 Risk Analysis Phase
  - 4.3 Risk Evaluation Phase
  - 4.4 Risk Treatment Phase
  - 4.5 Risk Communication Phase
  - 4.6 Risk Review Phase



#### 5.1.4.1 Risk Identification Phase

- ☐ Location's Risks shall be identified by Hazards Identification & Risk Assessment (HIRA) Team(s) constituted by Location InCharge in case of oil & gas installation\* or office building\*\* and respective InCharge Admin. in case of Head Office\*\*\*.
- ☐ Whereas Corporate Risks shall be identified by Corporate Risk Management Team (C-RMT).
- ☐ Depending upon the number of processes, operations and activities, *HIRA Plan* shall be developed in the following tabulated form and circulated:

#	Area	Team Lead	Team Members	Schedule (From – To)	Risk Register Deadline		
					Compilation	Review	Approval
1							
2							
3							

- ☐ *HIRA Plan* shall be developed on quarterly basis for carrying out hazards identification and risk assessment accordingly.
- ☐ In addition, whenever a new project (or expansion), exploration, seismic or drilling activity takes place, *HIRA Plan* shall be developed prior to commencement of work.
- ☐ HIRA Team members shall be the appropriate domain-related professionals (subject matter experts) who are provided with formal training session(s) on hazards identification and risk assessment methodologies.
- ☐ Each HIRA Team shall visit the allocated areas as per *HIRA Plan* by focusing on following *List of Risk Sources* (but not limited to):

<b>Man</b>	i.e. awareness, competence, and experience of workforce, contractors, service companies, etc.
<b>Machine</b>	i.e. aging factor and integrity of infrastructure, design, equipment, tools, safeguards, etc.
<b>Material</b>	i.e. quality of chemicals, parts/spares, backup machines, etc.
<b>Method</b>	i.e. mechanism, processes, supply chain systems, procedures, work instructions, etc.
<b>Product</b>	i.e. product's characteristics & quality with respect to reservoir's lifecycle perspective, contractual obligations, etc.
<b>Record</b>	i.e. HAZOP, drawings, risk assessments, historical logs, audits/inspections, HSE TOP cards, permits, JHAs, shutdown/ breakdown/accidents history, etc.
<b>Legal Framework</b>	i.e. applicable laws, regulatory/other requirements, etc.

- ☐ Each HIRA Team shall identify and list down applicable hazards considering the following List of Hazards whereas HSE Rep. shall compile the same against each process/operation/activity in the *Risk Register*.

List of Hazards (not exhaustive)	
<b>a. Physical hazards</b> <ul style="list-style-type: none"> <li>☐ Electrical (shock/burn)</li> <li>☐ Hazardous/stored energy</li> <li>☐ Radiations (ionizing or non-ionizing)</li> <li>☐ Revolving or rotating entities</li> <li>☐ Moving entities/dynamic situation (on floor/soil, in water or overhead)</li> <li>☐ Falling objects</li> <li>☐ Ejection (flying pieces or parts)</li> <li>☐ Improper storing/stacking (falling materials)</li> </ul>	<b>b. Chemical hazards</b> <ul style="list-style-type: none"> <li>☐ Explosion (explosive/chemical/fuel/ electric)</li> <li>☐ Fire (electric/chemical/fuel)</li> <li>☐ Splash</li> <li>☐ Asphyxiation (e.g. low oxygen atmospheres, excessive CO<sub>2</sub>, drowning, excessive N<sub>2</sub>, halon, smoke, etc.)</li> <li>☐ Combustible materials</li> <li>☐ Flammable materials</li> <li>☐ Oxidizing materials</li> </ul>



- ☒ Improper floor or surface (tripping/slipping)
- ☒ High pressure points
- ☒ High temperature points/surfaces/fluids
- ☒ Extreme low temperature points/surfaces/ fluids
- ☒ Explosion/rupture/boiling liquid expanding vapor explosion (bleve)
- ☒ Work at heights (falls)
- ☒ Confined space (toxic gases/suffocation)
- ☒ Obstructions/collisions/ contacts/impacts (sharp edges, low head-rooms)
- ☒ Objects under tension/induced stress
- ☒ Objects under compression
- ☒ Vibration
- ☒ Noise (high level/intrusive)
- ☒ Natural hazard (storm/lightning/flood/ earthquake)
- ☒ Terrain (swamps/marshes/morass/slopes/ streams)

- ☒ Corrosive/irritating materials
- ☒ Carcinogenic materials
- ☒ Toxic materials (e.g. H<sub>2</sub>S, exhaust fumes, SO<sub>2</sub>, benzene, chlorine, welding fumes, tobacco smoke, CFCs)
- ☒ Dust/particles
- ☒ Fumes/vapors/steam
- ☒ Mist/fog
- ☒ Frost bite

- c. Ergonomics hazards**
- ☒ Poor organization and job design
  - ☒ Work planning issues
  - ☒ Improper work environment (temperature/ humidity)
  - ☒ Improper light (glare/poor light)
  - ☒ Indoor climate (too hot/cold/dry/humid, draughty)
  - ☒ Heat stress (high ambient temperatures)
  - ☒ Cold stress (low ambient temperatures)
  - ☒ Improper ventilation
  - ☒ Manual lifting, handling or shifting
  - ☒ Repetitive movements
  - ☒ Poor Posture
  - ☒ Poor workplace design/layout
  - ☒ Congested workplace
  - ☒ Stressful tasks
  - ☒ Long sittings/duration of work
  - ☒ Improper work rest cycles
  - ☒ Mismatch of work to physical abilities
  - ☒ Assigning task to unskilled/ untrained person

- d. Biological hazards**
- ☒ Unhygienic conditions
  - ☒ Food contamination/ food-borne bacteria (e.g. e. coli)
  - ☒ Water-borne bacteria (e.g. legionella)
  - ☒ Clinical waste
  - ☒ Infections (blood/needles)
  - ☒ Contagious diseases
  - ☒ Bacteria/viruses (endemic/epidemic/ pandemic)
  - ☒ Poisonous plant (e.g. poison ivy and oak, stinging nettles, nightshade)
  - ☒ Animal/insect bite or sting
  - ☒ Algae or diseased plants
  - ☒ Disease-transmitting insects (mosquitoes: dengue, malaria, yellow fever; ticks: lyme disease; fleas: plague)
  - ☒ Parasitic insects (e.g. pin worms, bed bugs, lice, fleas)

- e. Psychological hazards**
- ☒ Post-traumatic stress
  - ☒ Burnout/fatigue
  - ☒ Bullying/harassment
  - ☒ Motion/sea sickness
  - ☒ Travel sickness
  - ☒ Height phobia

- f. Security-related hazards**
- ☒ Violence/terrorism
  - ☒ Assault
  - ☒ Sabotage
  - ☒ Military action/civil disturbances
  - ☒ Pilferage/burglary

- g. Occupational hazards**
- ☒ Acute coronary syndrome
  - ☒ Accidental trauma; Heat related disorders
  - ☒ Exposure to high noise; UV light; vibration; welding fumes; oil fumes; chemicals; extreme heat/ coldness; human blood; video screens; cleaning liquids, detergents and insecticide spray
  - ☒ Contaminated drinking water; infected sewage
  - ☒ Lifting of heavy weight; prolonged standing; shift work

☒ Existing controls/ barriers already in place against each process/operation/ activity shall be scribed in the *Risk Register* using *Hazards Control Hierarchy*.

Note:-

\*Oil & gas installation = OGDCL Field/ Rig/ Party/ Stores/ Logistics Base/ G&R Lab.

\*\*Office building = OGDCL Regional offices/ Medical centers/ Training center.

\*\*\*Head office = OGDCL House.

### 5.1.4.2 Risk Analysis Phase

☒ Actual Risk (with Existing Controls/ Barriers) and Residual Risk (after implementing Further Controls/ Barriers) shall be calculated as

**Risk Rating (RR) = Consequence (C) x Probability (P)**

☒ Based upon the inputs provided by HIRA Teams, HSE Rep. shall compile risks objectively in the *Risk Register* by assigning values as per following risk criteria:

▣ **Consequence (C) Severity** (Table-A) with numerical values attached to each impact pertaining to human, environment, asset/ financial and reputation. However, the highest numeric value shall be selected for Risk Rating calculation.

▣ **Incident (P) Probability** (Table-B) with numerical values attached to Probability of Occurrence and/ or effectiveness of existing controls/ barriers.

▣ **Risk Rating (RR) 5x5 Risk Matrix** (Risk Heat Map / Risk Heat Chart) Table-C





Table-A: Consequence Severity (C)

Severity	Potential Impact			
	Human	Environment	Asset/ Financial	Reputation
<b>Catastrophic (5)</b>	Multiple Fatalities	Massive Effect Persistent Severe Environmental Damage or Severe Nuisance extending over a large area of commercial, communal or recreation use. Continuous excursions beyond allowable or regulatory limits.	Loss of > 10 Million USD	International Concern
<b>Critical (4)</b>	Single Fatality	Major Effect Severe environmental damage; the company is required to take Extensive measures to restore the damaged environment. Intermittent excursions beyond allowable or regulatory limits.	Loss of 2 – 10 Million USD	National Concern
<b>Major (3)</b>	Multiple Injury Cases esp. Lost Time Injury(ies)	Local Effect Limited Discharges affecting the neighborhood or damaging local environment. Excursions beyond allowable or regulatory limits.	Loss of 0.025 – 2 Million USD	Provincial / Regional Concern
<b>Marginal (2)</b>	Medical Treatment Case(s)/ Restricted Workday Injury(ies)	Minor Effect Discharge or Contamination with no lasting effect. Rare excursions beyond allowable or regulatory limits.	Loss up to 0.025 Million USD	Local Concern
<b>Negligible (1)</b>	First Aid Case/ Near Hit	Slight Effect Slight Damage within the premises of the facility	Nil	Awareness, No Concern

Table-B: Incident (Event) Probability (P)

Likelihood That Exposure Would Result Into Loss		
	IN TERMS OF FREQUENCY	IN TERMS OF EFFECTIVENESS OF CONTROLS/BARRIERS
<b>Highly Likely (5)</b>	Incident or event occurred THREE OR MORE TIMES DURING LAST TEN YEARS within E&P oil and gas industry, Pakistan	Or NO operational control/barrier is in place
<b>Very Likely (4)</b>	Incident or event occurred TWO TIMES DURING LAST TEN YEARS within E&P oil and gas industry, Pakistan	Or INSUFFICIENT operational controls/barriers are IN PLACE
<b>Likely (3)</b>	Incident or event occurred ONCE DURING LAST TEN YEARS within E&P oil and gas industry, Pakistan	Or operational controls/barriers are IN PLACE and are NOT ROUTINELY REVIEWED
<b>Unlikely (2)</b>	Incident or event occurred SELDOM/ RARELY DURING LAST TEN YEARS within E&P oil and gas industry, Pakistan	Or operational controls/barriers are IN PLACE and ARE REVIEWED as per plans
<b>Very Unlikely (1)</b>	NEVER heard of DURING LAST TEN YEARS in E&P oil and gas industry, Pakistan	Or operational controls/barriers are EFFECTIVE to WITHSTAND their intended purpose

Table-C: 5x5 Risk Matrix (Risk Heat Map / Risk Heat Chart)

		Incident Probability (P) (Chance of Happening)				
		Very Unlikely	Unlikely	Likely	Very Likely	Highly Likely
Consequence (C) Severity (Impact)	Catastrophic	5	10	15	20	25
	Critical	4	8	12	16	20
	Major	3	6	9	12	15
	Marginal	2	4	6	8	10
	Negligible	1	2	3	4	5

- ☐ Further controls/barriers against the process/operation/activity shall be mentioned in the second last column of *Risk Register* especially in case ALARP is not attained.
- ☐ Whereas the residual risk rating be assigned in the last column of *Risk Register*.
- ☐ *Draft Risk Register* shall be reviewed by L-RMT/ HSE MRC with due diligence.
- ☐ Following template shall be used for *Risk Register*:





#	Details of Process/ Operation/ Activity	List of Hazards <i>(Ref. Appendix-D of ERM Procedure)</i>	Existing Controls/ Barriers	Consequence Severity (C)				Probability (P)		Actual Risk Rating (RR=C x P)	Further Controls/ Barriers	Residual Risk Rating (RR = C x P) (After Implementing Further Controls/ Barriers)	
				Human	Environment	Asset/ Financial	Reputation	In terms of Incidents Frequency	In terms of effectiveness of Controls/ Barriers				The highest numeric value to be selected for RR.
										Low (1-6)			Medium (7-12)
<input type="checkbox"/> Operational Risk				<input type="checkbox"/> Strategic Risk				<input type="checkbox"/> External Risk					
1													
2													
3													

**5.1.4.3 Risk Evaluation Phase**

- ☐ Risk ratings and existing controls/ barriers mentioned in the *Risk Register* shall be compared with the predetermined risk criteria to see how the assessed (rated) risks be treated accordingly e.g.:
  - ▣ no further action is required;
  - ▣ risk treatment option(s) to be applied; or
  - ▣ risk analysis to be redone.
- ☐ Subsequently, the *Final Risk Register* shall be endorsed and approved by Location InCharge in case of oil & gas installation or office building and respective InCharge Admin. in case of Head Office for circulation to all concerned with a copy to HSEQ Department H.O.
- ☐ Area Management shall examine the *Final Risk Register* and give feedback accordingly.

**5.1.4.4 Risk Treatment Phase**

- ☐ Risk treatment and actions shall be prioritized in the following manner based on risk appetite:

Risk Rating	Risk Treatment	Action and Timescale
<b>Low (ALARP) [1-6]</b>	<b>Nil</b>	<b>No action is required.</b>
<b>Medium (ALARP) [7-12]</b>	<b>Nil</b>	<b>No additional controls/barriers are required. Consideration may be given to a more cost-effective solution or improvement that imposes no additional costs. Monitoring is required to ensure that the desired controls are maintained.</b>
<b>High [13-20]</b>	<b>Controlling the significant risk</b>	<b>Urgent action should be taken and considerable resources be allocated to reduce the risk to ALARP through interim controls/barriers and strategic decision making/ objectives &amp; targets by putting in place actions to mitigate or minimize the risk. When considering interim controls/barriers, Hazards Control Hierarchy shall apply.</b>
<b>Intolerable [21-25]</b>	<b>Avoiding the significant risk</b>	<b>Any planned activity should NOT be commenced whereas an ongoing activity should be immediately STOPPED until the risk has been reduced. The ultimate decision to RESUME the activity shall be conditional with the approval of top management.</b>
	<b>Transferring the significant risk</b>	<b>The entire activity may be outsourced; OGDCL, however, to retain governance responsibility for the monitoring of such outsourcing arrangements to include the arrangements for risk management.</b>

- ☐ Objectives and associated targets, therefore, shall be formulated to control the significant (**High & Intolerable**) risk ratings through a Management Program / Action Plan (till ALARP is achieved) which includes:
  - ▣ Objective and targets to be achieved;
  - ▣ Areas where the program needs to be implemented;
  - ▣ Methods and means to achieve the objective.
  - ▣ Responsibility for defining and implementing the program.
  - ▣ Timeframe for completing the program and/or its elements or phases;



- ☐ L-RMT/ HSE MRC shall review, discuss and approve Management Program for implementation.
- ☐ Progress of Management Program shall be reviewed depending upon the nature of case.
- ☐ When Management Program achieves its objective and associated targets, the reduction in risks shall be reported to L-RMT/ HSE MRC for review and if found satisfactory, shall be closed out.

### 5.1.4.5 Risk Review Phase

- ☐ *Risk Register* shall be reviewed on quarterly basis by L-RMT/ HSE MRC.
- ☐ Furthermore, *Risk Register* shall be reviewed when there is a change in the nature of operations/processes/activities and/ or a development in appreciation of the relevant hazards and risks e.g. new guidance or legislation; audit/ inspection revealing nonconformity(ies); and/or major incident/ accident.

### 5.1.4.6 Risk Communication

- ☐ *Risk Register* shall include a *Risk Dashboard* to provide high level visibility, comprehension and for presenting risks in the L-RMT/ HSE MRC Meetings.
- ☐ Communication of hazards and risks shall be carried out through distribution of risk register; toolbox talk; HazCom (signboard/poster/color-coding); training/ awareness session; safety bulletins; safety alerts; circulars, etc.
- ☐ Sectional InCharges shall be responsible for the further communication of the hazards and risks to the employees, contractors and service companies working within their areas of operations/processes/activities.

## 5.1.5 Process Risk Management

- ☐ Process risk management shall be carried out employing Process Hazard Analysis (PHA) techniques by identifying the hazards at an early stage in the design process and the actual changes or the changes that can reasonably be expected during the operations lifetime in meeting / workshop format.
- ☐ PHA shall be conducted after every five years with following objectives:
  - ⊕ To check, verify and validate the efficacy of process controls and barriers / internal controls.
  - ⊕ To up to date documentation / arrangements for achieving safe operating limits and ensure availability to O&M personnel.
  - ⊕ To ensure placement of conscious labeling on equipment, storage vessels, containers, tanks and pipelines carrying or containing hydrocarbons or other hazardous material as per appropriate international standards.
  - ⊕ To ensure provision of an emergency response plan which includes means of escape; emergency response teams; appropriate safe refuge and assembly areas; and emergency response equipment for spillage containment, fires, explosions, burns, etc., and
  - ⊕ To communicate hazard information to employees (including using the analysis hazard review tables to improve operating procedures or develop trouble-shooting guides)

### 5.1.5.1 PHA Preparation Phase

- ☐ This phase of the PHA shall involve planning the meetings and workshops, collecting and reviewing background information, and preparing for leading and documenting the proceedings.
- ☐ The preparation phase shall be the responsibility of the team leader but the effort could be shared by the team scribe or others.
- ☐ Team members shall be allowed sufficient time to help collect and review process safety information (PSI) and procedures.

### 5.1.5.2 PHA Workshop Phase

- ☐ During PHA team meetings and workshops, accident scenarios shall be anticipated, important hazards & data shall be identified and risks shall be judged, employing variety of techniques for particular process areas or part of the PHA.





5.1.5.3 PHA Report Phase

- PHA report, results, and supporting documentation shall be based upon the information collected during the PHA meeting. PHA report shall state (1) who the team was, (2) what process the team reviewed, (3) when the PHA meetings and workshops took place, (4) how the team performed the review, (5) what the results were and (6) what were the recommendations for reducing the risk.
- PHA Report shall be shared with the concerned Departmental Heads.
- Custodian of the unit shall develop Action Plan against the PHA recommendations and perform quarterly reviews of the recommendations followed by progress sharing with concerned management and HSEQ Department.

5.1.6 Corporate Risk Management

- Manager Risk Management & Regulatory Compliance (RM&RC) shall be responsible to consolidate *Location's Risk Registers*, develop *OGDCL's Corporate Risk Register and Dashboard*.
- OGDCL's *Corporate Risk Register* shall mainly include a) operational, b) strategic and c) external risks; whereas *Risk Dashboard* to include those significant activities which have been mutually agreed in the Corporate Risk Management Team (C-RMT) meeting. *Risk Dashboard* shall generally encompass following prioritized risks (but not limited to):

#	Category	Priority Risk
1	Strategic Risks	Financial Instruments (Credit Risk, Liquidity Risk, Market Risk)
		Reserves Replacement Ratio
		Project Risks
		Supply and Demand Risks
2	Operational Risks	Regional Risks
		Human Capital Deficit
		Operational Hazards
		Supply Chain Risks
		Ageing Oil and Gas Infrastructure
		Information Technology
3	External Risks	Petroleum Data Preservation
		Impact of Investigation Agencies/ LEAs
		Natural Calamities
		Pandemic Risks

- OGDCL's *Corporate Risk Register* and *Risk Dashboard* shall be reviewed by C-RMT on quarterly basis before submission to MD/CEO for final approval.
- Furthermore, OGDCL's *Corporate Risk Register* shall be reviewed when there is a change in the nature of operations/processes/activities and/ or development in appreciation of the relevant hazards and risks e.g. new guidance or legislation; audit/inspection revealing nonconformity(ies); and/or major incident/accident.
- MD/CEO shall be responsible to ensure that the identified, especially the significant corporate risks, controls and objectives/ action plans are communicated to BOD and other stakeholders.
- Respective Directorate shall be responsible to communicate the approved risks & controls to its units'/sub unit's teams and ensure timely mitigation on the agreed objectives/ action plans to reduce significant corporate risks.
- GM HSEQ shall be responsible to ensure that *Enterprise Risk Management (ERM) Procedure* is up to date as well as accessible and comprehensible to all concerned for compliance.



OIL & GAS DEVELOPMENT COMPANY LIMITED  
**HAZARDS IDENTIFICATION AND RISK ASSESSMENT (HIRA) PLAN**

Date of Risk Assessment (From \_\_\_\_\_ To \_\_\_\_\_)

LOCATION: \_\_\_\_\_

**HIRA TEAM A**

Assessment Area	Team Leader	Team Members	Schedule (From – To)	Risk Register Deadline		
				Compilation	Review	Approval

**HIRA TEAM B**

Assessment Area	Team Leader	Team Members	Schedule (From – To)	Risk Register Deadline		
				Compilation	Review	Approval

**HIRA TEAM C**

Assessment Area	Team Leader	Team Members	Schedule (From – To)	Risk Register Deadline		
				Compilation	Review	Approval

**HIRA TEAM D**

Assessment Area	Team Leader	Team Members	Schedule (From – To)	Risk Register Deadline		
				Compilation	Review	Approval

**Note:**

- 1) THIS PLAN HAS BEEN PREPARED UNDER THE SECTION 5.0 "PLANNING" OF OGDCL INTEGRATED HSE SYSTEM MANUAL DULY APPROVED BY MD&CEO OGDCL.
- 2) APPROVED COPY OF RISK REGISTER WILL BE DISTRIBUTED TO ALL CONCERNED AFTER THE ENDORSEMENT OF COMPETENT AUTHORITY.
- 3) OBJECTIVES & MANAGEMENT PROGRAM WILL BE IMPLEMENTED BY THE RESPECTIVE SECTIONS FOR THE MITIGATION MEASURE OF SIGNIFICANT (INTOLERANT/HIGH) RISK AREAS.

Prepared by \_\_\_\_\_

Reviewed by \_\_\_\_\_

Approved by \_\_\_\_\_

Ref. Section 05 (Planning) of OGDCL's Integrated HSE System Manual





OGF/XXX-HSE-002(06)

## CORPORATE / LOCATION RISK REGISTER BASED ON LIFECYCLE PERSPECTIVE

Risk Register No.: HSE / XXX / 20XX – XXX(00)

Title of Entity: \_\_\_\_\_

Date of Risk Assessment: From \_\_\_\_\_ To \_\_\_\_\_

Reference of Risk Assessment Plan: \_\_\_\_\_



Oil and Gas Development Company Limited

### RISK REGISTER

Threats & Opportunities Assessment for Managing Risks Based On Life Cycle Perspective

OGF/XXX-HSE-002(06)

#### C-RMT / L-RMT

#	Name	Role	Designation	Directorate/ Department/ Section
1		Chairman		
2		Secretary		
3		Member-1		
4		Member-2		
5		Member-3		
6		Member-4		
7		Member-5		
8		Member-6		
9		Member-7		
10		Member-8		
11		Member-9		
12		Member-10		



Oil and Gas Development Company Limited

### RISK REGISTER

Threats & Opportunities Assessment for Managing Risks Based On Life Cycle Perspective

OGF/XXX-HSE-002(06)

#### Hazards Identification & Risk Assessment (HIRA) Team

Area(s)	Name	Role	Designation	Company
<b>HIRA Team A</b>				
		Team Lead		
		Member		
		Member		
		Member		
<b>HIRA Team B</b>				
		Team Lead		
		Member		
		Member		
		Member		
<b>HIRA Team C</b>				
		Team Lead		
		Member		
		Member		
		Member		
<b>HIRA Team D</b>				
		Team Lead		
		Member		
		Member		
		Member		







# Planning: OGDCL's Integrated HSE System Manual

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Oil and Gas Development Company Limited  
**RISK REGISTER**  
Threats & Opportunities Assessment for Managing Risks Based On Life Cycle Perspective

OGF/000/HSE-002(06)

## Summary of Risk Assessment (Tabulated)

Area of Assessment	Low	Medium	High	Intolerant	Total
I.					
II.					
III.					
IV.					
V.					
VI.					
VII.					
VIII.					
IX.					
X.					
<b>Total:</b>					



Oil and Gas Development Company Limited  
**RISK REGISTER**  
Threats & Opportunities Assessment for Managing Risks Based On Life Cycle Perspective

OGF/000/HSE-002(06)

## Risk Dashboard



Oil and Gas Development Company Limited  
**RISK REGISTER**  
Threats & Opportunities Assessment for Managing Risks Based On Life Cycle Perspective

OGF/000/HSE-002(06)

Area I: \_\_\_\_\_

### HIRA Team:

Sr. No.	Name	Designation	Signature	Date



OGF/XXX-HSE-002(06)

Oil and Gas Development Company Limited  
**RISK REGISTER**

Threats & Opportunities Assessment for Managing Risks Based On Life Cycle Perspective



#	Details of Process / Operation / Activity	List of Hazards <i>(Ref. Appendix-D of ERM Procedure)</i>	Existing Controls / Barriers	Consequence Severity (C)				Probability (P) The highest numeric value to be selected for RR.	Actual Risk Rating (RR=C x P)	Further Controls / Barriers	ALARP (Yes/No)	Residual Risk Rating (RR = C x P) <i>(After Implementing Further Controls/Barriers)</i>
				Human	Environment	Asset/ Financial	Reputation					
1												
2												
3												
4												
5												





## 5.2 Job Vulnerability & Hazard Analysis

OGM/P-HSE-5.2(08) Revision Number 8

Original Issue: June 25, 2007  
 This Issue: March 14, 2022

**Updated By:**  
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 Senior HSEQ Officer, OGDCL

**Reviewed By:**  
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**Checked By:**  
**Mahmood-ul-Hassan Khan**  
 General Manager HSEQ, OGDCL

**Approved By:**  
**Syed Khalid Siraj Subhani**  
 Managing Director, OGDCL

### Change/ Revision Log

#	Description of Change
	<i>Reviewed, no change suggested.</i>

### Associated Documents Approval & Issue

Related Document/ Record	Initiated by	Reviewed by	Checked/ Verified / Approved by
OGF – HSE – 003 Job Vulnerability/ Hazard Analysis (JVA/ JHA)	Department / Section ICs	Location HSE IC Permit Issuer	Location IC



5.2.1 Purpose of JVA/ JHA

- 1 A JVA/ JHA shall be intended to provide a structured approach to identifying hazards and incorporating controls measures for those hazards related to tasks.
2 JVA/ JHA shall be required for any task performed under a Permit to Work (PTW). However, there may be exceptions; In such cases, the rationale for not conducting a JVA/ JHA should be clearly stated on the PTW template.

5.2.2 Requirements for JVA/ JHA

- 1 Jobs with the worst accident history shall have priority and should be analyzed first.
2 JVA/ JHA will be based upon following factors:
- Frequency of Accidents: a job has repeatedly caused near hits or accidents is a candidate for JVA / JHA.
- Rate of Disabling Injuries: Every job that has caused disabling injuries should be given a JVA / JHA.
- Severity Potential: Some jobs may not have a history of accidents but may have the potential for a severe injury (high impact ratings).
- New Jobs: Analyses of new jobs and jobs where changes have been made in processes and procedures should follow.
- SIMOPS (Simultaneous Operations) Jobs: Jobs that involve a number of functional groups or disciplines.
3 JVAs / JHAs shall be attached to the corresponding work permits and discussed during the toolbox talks / safety meetings.
4 The following list is designed to assist in determining the requirement for a JVA / JHA and contains jobs that are considered DO NOT require a JHA. This list is not exhaustive and be used as a guide only:

Table with 2 columns: Production - Routine Operations and Maintenance - Routine Operations. Lists various tasks such as 'Weekly line of sight gas detector cleaning', 'Housekeeping', 'Test running emergency generator', etc.

5.2.3 JVA/ JHA Development Team

- 1 The Team shall constitute of the following members:
- Team Lead: Representative from exploration, construction, seismic, production, maintenance or drilling (depending on the scope of work). This person should be experienced in the work and at least at supervisor level.
- Representative(s) at the "hands on" level - ideally, the Job Supervisor who will directly oversee the execution of the Job
- Technical specialists / engineers who can bring additional knowledge to the assessment (if required)
- Location HSE Rep. (if required)
- At a minimum one representative from every discipline or contractor involved in execution of job



### 5.2.4 JVA / JHA Responsibilities

- ☐ It shall be the responsibility of Job Supervisor to coordinate and conduct JVA / JHA prior to execution of the task.
- ☐ Location HSE Representative shall communicate the requirements laid down in this procedure to all employees and contractor's management.
- ☐ For activities to be carried out by projects personnel or any contractor inside plant boundary / live areas / process areas (i.e. Brown field), all risk assessments shall be reviewed and endorsed by Permit Issuer.
- ☐ In green field (development of new facility / construction sites / projects) outside of plant boundary; all JVAs/ JHAs shall be reviewed and endorsed by designated person as authorized by Location IC.

### 5.2.5 Modus Operandi: JVA/ JHA

#### Step 1 – Establish the Context

- ☐ Establish the context of the scope of work required by the JVA/ JHA:

Complete Section of the JVA / JHA Worksheet:	
<b>Job Description</b>	- <i>What will be done?</i> State the specific job to be performed that may have a history of potential for injury, incidents, safety critical, new jobs, jobs changed, new personnel performing job.
<b>Location</b>	- <i>Where?</i> Identify the location where the work will be conducted.
<b>JHA Date</b>	- <i>When?</i> Record the date that the JVA/ JHA is being recorded.
<b>JHA Leader</b>	- <i>Who facilitated the JVA/ JHA?</i> Record the name of the person who facilitated the JHA.
<b>Review Team</b>	- <i>Who will be involved?</i> Record details of the Department, responsible Job Supervisor for the work and the names of JVA/ JHA participants.
<b>Hazard Checklist</b>	- Identify applicable Hazards from list

#### Step 2 – Break the Job into Logical Steps

- ☐ Divide each job into simple steps. Number these and describe what is to be done and in what order. Ensure steps are not too complicated or too simple.

Complete Section of the JVA / JHA Worksheet:	
<b>Step No.</b>	<i>How many steps can the job be broken into?</i> Number the steps of the job, i.e. 1,2,3 etc.
<b>Job Step</b>	<i>What shall be done at each step?</i> Against each step number, briefly describe what is to be done in order of the work to be conducted.
Note: Consider these in each step <i>Are there safer methods to achieve the same results?</i> <i>Are there alternative methods such as avoiding confined space entries via remote device, removing task from a hazardous area, shutting in the process (consider hierarchy of controls).</i>	

#### Step 3 - Identify the Hazards for Each Job Step (Hazards)

- ☐ For each step of the job, identify all significant hazards associated with the work, whether they are part of the employee's task or part of the job surroundings. For each of these hazards, identify the potential incident that may occur. Also identify any potential control measures that may fail as a result of the activities conducted during the job.

Complete Section of the JVA / JHA Worksheet:	
<b>Hazard</b>	<i>What can happen at each step?</i> <i>What are the potential incidents that could occur from each of the Job Steps?</i> <i>Are there any potential failures of existing controls that could occur as a result of the Job Step?</i> Identify the hazard for each step of the job and the potential incident that may occur. Identify any existing control measures that may be impacted or compromised by the job.



**Step 4 – Develop Hazard/ Risk Elimination or Reduction Measures**

- Once the hazards have been identified, hazard / risk reduction or elimination measures shall be developed. When adopting measures to control a hazard, the following Hierarchy of Controls should be followed.
- The Hazard Control Section of the JVA / JHA shall be completed by following the below given guidelines:

Complete Section of the JHA Worksheet:	
<b>Hazard Controls</b>	<p><b>What is or will be in place to manage or remove the hazards?</b> For each step of the job, identify the controls in place to manage or remove the hazard. Use the hierarchy of control, i.e. elimination, substitution, redesign, separate, administrate, PPE</p> <p><b>Are the controls listed specific and complete?</b> All of the controls shall be implemented before the job commences, complex controls may not be able to be implemented before commencement of the job – this will require further interim controls to be in place before commencing the job.</p> <p><b>Have all the hazards and controls been identified from previous times that this job was completed?</b> Review any previous JHA Worksheet for this job, ensuring any relevant hazards and controls are included in this JHA worksheet</p>

**Step 5 – Calculate the Risk and Determination of Tolerability**

- The fifth and final step of risk assessment shall be to determine the risk associated with each step of the work tasks. Risk is defined as the product of the probability of occurrence (likelihood) and severity of loss (Consequence) from exposure to a hazard.

**Risk Rating (RR) = Consequence (C) x Probability (P)**

- The Risk shall be calculated as per following 5x5 Risk Matrix (Risk Heat Map / Risk Heat Chart):

		Incident Probability (P) (Chance of Happening)					
		Very Unlikely	Unlikely	Likely	Very Likely	Highly Likely	
Consequence (C) Severity (Impact)	Catastrophic	5	5	10	15	20	25
	Critical	4	4	8	12	16	20
	Major	3	3	6	9	12	15
	Marginal	2	2	4	6	8	10
	Negligible	1	1	2	3	4	5

- Risk tolerability/treatment of each step shall be assessed as per the following criteria:

Risk Rating	Risk Treatment	Action and Timescale
Low [1-6]	Nil for ALARP	No action is required.
Medium [7-12]	Nil for ALARP	No additional controls/barriers are required. Consideration may be given to a more cost-effective solution or improvement that imposes no additional costs. Monitoring is required to ensure that the desired controls are maintained.
High [13-20]	Controlling the significant risk	Urgent action should be taken and considerable resources be allocated to reduce the risk to ALARP through interim controls/barriers and strategic decision making/ objectives & targets by putting in place actions to mitigate or minimize the risk. When considering interim controls/barriers, Hazards Control Hierarchy shall apply.
Intolerable [21-25]	Avoiding the significant risk	Any planned activity should NOT be commenced whereas an ongoing activity should be immediately STOPPED until the risk has been reduced. The ultimate decision to RESUME the activity shall be conditional with the approval of top management.
	Transferring the significant risk	The entire activity may be outsourced; OGDCL, however, to retain governance responsibility for the monitoring of such outsourcing arrangements to include the arrangements for risk management.



**Oil & Gas Development Company Limited**

Location / Site: \_\_\_\_\_

JHA No. \_\_\_\_\_

Rev. No. \_\_\_\_\_

Issue Date: \_\_\_\_\_



**Job Vulnerability / Hazard Analysis (JVA / JHA)**

DESCRIPTION OF JOB LOCATION		POTENTIAL VULNERABILITIES	IMPACT CONTROL MEASURES
JOB DESCRIPTION		DEPARTMENT	SUPERVISOR
#	ROLE	NAME	SIGNATURE
1	Leader		
2	Rep. Permit Issuing Authority		
3	Rep. Permit Receiving Authority		
4	Rep. HSE		
HAZARD / RISK CHECKLIST			
<input type="checkbox"/> Slips, Trips and Falls <input type="checkbox"/> Lifting Operation <input type="checkbox"/> Corrosive Substance <input type="checkbox"/> Flammable Materials <input type="checkbox"/> Dropped Object <input type="checkbox"/> Fatigue / Over Exertion		<input type="checkbox"/> Access / Egress <input type="checkbox"/> Noise <input type="checkbox"/> Use of Oils / Chemicals <input type="checkbox"/> Explosives <input type="checkbox"/> Working with Pressure <input type="checkbox"/> Explosives	<input type="checkbox"/> Moving Machinery <input type="checkbox"/> Illumination <input type="checkbox"/> SIMOPS <input type="checkbox"/> Ignition Source <input type="checkbox"/> Weather Conditions <input type="checkbox"/> Isolation
<input type="checkbox"/> Y <input type="checkbox"/> N Have alternatives been considered to achieving the job outcome?		<input type="checkbox"/> Manual Handling <input type="checkbox"/> Waste Management <input type="checkbox"/> Flaring / Venting <input type="checkbox"/> Hydrocarbon Release <input type="checkbox"/> Electricity <input type="checkbox"/> Vehicle/Equip. Movement	<input type="checkbox"/> Stored Energy <input type="checkbox"/> Miscommunication <input type="checkbox"/> Inadvertent unit / facility trip <input type="checkbox"/> Hydrogen Sulphide <input type="checkbox"/> Working at Height <input type="checkbox"/> Confined Space







# Planning: OGDCL's Integrated HSE System Manual

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OGFXXX--HSE - 003(04)

Prepared by:		Reviewed by:	
Signature (Concerned Departmental/ Sectional In-Charge)		Signature (Permit Issuer)	Signature (Location In-Charge HSE)
Date:		Date:	
Remarks:			
Approved by:			
Signature (Location In-Charge)			
Date:			





# Planning: OGDCL's Integrated HSE System Manual

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## 5.3 Legal & Other Requirements

OGM/P-HSE-5.3(08) Revision Number 8

Original Issue: June 25, 2007  
This Issue: March 14, 2022

**Updated By:**

**Muhammad Sameem Hussain Qaiser**  
Senior HSEQ Officer, OGDCL

**Reviewed By:**

**Muhammad Mubashir Abbas**  
Manager HSEQ, OGDCL

**Checked By:**

**Mahmood-ul-Hassan Khan**  
General Manager HSEQ, OGDCL

**Approved By:**

**Syed Khalid Siraj Subhani**  
Managing Director, OGDCL

### Change/ Revision Log

#	Description of Change
	<i>Reviewed, no change suggested.</i>

### Associated Documents Approval & Issue

Related Document/ Record	Initiated by	Reviewed by	Checked/ Verified / Approved by
OGM/RR-HSE-001 HSE Regulatory Matrix (Preparation/ Updation)	Chief HSE	Manager HSE	GM HSE
OGM/RR-HSE-001 HSE Regulatory Matrix (Compliance Status)	Location HSE	Location HSE IC	Area Manager/ Location IC







5.3.1 General

- ☐ HSE Department shall be responsible for identifying the applicable regulatory and other requirements.
- ☐ HSE Regulatory Requirements shall include the national/ local regulations related to environment, occupational health & safety e.g.:
  - a) Directorate General Petroleum Concession (DGPC) Guidelines
  - b) Oil & Gas Safety Regulations (Mines Act)
  - c) IEE/EIA Regulations (Pakistan Environmental Protection Act)
  - d) Oil and Gas Regulatory Authority (OGRA) Rules & Regulations
  - e) Exploration and Production Rules (Petroleum Act)
  - f) National Environmental Quality Standards [NEQS] Rules [Pakistan Environment Act]
  - g) Electricity Rules [Electricity Act]
  - h) Wildlife Protection Ordinance [Federal/ Provincial]
  - i) Explosives Rules
  - j) Pakistan Nuclear Regulatory Authority (PNRA) Regulatory Guides
- ☐ All applicable laws, regulations and other requirements shall be listed in the **Regulatory Requirements Matrix**, which is maintained by the HSE Department.

☐ HSE Section / Department in consultation with all stakeholders shall seek, record to check compliance on all applicable laws, regulations, and other requirements and report on the Regulatory Requirement Matrix on biannual basis.

5.3.2 Access to Regulatory and Other Requirements

- ☐ Information related to regulatory and other requirements shall be obtained by contacting the regulatory bodies, browsing the official websites or through industrial associations.
- ☐ HSE Department shall track legislative and regulatory developments applicable to the oil & gas industry and area where the facility is located. The information shall be acquired from internal and external sources.
- ☐ HSE Department shall respond to the applicable changes by updating the Regulatory Requirements Matrix. The format of Regulatory Requirements Matrix is mentioned below:

Requirement	Regulation, Law, Recommended Practice	Authority/ Stakeholders	Applicable				Status of compliance with regulations/ Comments (or Action taken in case of non-compliance)
			Office Building	Seismic	Drilling	Production	

5.3.3 New & Modified Activities & Services

- ☐ Changes to, and development of new activities, processes and services may change OGDCL legal and regulatory obligations. Such changes include:
  - a) Changes in processes and technology, and introduction of new processes/ material substitution;
  - b) Increase, reduction, or modification of the point of sources of emissions and discharges;
  - c) Changes in the inventory of chemicals and other regulated substances;
  - d) Significant expansion or reduction in business activities;
  - e) Facilities addition or relocation;
  - f) Temporary projects, such as construction, installation of new equipment

☐ Departmental heads shall be responsible for identifying changes in activities, processes and services that may change the facility's legal and regulatory obligations, and to communicate the same to the HSE



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Department/ Section.

- ☐ Relevant changes may also be identified by the Location HSE Management Review Committee (MRC) meetings or by internal or external audits of the HSE System.
- ☐ The HSE Department shall review the reported changes and determine their legal and regulatory impact and impact. When the change triggers new regulatory requirements, the Regulatory Requirements Matrix shall be updated accordingly.
- ☐ In addition, the Regulatory Requirements Matrix shall be reviewed at least once every year.
- ☐ Based on the changes / amendments in the legislative requirements, HSE Department / Section shall seek any change(s) in the Risk Register and any need to modify & implement relevant HSE Objectives and Management Programs in consultation with all stakeholders.



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## 5.4 HSE Objectives and Management Programs

OGM/P-HSE-5.4(08) Revision Number 8

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**Updated By:**

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 General Manager HSEQ, OGDCL

**Approved By:**

**Syed Khalid Siraj Subhani**  
 Managing Director, OGDCL

### Change/ Revision Log

#	Description of Change
1	Added: Specimen of Annual HSE Activity Plan (Appendix A)

### Associated Documents Approval & Issue

Related Document/ Record	Initiated by	Reviewed by	Checked/ Verified / Approved by
OGF – HSE – 004 HSE Objective & Management Program	Department / Section ICs	Location HSE MRC	Area Manager/ Location IC



**5.4.1 HSE Plan**

- ☐ HSE Plan shall be the cornerstone of HSE Planning and Goal Setting. Development of HSE Plan shall be of strategic process because it involves the best way to respond to the circumstances of business environment whether or not these are known with any degree of certainty. Being strategic, means being clear about objectives, being aware of the organization's objectives and resources, and incorporating both to be able to respond to a dynamic environment.
- ☐ An Annual HSE Activity Plan (specimen attached at Appendix A) shall be rolled out on the start of each year and then subsequently every year. The Annual HSE Plan shall be:
  - ▣ Developed by GM HSE; reviewed and agreed by HODs/ management team members; approved by Managing Director; and updated annually & "rolled forward" to reflect improved knowledge

Note: Following Table provides "examples" that may be referred to while setting up HSE Plan based on the identified focus areas of Facilities, People, System & Procedure and Failures. The Table provides a glossary of Objectives, Goals & Targets to be considered where applicable.

FACILITIES	PEOPLE	SYSTEMS & PROCEDURES	FAILURES
Technical audits	Incentive schemes	Emergency response training (mock up) drills	Lost Time Injury Frequent Rate
Operational audits	Percent of workforce with approved HSE training completed	Management system audits	Number of near hits per month
Percent completion of maintenance programs	Percent of workers trained (operational) - actual versus plan	Project safety reviews and actions complete	Days off sick those are not caused by reported workplace incidents
Inspections of facilities	HSE awareness programs	ISO 14001/ 45001 Certification	Total Recordable Injury Rate Rate (=LTI+RWC+MTC)
Management safety behavior audits	Wellbeing programs	Percent completion of planned HSE meetings; Toolbox talks	Number of spills, leaks, fires, injuries as a percent of historical average
Number of toolbox meetings/quarter	Staff and contractor employee turnover	Percent of workforce undergoing health screening.	Hazard/unsafe behaviors reported
Project HSE plan compliance	Percent line managers/supervisors achieving 100% HSE competency	Percent complete of HSE action plans within a challenging timescale	Following an incident: identifying learning points and instigating actions to prevent recurrence
Written scheme of verification implemented	Number of hazards reported per month	Percent compliance with legal compliance register	Re-use/ Reduce/ Recycle/ Refurbish/ Repair Success
Safety equipment inspections	Senior management site visits	Percent completion of planned HSE audits	Energy efficiency/conservation
Calibrations	Percent attendance in HSE MRC meetings	Percent of job safety analyses performed	Emissions / Vent / Flare
Safe disposal of hazardous waste	Percent complete safety induction	Closeout from action tracking register	Bio-diversity

**5.4.3 HSE Objectives & Targets**

- ☐ All locations shall establish HSE Objectives & Targets based on Annual HSE Plan. As next level down from the Annual HSE Plan, the location HSE Plan shall be much more detailed with all Objectives and Targets further



subdivided into actions and responsibilities i.e. Management Programs (Strategy). Progress – actual versus planned – shall be monitored and discussed in HSE Management Review Committee (MRC) Meetings.

- ☐ Location HSE Plan shall be developed and rolled out within one month of the rollout of Annual HSE Plan. The Location HSE Plan shall:
  - ▣ Derive its inputs from Annual HSE Plan; based on the results of HSE Risk Assessment activities, HSE Section in consultation with the Sectional ICs, shall set the Objectives & Targets to control the Significant Risk Ratings.
  - ▣ These shall be reviewed by the concerned Sectional IC and then discussed in the Location HSE MRC meetings, where they may be approved.
  - ▣ The approved targets shall be kept with the HSE Department/ Section and displayed on notice boards, bulletin boards, and/ or electronic/ print media for easy access to employees and stakeholders.
  - ▣ Progress reviewed by Location Management on fortnightly / monthly basis

☐ In addition, based on the results of Impact (Risk) Assessment, HSE Objectives & Targets shall be formulated to control the Significant i.e. Intolerable and High Impact (Risk) Ratings.

- ☐ When HSE performance falls below desirable level, or when there is a possibility of a noncompliance against laws or regulations, establishment of appropriate HSE Objectives and Targets shall be recommended as well.

#### 5.4.4 Setting HSE Objectives & Targets

- ☐ The objectives shall define the goals to be achieved given in subjective terms and the target is the measurable and specific indicator related to objective. Overall following SMART approach shall be adopted:  
 S: Simple      M: Measurable      A: Attainable      R: Realistic      T: Time-bound
- ☐ While executing SMART approach, impact (risk) control hierarchy shall be used to fill the HSE variances (as appeared from the results of HSE Risk Assessment).
- ☐ While formulating objectives, the following table shall be consulted to assess the vulnerabilities and check the "effectiveness" of existing controls in a given situation, which is based on lifecycle perspective of Man-Machine-Material-Method.

MAN			
DESIGN STANDARDS	Systems or sub system elements are designed for a more <b>severe</b> duty than they experience	→ Scenarios, where targets and objectives to be defined →	The systems or sub system elements were constructed to standards <b>lower</b> than the current norm
SUPPLIER (CONTRACTOR / SUB-CONTRACTOR / SERVICE COMPANY) LEVEL OF COMPLIANCE	The suppliers are more conscious and never compromise on HSE		The suppliers are reluctant to implement and follow HSE e.g. to remain on the lower cost side
COMPETENCE OF OPERATOR	The <b>operators</b> are well-trained and skilled to operate the process systems or sub system element		The <b>operators</b> are untrained and unskilled to operate the process systems or sub system element
MATERIAL			
QUALITY OF COMPONENTS (MATERIAL)	The quality of components (material) is <b>better</b> than the industry norm	→ Scenarios, where targets and objectives to be defined →	<b>Severe</b> service conditions apply, e.g. highly corrosive
MACHINE			
RESERVOIR	<b>New</b> & viable reservoir		<b>Old</b> & diminishing reservoir





BEHAVIOR	fluid behavior and properties	→ Scenarios, where targets and objectives to be defined →	fluid behavior and properties
PROCESS AGE	The process systems or sub system element is <b>new</b> and known to withstand design conditions	→ Scenarios, where targets and objectives to be defined →	The process systems or sub system element is <b>old</b> and known to have severe fatigue
METHOD			
ACCEPTANCE CRITERION	OGDCL has a criterion to verify/ validate critical jobs and consignments to formally rule-out any potential faults and failures	→ Scenarios, where targets and objectives to be defined →	OGDCL has not set standardized criterion to verify/ validate critical jobs and consignments
PRODUCT CHARACTERISTICS	HSE features are intertwined in the product quality as per agreed specs & regulations before dispatch	→ Scenarios, where targets and objectives to be defined →	HSE features are overlooked in the product quality as per agreed specs & regulations before dispatch

- ☐ Following factors shall be considered before finalizing the objectives:
  - ⊕ Financial constraints
  - ⊕ Operational constraints
  - ⊕ Business constraints

**5.4.5 Establishing HSE Management Programs**

- ☐ For each HSE objective and associated targets, the concerned Departmental/ Sectional head in consultation with HSE Department/ Section shall establish the Management Program (Strategy) to achieve the objective and target. HSE Management Programs shall be defined on the Objective Sheet, which includes:
  - a) HSE objective and targets that are to be achieved;
  - b) Areas/ departments where the program needs to be implemented;
  - c) Methods and means to achieve the objective.
  - d) Responsibility for defining and implementing the program.
  - e) Timeframe for completing the program and/or its elements or phases;
- ☐ Location HSE MRC shall review and discuss the HSE Management Programs for implementation. Planning, implementation and review of HSE Management Programs shall offer reassurance with regard to:
  - a) ongoing compliance with regulatory requirements,
  - b) ongoing training of field personnel,
  - c) minimization of the volume and toxicity of the wastes and prevention of accidents &
  - d) appropriateness/ feasibility of the program itself.
- ☐ After approval, the HSE Programs shall be assigned to the concerned Departments/ Sections for implementation.

**5.4.6 Final Review and Closeout**

- ☐ HSE Department/ Section shall monitor the progress of HSE Management Programs on fortnightly basis or as deem practical depending upon the nature of case and reports it to the management immediately or in the Location HSE Management Review Committee (MRC) meetings. Progress shall be recorded on the HSE Management Program Sheet.
- ☐ When an HSE Management Program achieves its objectives and targets, the results shall be reported to the Location HSE Management Review Committee (MRC), which reviews and verifies the implementation of the management program and if found satisfactory, shall close out the



management program.

- ☐ The achievement of HSE Objectives and Targets shall also be reported in the Location HSE Management Review Committee (MRC) meetings.

**5.4.7 Amendment of HSE Management Programs**

- ☐ Issues related to new developments or to new or modified activities, processes and services or changes due to lifecycle perspective shall be reported to the HSE Department/ Section. Such projects may include:
  - a) Significant expansion, reduction or modification of facility;
  - b) New suppliers (contractors, sub-contractors, service companies);
  - c) Temporary project activities.
- ☐ Location HSE Management Review Committee (MRC) shall review the proposed changes and determine whether the HSE Management Program needs to be amended or updated to address the change.

**5.4.8 HSE Objectives & Management Program Template**

- ☐ Following template shall be used for HSE Objectives & Management Program:

<b>Ref.: Vulnerabilities Identified &amp; Rated during HSE Impact (Risk) Assessment:</b>	<b>Severity</b>	<b>Probability</b>	<b>Impact (Risk) Rating</b>			
<b>GENERAL</b>						
DURATION / TIME SPAN:	FROM (DATE):	TO (DATE):				
<b>OBJECTIVE:</b>						
<b>TARGET:</b>						
<b>Location In-Charge HSE (SIGN):</b>		<b>Location HSE MRC (SIGN):</b>				
<b>IMPLEMENTATION PLAN</b>						
NO.	ELEMENT / ITEM	RESPONSIBLE PERSON(S)	RESOURCES REQUIRED	DATE		REMARKS
				DUE	ACTUAL	
<b>FORTNIGHTLY/ MONTHLY REVIEW LOG:</b>						
NO.	DATE OF REVIEW	REVIEW ELEMENT	EVIDENCE CHECKED	PROGRESS STATUS	SIGNATURE LOCATION IC	
<b>CLOSE OUT REVIEW:</b>						
<b>Secretary – Location HSE MRC (SIGN):</b>				Close Out Date		



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## Appendix A Annual HSE Activity Plan (Specimen)

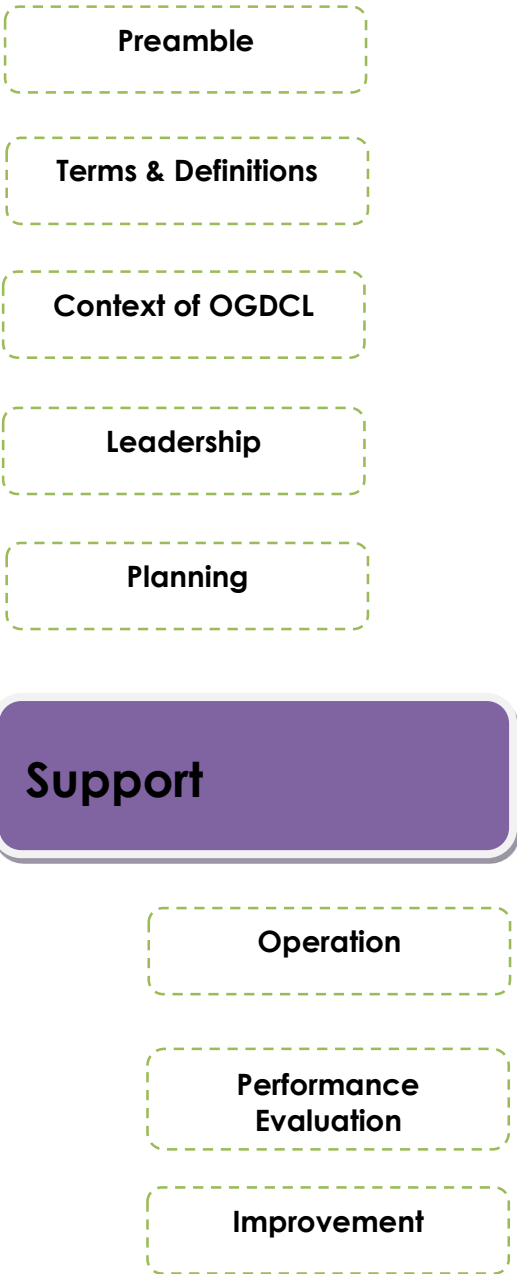
#	TASK	DESCRIPTION OF TASK	RESPONSIBLE	STATUS
A.	<b>Leadership &amp; Commitment</b>	1. Management System Certifications	Corporate HSEQ	
		2. HSE KPIs (related to facilities; people; systems & procedures; & failures)	Location InCharge → Corporate HSEQ	
		3. Management Walk Around (MWA)/ STOP Intervention Program	EDs/ HODs/ Area Managers	
		4. HSE Leadership & Commitment Training for All Sectional In-Charges/ Area Managers	Corporate HSEQ	
		5. Regulatory (CIM/ EPA/ OGRA) Compliance	Location Management → Corporate HSEQ	
		6. Engineering Change Requests (ECR) Reviews	ECR Committee	
B.	<b>Competence, Training and Development</b>	7. HSE Training Need Assessment	Location InCharge/ Location HSE InCharge	
		8. Update of PPE Need Assessment Matrix	Respective Sectional InCharges/ Location HSE InCharge	
		9. Onsite HSE Training (Awareness) Planner and Execution	Location HSE InCharge/ HSE Development Facilitator (DF) and as assigned	
C.	<b>Hazards Identification &amp; Risk Assessment</b>	10. Hazards Identification & Risk Assessment (HIRA) Plan and execution	Location InCharge → HIRA Team/ Location HSE InCharge	
		11. Development/ Updation of HSE Risk Register & Risk Dashboard	Sectional InCharges → Location InCharge	
		12. Hazards Communication (HazCom)	Sectional InCharges	
		13. Jobs' Hazard Analysis (JHAs)	Sectional InCharges	
D.	<b>Emergency Preparedness &amp; Response</b>	14. Emergency Response Plan (ERP) & LMT Roster	Location HSE InCharge → Location InCharge	
		15. Management of Emergency Response Post	Location Management	
		16. Emergency Drill Planner	Location HSE InCharge → Location Management	
		17. Scenario-based (Mockup) Emergency Drills	Location Management/ Location HSE InCharge	
		18. Safety (Proactive) Monitoring Plan and execution	Sectional InCharges	
		19. Calibration of Safety Critical Equipment	Sectional InCharges	
E.	<b>Contractor Safety Management</b>	20. Submission of HSE Plans & Protocols Compliance (Risk Control Mechanism)	Reps. of Contractors/ Service Companies	
		21. Pre-Job Meetings with the Reps. of Contractors/ Service Companies	Sectional InCharges	
		22. PPE Compliance by Subcontractors & Local Labors	Sectional InCharges	
		23. Performance Gauging of Contractors (High Risk Jobs)	Location Management	
		24. Contractors HSE Awareness Activities/ Inductions (HSE Pledge Handbook For Contractors & Service Companies)	Location Management/ HSE InCharge	
F.	<b>Road Safety Management</b>	25. Journey Management & Safe Driving Instructions (Leaflet)	Location TPT InCharge	
		26. Onsite Awareness for Drivers (Defensive Driving)	Location HSE InCharge / External Trainer	
		27. Vehicular Inspections	TPT InCharge	
		28. Acknowledgment of Safe Drivers	Location Management	
G.	<b>Measuring Performance</b>	29. HSE Routine/ Daily Reporting	Location HSE InCharge	
		30. Analysis & Compliance of HSE Audit Observations	Location HSE MRC Members	
		31. Onsite HSE MRC Meetings	Location HSE MRC Members	
		32. HSE Performance Reports	Location HSE InCharge → Location InCharge → H.O.	
H.	<b>HSE Campaigns/ Readiness</b>	33. Toolbox (Safety Talks)	Sectional InCharges	
		34. STOP Intervention/ Observation Tours	Location Management/ Sectional InCharges	
		35. Hazard Hunt Program (HHP)	Hazard Hunt Teams	
		36. Celebration of HSE Events/ HSE Reward & Recognition	Location Management	
		37. Health Awareness, Campaigns & Wellness Initiatives	Location Medical InCharge → Medical Services H.O.	
		38. Maintenance of plants/ saplings	Location Admin. InCharge	
I.	<b>Occupational Health (OH)</b>	39. Health Monitoring Plan and execution	Location Medical InCharge/ Location HSE InCharge/ Location Admin InCharge	
		40. Occupational Health Assessment Plan & Trade-wise Assessment Tests of Employees	Location Medical InCharge	
		41. Occupational Health Trainings (First Aid; Respiratory Protection; Stress Management;/ Seasonal Diseases & Hygiene)	Location Medical InCharge	



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J.	<b>Environment Monitoring</b>	42. Environment Monitoring Plan and execution	Location Lab. InCharge/ Location HSE InCharge	
		43. Air Emissions Data Analysis	Location HSE InCharge → H.O.	
		44. Maintenance of Air Emitting Point Sources (Generators etc.)	Location Mechanical InCharge	
		45. Carbon Footprint Study	Carbon Footprint Study Team	
K.	<b>Waste Management</b>	46. Onsite Waste Management Plan	Location HSE InCharge	
		47. Waste Handling Awareness Sessions	Location HSE InCharge	
		48. Storage & Maintenance of Disposal Site/ Treated Waste	Location Material InCharge	
		49. Pre-&-Post Treatment QC of Waste/ Pits	Location InCharge/ Location Lab InCharge/ Outsourced (EPA Certified Env. Labs)	
		50. Safe Disposal of (Hazardous) Waste	Location InCharge/ Location Material InCharge	



**Reference Standards**  
ISO 14001:2015 & ISO 45001:2018

Clause 7.1: Resources.  
 Clause 7.2: Competence.  
 Clause 7.3: Awareness.  
 Clause 7.4: Communication.  
 Clause 7.5: Documented information.

PSM (22 Elements) Model

**Process Safety Information:** It provides a foundation for identifying and understanding the hazards involved in the process. It ensures that PSM goals of HSE are achieved by providing process safety documentation. A PSI package shall be prepared for each process unit. Documents of the PSI package should be maintained up to date for the life of each process unit.

**Effective Communication:** The purpose of this element is to emphasize and elaborate the importance of effective two-way communication in prevention of occupational accidents/ illnesses and achieving safety goals and objectives.

**Training and Development:** This element signifies that all personnel whose work could affect the safety of the site must have, and maintain, the necessary knowledge and skills to execute their job functions in a manner consistent with the safe operation of the site.

**This Section's Objectives**

- Support HSE System by providing necessary resources.
- Support HSE System by ensuring that workforce is competent.
- Support HSE System by making workforce aware of their roles, duties, accountabilities and authorities.
- Support HSE System by creating effective communication processes.
- Support HSE System by facilitating internal communications.
- Support HSE System by establishing external communications.
- Support HSE System by managing and employing documented information.



**Associated Documents**

- HSE Short Awareness Session (Training) Planner
- Emergency Drill Planner
- Toolbox Talk Program
- HSE Short Awareness Session Attendance Record
- HSE Short Awareness Session Evaluation Form
- Training Certificates (to be issued by OGTI only)
- Product Safety Data Sheet (PSDS)
- External Environmental Complaint (EECS) Sheet
- Inter office Memos Format
- Master List of Documents
- List of External Documents
- Document Change Request (DCR) Form
- Distribution Log
- Master List of Records

**Applicable Documents**

-- Nil --





- Competence & Awareness**  
OGM/P-HSE-6.1
- Communication & Consultation**  
OGM/P-HSE-6.2
- Documented Information**  
OGM/P-HSE-6.3
- Control of Records**  
OGM/P-HSE-6.4

## 6.1 Competence & Awareness

OGM/P-HSE-6.1(08) Revision Number 8

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**Updated By:**

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**Syed Khalid Siraj Subhani**  
 Managing Director, OGDCL

### Change/ Revision Log

#	Description of Change
1	Added: Methodology to conduct HSE Training Need Assessment (TNA).
2	Added: Health Awareness, Campaigns & Wellness Initiatives.
3	Amended: HSE Training Record and Effectiveness.

### Associated Documents Approval & Issue

Related Document/ Record	Initiated by	Reviewed by	Checked/ Verified / Approved by
OGF – HSE – 005 Onsite Short Awareness Session (Training) Planner	Location HSE IC	Location HSE MRC	Location IC
OGF – HSE – 006 Emergency Drill Planner	Location HSE IC	Location HSE MRC	Location IC
OGF – HSE – 007 Toolbox Talk Program	Location HSE IC	Location HSE MRC	Location IC
OGF – HSE – 007A Toolbox Talk Evaluation	Location HSE Rep.	Sectional Rep. / Supervisor	Location HSE IC
OGF – HSE – 008 HSE Short Awareness Session Attendance	All Concerned	Location HSE IC	Location IC
OGF – HSE – 009 HSE Short Awareness Session Evaluation	All Concerned	Location HSE IC	Location IC
OGF – HSE – 010 Training Certificate	Trainer / Instructor	OGTI	OGTI

### 6.1.1 General

- ☐ The objective of HSE System awareness and training program shall be to ensure that all personnel know:
  - a) the importance of HSE management system and their roles in maintaining it;
  - b) significant vulnerabilities of their work on environment, health & safety, potential consequences of departure from procedures, and benefits of improved personal performance; and
  - c) emergency preparedness and response requirements.
- ☐ HSE trainings shall be in any format like demonstrations, mockup drills, classroom instruction, and participation in external seminars or conferences; whereas general awareness on HSE shall also be communicated through banners/ postings, HSE awareness programs/ events, etc.

### 6.1.2 HSE Competence and Skill Determination

- ☐ HSE and all other Departmental/ Sectional Heads shall be responsible for ensuring that personnel whose work can cause significant vulnerabilities (hazards) are sufficiently competent and skilled in performing their work.
- ☐ If workers are deemed "not" to be competent, refresher / remedial training of existing workforce members, recruitment of additional personnel or hiring / contracting of external expertise in order to acquire the necessary competence shall be arranged. The actions taken to raise competence to the required level shall be evaluated for effectiveness by means of the following mechanisms:
  - ▣ Interlocution of the workers on their understanding of their competence to perform the relevant tasks following the prescribed training;
  - ▣ Assessment of competence of the workers by observing them undertake the relevant tasks following the prescribed training;
  - ▣ Peer review or supervision following the required training.
- ☐ Competence requirements for individual tasks shall be determined by considering the following factors in deliberations:
  - ▣ The education, training and experience required to undertake the role and the re-training necessary to maintain competence;
  - ▣ The work environment;
  - ▣ The preventive and control measures arising from the risk assessment process;
  - ▣ The requirements applicable to the HSE management system;
  - ▣ The potential consequences of compliance and non-compliance, including the impact on the worker's health and safety;
  - ▣ The duties and responsibilities associated with the roles;
  - ▣ The complexity and requirements of operating procedures and work instructions;
  - ▣ The results from incident investigations;
  - ▣ Legal and other requirements;
  - ▣ The necessary updating of the competence made necessary by context or work changes;
  - ▣ Individual capabilities, including experience, language skills, literacy & diversity.

- ☐ Personnel who have proven experience in operating relevant processes and equipment shall not "necessary" be required to undergo any formal HSE training; however they may require behavior-based HSE sessions to avoid complacency.

### 6.1.3 Identification & Assessment of HSE Training Needs

- ☐ HSE Monthly Reports and Minutes of MRC Meetings shall be a regular ongoing source of determining the HSE performance levels and identifying the HSE training needs of the personnel.
- ☐ At the start of each year, HSE Department / Section, in consultation with the Department / Section heads, shall review the current HSE performance levels. Following factors shall be taken into account while identifying the gaps:
  - a) Changes in the HSE System, such as new or revised procedures, or changes in the HSE policy;
  - b) Changes in processes, or operations;
  - c) Changes in applicable laws, regulations, and other requirements;

- d) New significant HSE issues, objectives, or targets;
  - e) New management programs;
  - f) Results of Internal HSE Audits of the HSE System;
  - g) Non-compliance against applicable laws, regulations, and other requirements;
  - h) Non-attainment of specified HSE performance, or decreasing performance;
  - i) Inadequate performance of individuals or groups of personnel.
- ☐ HSE Department / Section shall carry out HSE Training Need Assessment (TNA) based on core HSE competencies in consultation with the Department / Section Heads on the following format (specimen):

Name & Designation	Role	HSE Training Need Assessment (TNA) of _____ Department/ Section																					
		Essential trainings required to impart HSE competencies in an individual																					
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	100	

Legend:-

<b>X</b>	Exempt from this training/ competency
<b>1</b>	Not yet capable to perform task as per HSE requirements and/ or demonstrated <u>poor</u> HSE Performance; hasn't participated in the training
<b>2</b>	Some capability to perform task as per HSE requirements and/ or demonstrated <u>average</u> HSE Performance; training completed but found ineffective
<b>3</b>	Capable to perform task as per HSE requirements and/ or demonstrated <u>good</u> HSE Performance; however refresher course required
<b>4</b>	Fully capable to perform task as per HSE requirements and/ or demonstrated <u>excellent</u> HSE Performance; training/ refresher completed & followed-up quite effectively
<b>5</b>	Expert to perform task as per HSE requirements, even can train others

### 6.1.4 HSE Training Plan

- ☐ Based on TNA, HSE Department/ Section shall prepare a biannual / annual HSE Training Plan/ Program.
- ☐ Annual HSE Training Planner may contain following essential trainings:
  - ⊕ HSE Laws & Regulations for oil and gas E&P Sector
  - ⊕ Enterprise Risk & Crisis Management
  - ⊕ Emergency Preparedness & Response Systems
  - ⊕ Rules of Permit To Work (PTW) System & Right Use of PPE
  - ⊕ Pollution Elimination & Waste Management Methods
  - ⊕ Journey Management & Defensive Driving
  - ⊕ Ergonomics & Office Safety (Monitoring, Measurement & Compliance)
  - ⊕ Electrical Safety (Monitoring, Measurement & Compliance)
  - ⊕ Mechanical Safety (Monitoring, Measurement & Compliance)
  - ⊕ Process & Chemical Safety (Monitoring, Measurement & Compliance)
  - ⊕ Control of Service Companies, Suppliers and Contractors
  - ⊕ First Aid & CPR
  - ⊕ How to conduct Effective Toolbox / Safety Talks
  - ⊕ Right Use of STOP Cards

- ⊕ Management of Change (MOC)
- ⊕ Accidents Prevention & Investigation through RCFA
- ⊕ Health & Hygiene
- ⊕ HSE Auditor
- ⊕ Train The HSE Trainer
- ⊕ Process Safety Management
- ☐ **Personal Protective Equipment:** Location management shall ensure that all employees, contractors, and visitors required to wear PPE are trained to know the following:
  - ▣ When PPE is required.
  - ▣ What PPE is required?
  - ▣ How to properly wear, remove and adjust the PPE.
  - ▣ What are the limitations of the PPE?
  - ▣ Proper care, maintenance and disposal of PPE.
- ☐ Personnel shall demonstrate an understanding of the training and show their ability to use PPE properly before being allowed to perform work. Retraining should be required if:
  - ▣ There are changes at the work site that impacts the previous training.
  - ▣ There are changes to the PPE used at the work site.
  - ▣ There are inadequacies in the individual's knowledge or use of the PPE.
- ☐ **Permit To Work (PTW) System:** To ensure that work is done safely and efficiently, training on Permit To Work (PTW) System shall be arranged. These shall be specific to hazardous areas & jobs and involve procedures to request, review, authorize, document and most importantly, de-conflict tasks to be carried out by front line workers. Before authorizing an individual for permit issuance or receiving, he shall have to undergo an evaluation on a standardized criterion to get his competence assessed. This evaluation shall be conducted by Location HSE Rep.; however formal authorization shall be granted by Location InCharge on recommendation of by Location HSE Rep.
- ☐ **Pollution Prevention:** Awareness sessions on Pollution Elimination & Waste Management Methods shall be arranged to equip workforce members with the knowledge of different environmental monitoring techniques for water, noise, air, and wastes; how to interpret the impacts of pollutants; and the techniques available to eliminate the pollutants and manage waste.
- ☐ **Emergency Preparedness & Response:** Effective emergency preparedness and response shall be achieved by implementation of the incident command system. Trainings to successfully implement ERP on fires, BLEVE, natural disasters, etc. highlight the need to incorporate incident command system in incidents such as well blowouts, fires, personnel injuries, pipeline ruptures, spills and uncontrolled releases.
- ☐ **Defensive Driving:** Location management shall support and encourage defensive driving. Employees authorized to drive a company vehicle shall be required to participate in a company sponsored defensive driving course.
- ☐ **Health Awareness, Campaigns & Wellness Initiatives:** In order to promote wellness & healthy lifestyle, health awareness information about common medical problems, seasonal diseases, epidemic medical threats, chronic diseases, their complications and their management shall be provided by Medical Services department to workforce members as follows:

Medium	Detail	Frequency
Handouts/ posters	<ul style="list-style-type: none"> <li>▣ Handouts/ posters shall be printed about the common medical problems, seasonal diseases, epidemic medical threats, chronic diseases, their complications and their management.</li> <li>▣ Copy of health awareness by handouts/ posters shall be placed or pasted at prominent suitable places at the plant.</li> </ul>	Quarterly
Newsletters	<ul style="list-style-type: none"> <li>▣ Occupational Health Newsletters shall be published containing clinical statistics of general interest, highlights of medical activities and awareness articles on important medical problems.</li> </ul>	Quarterly



	<p>Newsletters shall also be sent through E-mail and request be made to communicate the contents to those who don't have access to mail.</p>	
<b>Trainings</b>	<p>Awareness sessions to employees about healthcare subjects of importance and epidemic medical threats shall be arranged. Following must be covered:</p> <ul style="list-style-type: none"> <li>⊕ First Aid: The Advance First Aid team may provide additional medical training, which equips them with the skills to assist Location Doctor in emergency situations. The course contents may be designed by the Location Doctor in coordination of HSE with particular emphasis on the techniques and aspects of care considered important when escorting a seriously ill, injured casualty e.g. monitoring of vital signs, transportation of casualty (s), triage etc.</li> <li>⊕ Basic Life Support (BLS)/ Cardiopulmonary Resuscitation (CPR)</li> <li>⊕ Healthy Lifestyle to Reduce Coronary Risk Factors</li> </ul> <p>Schedule of presentation shall be embedded with Onsite Training Planner and communicated through E-mail and circulars.</p>	Biannually
<b>Walk Promotion Campaign</b>	<p>Walk Promotion Campaigns shall be organized to encourage employees to be physically active and walk more whereby they also benefit from seeing positive messages &amp; information that reassure them to participate in such programs more often.</p>	Annually
<b>Sports</b>	<p>Sports events shall include tournament of table tennis, cricket, football, hockey, etc. types of matches and be organized as a regular feature of the company.</p>	Annually

**6.1.5 Onsite Scenario Based Emergency Mockup Drills**

- ☐ Location IC shall ensure that all personnel designated for specific emergency response activities are adequately trained.
- ☐ Location HSE Department/ Section shall prepare an annual Emergency Drill Plan for probable scenarios like:

#	Drill Scenario	Facilitator	Target Audience	Frequency
a.	Fire	Fire Rep.	All Employees	Monthly
b.	Explosion	HSE Rep.	All Employees	Quarterly
c.	Toxic Gas Leakage	HSE Rep.	All Employees	Quarterly
d.	Chemical/ Oil Spill	HSE Rep.	All Employees	Quarterly
e.	Electrical Shock	HSE Rep.	All Employees	Quarterly
f.	Burst Gas Pipeline	HSE Rep.	All Employees	Quarterly
g.	Snake Bite	Medical Rep.	All Employees	Quarterly
h.	Natural Calamity/ Disaster	Admin. Rep.	All Employees	Semi Annually
i.	Pits overflow/ seepage	HSE Rep.	All Sectional ICs	Semi Annually
j.	Oil Tanker Turn Turtle	HSE Rep.	Commercial	Quarterly
k.	Drowning	Medical Rep.	All Employees	Semi Annually

- ☐ Standardized template shall be used for recording Emergency Drill Report.

**6.1.6 HSE Training Record and Effectiveness**

- ☐ Participation in all HSE specific trainings and general orientation shall be recorded. HSE training record of each employee shall be maintained by Location's HSEQ Section as follows:



Name of Employee:				
Employment No.:				
Designation:				
DOJ:				
Location:				
Training Date	Title of Training	Training Hours	Trainer's Name	Result (Qualified/ Reappear)

- ☐ Competence (i.e. applying skill, knowledge into work & attitude) acquired (gained) through experience shall be identified and recorded in the form of Experience Certificates or biodatas, which shall also be maintained by HSE Department/ Section.
- ☐ HSE Department / Section shall follow-up the implementation of HSE Training Plan/ Program and report the progress to the Location HSE Management Review Committee (MRC).

☐ However, it shall be the primary responsibility of Location IC to oversee the effectiveness of HSE sessions in terms of best-utilization of the training delegates. For that prescribed template shall be used.

OGF/XXX-HSE-005(01)



**OIL & GAS DEVELOPMENT COMPANY LIMITED**  
**Location (EFP/FGCP/Seismic Party/Drilling Rig/Field/Plant/Other)**

**ONSITE HSE TRAINING (AWARENESS SESSION) PLANNER FOR YEAR \_\_\_\_\_**

[based on Training-Need-Analysis (TNA)]

Date	Duration	Time	Topics	Instructor/Facilitator	Target Participants	Venue

**Note:**

- 1) THIS INTERNAL TRAINING PLAN HAS BEEN PREPARED UNDER THE SECTION 6.0 "SUPPORT" OF OGDCL INTEGRATED HSE SYSTEM MANUAL DULY APPROVED BY MD&CEO OGDCL.
- 2) THE EFFECTIVENESS OF THE PARTICIPATION WILL BE MONITORED SO THAT AWARENESS & CONTINUAL IMPROVEMENT IN THEIR RESPECTIVE AREAS WOULD BE ACHIEVED.

Prepared by \_\_\_\_\_ Reviewed by \_\_\_\_\_ Approved by \_\_\_\_\_

OGF/XXX-HSE-006(00)



# OIL & GAS DEVELOPMENT COMPANY LIMITED

Location (EFP/FGCP/Seismic Party/Drilling Rig/Field/Plant/Other)

## EMERGENCY DRILL PLANNER FY \_\_\_\_\_

S/ NO	TITLE	SCOPE / SCENARIO	VENUE	SCHEDULE																
				J	F	M	A	M	J	J	A	S	O	N	D					
1.				Planned																
				Actual																
2.				Planned																
				Actual																
3.				Planned																
				Actual																
4.				Planned																
				Actual																
5.				Planned																
				Actual																
6.				Planned																
				Actual																

**Notes:**

- 1) THIS PLAN HAS BEEN PREPARED UNDER THE SECTION 6.0 "SUPPORT" OF OGDCL INTEGRATED HSE SYSTEM MANUAL DULY APPROVED BY MD&CEO OGDCL.
- 2) THE ABOVE MENTIONED DATES ARE JUST THE PROPOSED DATES; THE EMERGENCY SURPRISED DRILLS WOULD BE CARRIED OUT AT EITHER ON THE ABOVE DATES, ONE DAY BEFORE OR AFTER THE PROPOSED DATES TO CHECK THE ACTUAL PREPARATION OF THE EMERGENCY TEAMS & EMPLOYEES.

Prepared by \_\_\_\_\_ Reviewed by \_\_\_\_\_ Approved by \_\_\_\_\_

OGF/XXX – HSE – 007(01)

**OIL AND GAS DEVELOPMENT COMPANY LIMITED**  
 Location (EFP/FGCP/Seismic Party/Drilling Rig/Field/Plant/Other)



## TOOLBOX TALK PROGRAM FY \_\_\_\_\_

Department / Section: \_\_\_\_\_

#	Topic	Talk Leader/Initiator	Frequency	Proposed Date/Time	Proposed Venue	Target Participants
1			Weekly			
2			Weekly			
3			Weekly			
4			Weekly			
5			Weekly			
6			Weekly			
8			Weekly			
9			Weekly			
10			Weekly			

**Note:**

- 1) THIS PLAN HAS BEEN PREPARED UNDER THE SECTION 6.0 "SUPPORT" OF OGDCL INTEGRATED HSE SYSTEM MANUAL DULY APPROVED BY MD&CEO OGDCL.
- 2) THE EFFECTIVENESS OF THE PARTICIPATION WILL BE RECORDED SO THAT IMPROVEMENT IN THEIR RESPECTIVE AREAS WOULD BE ACHIEVED.

<b>Prepared By</b>	<b>Consulted By</b>	<b>Reviewed By</b>	<b>Approved By</b>
Signature Location In-Charge HSE	Signature Concerned Domain Expert	Signature Members – Location HSE MRC	Signature Location In-Charge





**Oil & Gas Development Company Limited**  
Location: (EFP/FGCP/Seismic Party/Drilling Rig/Field/Plant/Other)

OGF/XXX - HSE - 007A(00)

**Toolbox Talk  
Evaluation Template**

DETAILS			
<b>Section / Department:</b>			
<b>Supervisor:</b>			
<b>Date:</b>			
<b>Time:</b>			
<b>Description Of Task(s) To Be Performed:</b>			
<b>Discussion On Vulnerabilities / Impacts Associated With Task(s):</b>			
<b>Applicable Procedural Requirements Reviewed (provide details):</b>			
<b>Job Vulnerabilities / Hazards Assessment (JVA / JHA) Discussed With Workforce (mention details):</b>			
ATTENDANCE			
#	PARTICIPANT NAME	DESIGNATION	SIGNATURE
ENDORSEMENT			
<b>Toolbox Talk Conducted by:</b>			
<b>Signature:</b>			
<b>Effectiveness checked by:</b>			
<b>Signature:</b>			

Ref. Section 06 (Support) of OGDCL's Integrated HSE System Manual



**Oil & Gas Development Company Limited**

OGF/XXX - HSE - 008 (00)

HSE SHORT AWARENESS SESSION

**ATTENDANCE SHEET**

TITLE	
REFERENCE	
DURATION	
VENUE	
NO. OF TRAINEES	
FACILITATOR	

#	PARTICIPANT NAME	DESIGNATION	OG NO.	SIGNATURE

SIGNATURE (FACILITATOR):
DATE:





**Oil & Gas Development Company Limited**  
Location: (EFP/FGCP/Seismic Party/Drilling Rig/Field/Plant/Other)

OGF/XXX - HSE - 009(01)

**HSE SHORT AWARENESS SESSION  
EVALUATION TEMPLATE**

Lecture Title:	Venue:
Lecture Delivered By:	Lecture Date/ Time:

**LECTURE MATERIAL:**

Parameters	Strongly Dissatisfied	Dissatisfied	Average	Satisfied	Strongly Satisfied
1. Contents of course					
2. Practical information on subject					
3. Readability of course material					
4. Formatting					
5. Sample Examples					
6. What information is missing or lacking in the course material? Which part of course content needs to be more emphasized / improved?					

**LECTURE PRESENTER (overall):**

Parameters	Strongly Dissatisfied	Dissatisfied	Average	Satisfied	Strongly Satisfied
7. Subject Knowledge & Command					
8. Presentation & Teaching Skills					
9. Clarity of Presentation					
10. Two-way Communication					
11. Ability to answer questions					
12. Use of practical examples					
13. What area(s) do you think the tutor needs to improve?					

**OVERALL LECTURE'S PERFORMANCE:**

Parameters	Strongly Dissatisfied	Dissatisfied	Average	Satisfied	Strongly Satisfied
14. Meeting your expectations					
15. Learning experience					
16. Relevance to your work					
17. What areas need to be emphasized or improved to make the overall course more effective and useful?					

Name & OG #:	Department and Location:
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## 6.2 Communication and Consultation

OGM/P-HSE-6.2(08) Revision Number 8

Original Issue: June 25, 2007  
This Issue: March 14, 2022

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### Change/ Revision Log

#	Description of Change
	<i>Reviewed, no change suggested.</i>

### Associated Documents Approval & Issue

Related Document/ Record	Initiated by	Reviewed by	Checked/ Verified / Approved by
OGF – HSE – 011 Product Safety Data Sheet (PSDS)	Location Lab. IC	Location HSE IC	Location IC
OGF – HSE – 012 External Environmental Complaint Sheet (EECS)	Complainant → Location HSE Rep.	Location IC	GM HSE
OGF – HSE – 013 Inter Office Memos Format	HSE Department H.O.	Manager/ Chief HSE	GM HSE



### 6.2.1 Internal Communication

- The internal communication channels used for communicating HSE information shall mainly include (but not limited to):

HSE Information	Internal Communication Channel
a) HSE Policy, Procedures & Work Instructions	<ul style="list-style-type: none"> <li>Website / Newsletters / Inter Office Memos / Bulletin &amp; Notice Boards</li> <li>Safety Handbooks</li> </ul>
b) Identification & Management of HSE vulnerabilities, impacts (Risk Register) and Objectives & Management Programs	<ul style="list-style-type: none"> <li>Training &amp; Awareness Sessions</li> <li>STOP Cards</li> <li>Toolbox Talks</li> <li>PTW/ Energy Isolation</li> <li>Standardization through Color Coding Schemes</li> <li>Area Classification &amp; Signs / Labels</li> <li>Minimum Approach Distance (Safe Distance Communication)</li> <li>HSE Awareness Weeks / Workshops / Seminars</li> </ul>
c) Hazardous Materials / Chemicals / Processes	<ul style="list-style-type: none"> <li>Signs / Labels / MSDS/ PSDS</li> <li>Toolbox Talks</li> <li>PTW/ Energy Isolation</li> </ul>
d) Feedback on HSE System and HSE System Performance	<ul style="list-style-type: none"> <li>HSE Management Review Committee (MRC) MoMs</li> <li>STOP Cards</li> </ul>
e) Lessons Learned From Incidents Investigations	<ul style="list-style-type: none"> <li>Toolbox/ Safety Talks</li> <li>Safety Alerts</li> </ul>
f) Progress in eliminating hazards and associated OH&S risks	<ul style="list-style-type: none"> <li>ERPs</li> <li>HSE Awareness Weeks / Workshops / Seminars</li> </ul>
g) Progress with consultation and participation of workers	
h) Operational Changes	
i) Suggestion and Feedback from Personnel	

#### 6.2.1.1 Communication of HSE Policy, Procedures & Work Instructions

- HSE policy shall be documented in the HSE System Manual and shall be posted in all locations. Revisions of the policy shall be communicated through memos. Personnel shall also be made aware of the significance of policy through training sessions and informal meetings.
- Procedures and work instructions shall be issued formally to the relevant departments and sections and controlled.

HSE Policy, pertinent procedures, work instructions and handbooks shall also be communicated to the service companies, suppliers and subcontractors to ensure compliance.

#### 6.2.1.2 Toolbox (Safety) Talk Program

- Toolbox Talk shall be done on daily or weekly basis as per nature of operations / jobs / project activities.
- Topic shall be chosen that is relevant to the audience; one that shall create a discussion; a two-way communication; either an in-internal topic shall be used e.g. an incident that happened on site the week before, new work hazards, or one generated from the Toolbox Talk Programme.
- The talks shall take place directly in the workplace, whether it is a production site, plant area, and workshop or at a construction site where between 4 and 10 in number shall be the most effective audience.
- Toolbox Talks shall be monitored for their effectiveness to generate interest in the topic by building up the discussion point by point.
- Signatures from delegates shall be obtained to confirm attendance and to maintain record.

**6.2.1.3 Communication of Hazardous Materials/ Chemicals /Process**

(Hazardous Materials Identification System)

- ☐ The four bars shall be color-coded, using the modern color bar symbols and the number ratings as follows:  
0 = Insignificant hazard; 1 = Slight hazard; 2 = Moderate hazard; 3 = High hazard; 4 = Extreme hazard

<u>Type of Hazard</u>	<u>HMIS Color Bar</u>
<b>Health</b>	<b>Blue</b>
<b>Flammability</b>	<b>Red</b>
<b>Physical Hazard</b>	<b>Orange</b>
<b>Personal Protection</b>	<b>White</b>

- ☐ The color bar is not for emergencies and is used to convey broader health warning information.

**6.2.1.3.1 Permanent signs**

- ☐ Permanent signboards must be used for signs relating to prohibitions, warnings and mandatory requirements and the location and identification of emergency escape routes and first-aid facilities.
- ☐ Signboards and/or a safety color must be used to mark permanently the location and identification of firefighting equipment.
- ☐ Signboards on containers and pipes must be placed as per material/ product they are carrying and transporting.
- ☐ Places where there is a risk of colliding with obstacles or of falling must be permanently marked with a safety color and/or with signboards.
- ☐ Traffic routes must be permanently marked with a safety color.

**6.2.1.3.2 Occasional signs**

- ☐ Illuminated signs, acoustic signals and/or verbal communication must be used where the occasion requires signaling danger, to call persons to take a specific course of action and for the emergency evacuation of persons.
- ☐ Hand signals and/or verbal communication must be used where the occasion requires to guide persons carrying out hazardous or dangerous maneuvers.

**6.2.1.3.3 Incoming Materials / Chemicals**

- ☐ It shall be ensured that all original containers of hazardous chemicals or materials entering the department are properly labeled with the product name; Hazard warnings, including the target organ / physical effects; and Name and address of the manufacturer, distributor or supplier.
- ☐ Effective information and training shall be provided on hazardous chemicals or materials in the work area at the time of their initial assignment, and whenever a new physical or health hazard (the employees have not previously been trained about) is introduced into their work area.
- ☐ Material Safety Data Sheets (MSDS) shall be made available and maintained as follows:
  - ☐ Original with the work area (HazCom file)
  - ☐ Copy with the Materials / Store Department (Backup HazCom file)
  - ☐ Copy with the HSE Department/ Section (Central HazCom file)
  - ☐ Copy with the Medical Rep. / Doctor (Emergency HazCom file)
- ☐ Each department shall develop & update its own HazCom Equipment Table and display it at area's Bulletin & Notice Board as per following format:

Area	Equipment Description	Chemical being Used	MSDS #	H – F – R	Hazard
	1.				
	2.				
	3.				
	4.				

#### 6.2.1.3.4 Outgoing Product

- ☐ Laboratory IC shall prepare the Product Safety Data Sheets (PSDS) in consultation with the relevant stakeholders based upon the properties of the product to be delivered to the client.
- ☐ PSDS shall include the following contents:
  - a) Product and company identification
  - b) Composition/information on ingredients
  - c) Vulnerabilities (threats & opportunities) identification
  - d) First aid measures
  - e) Firefighting measures
  - f) Accidental release measures
  - g) Handling and storage
  - h) Exposure controls/personal protection
  - i) Physical and chemical properties
  - j) Stability and reactivity
  - k) Toxicological information
  - l) Ecological information
  - m) Disposal considerations
  - n) Transport information
  - o) Regulatory information
  - p) Other information
- ☐ HSE Section shall review the PSDS for its completeness especially in accordance with the regulatory requirements.
- ☐ Subsequently the Location Management shall approve it.
- ☐ The PSDS shall be disseminated / conveyed to the downstream customers including product transporters to timely & effectively respond to daily exposure situations as well as to emergency situations.
- ☐ The PSDS shall be reviewed six monthly and the new revision shall only become in effect once the properties of the product has changed in a significant manner.
- ☐ Product Safety Data Sheets (MSDS) shall be made available and maintained as follows:
  - ▣ Original with the work area (HazCom file)
  - ▣ Copy to the Product Transporter / Purchaser
  - ▣ Copy with the Commercial Department (Backup HazCom file)
  - ▣ Copy with the HSE Department/ Section (Central HazCom file)
  - ▣ Copy with the Medical Rep./ Doctor (Emergency HazCom file)

#### 6.2.14 Communication through Standardized Color Coding

##### 6.2.1.4.1 Pipeline Color Code Identification Band System and Labeling System:

- ☐ This shall be complied where the following apply:
  - ▣ Pipe contents are hazardous, or could generate hazardous conditions.
  - ▣ The pipe serves a safety purpose, as part of hazard prevention or emergency response.
  - ▣ Flow must be redirected, shut off, or adjusted to allow for maintenance or other expected work.
  - ▣ The pipe or its contents could affect the procedures followed during an emergency.
- ☐ Standardization shall be accomplished in all facilities as follows:-

##### The Band System:

- ☐ All process equipment and pipe work apart from Fire Fighting System shall be finished in either Light Grey or White along its entire length as the decorative color (the base color or ground color).
- ☐ The fluid contents of all flow-lines shall be identified by tapes which are appropriately colored; the nature of the pipe contents shall be identified by means of a Color Code Identification Band System (CCIB).
- ☐ Ground colors shall be provided on the full pipe section; whereas color band width to be 25 mm up to 50 mm.

- ☐ When double color bands exist on the pipeline, then a proportional width of 4:1 to the next band is provided.
- ☐ These color bands are provided at suitable locations as:
  - ▣ At the beginning and termination points
  - ▣ At 25m intervals (up to 50m in case of headers)
  - ▣ At change in flow direction points and flow diversion locations.
  - ▣ At locations where the pipe enters the plant or exits from the boundary.
- ☐ Color Code Identification Band System (CCIB) is given below:

Type of Fluid	Identification Band Color
Water (Raw;Potable;Storm;Treated;Produced)	Green
Steam	Crimson Red
Firefighting	Signal Red
Oils (Combustible Liquids)	Dark Brown
Chemicals	Orange
Gases (Gaseous or Liquefied)	Yellow
Acids & Alkalis	Purple
Air (Utility; Service, Instrument)	Light Blue
Process Effluents (Drain; Vent; Flare)	Black

- ☐ The additional use of Colored Labels giving the full or abbreviated product description, temperature, pressure, and other details necessary to identify any potential hazard, together with the appropriate visual aids and hazard pictorial symbols, shall be applied where deem appropriate.
- ☐ In addition to being Color Coded, each process sub-system, pipeline and valve shall be individually identified by marking them in accordance with the Equipment Identification and Tag Numbering System.
- ☐ The line number and the flow direction shall be stenciled on each pipe section and pipeline together with the CCIB, to provide the pipe work with unique traceability.

**The Labeling System**

- ☐ The labels shall be placed on pipes:
  - ▣ Adjacent to all valves and flanges
  - ▣ Adjacent to all changes in pipe direction
  - ▣ On both sides of wall, floor or ceiling penetrations
  - ▣ Every 50 feet on straight runs of pipe (or every 25 feet in congested areas)
- ☐ A color code based on the type of hazard posed by a pipe's contents. The labeling color code shall be:
  - ▣ Water: **White** text on green text box
  - ▣ Steam: **White** text on crimson text box
  - ▣ Fire quenching fluids: **White** text on red text box
  - ▣ Combustible fluids: **White** text on brown text box
  - ▣ Toxic and corrosive fluids: **Black** text on orange text box
  - ▣ Flammable fluids: **Black** text on yellow text box
  - ▣ Acidic fluids: **White** text on purple text box
  - ▣ Compressed air: **White** text on blue text box
  - ▣ Process effluents: **White** text on black text box

**6.2.1.4.2 Color Coding for Maintenance of Lifting Gears**

- ☐ Lifting equipment comprises lifting appliances (equipment performing the lifting), lifting accessories (devices that connect the load to the lifting appliance 'GEARS') and lifted equipment (e.g. containers, baskets, etc). All shall be marked with the Working Load Limit (WLL) and Safe Working Load (SWL).
- ☐ An equipment register, including maintenance records and evidence of certification to be available with Operator.
- ☐ Following are some of the items used as gears in lifting activities;

Wire rope slings	Chains and chain slings	Man-made fibre slings	Shackles
Beam- and Plate clamps	Eye bolts & swivel rings	Hoist rings	Turnbuckles
Wedge sockets	Lifting harnesses	Drill pipe elevators	Casing elevators

Bail arms	Spreader beams	Hooks	Load cells
Pad eyes and bolts	Rigging screw	Pallet hook	

- ☐ Color coding shall be an add-on for visual inspection and confirm the following aspects;
  - a) an inspection has been carried out;
  - b) whether or not inspection is current; and
  - c) to determine the inspection results by being able to link back from the physical evidence to the records.
- ☐ Location ICs shall ensure that all portable, circulating & fixed lifting equipment and accessories for lifting, after thorough examination, are color coded to give visual indication of their certification and fitness status:-

Color Code	Period
<b>Green</b>	Lifting accessories, which have been inspected and found fit for purpose should be color-coded for a maximum six months.
<b>Yellow</b>	Lifting accessories, which inspection is due after lapse of 06 months shall be stored separately and clearly marked/ color coded and returned for re-inspection, certification and color coding.
<b>Red</b>	Crimson red color to denote equipment "unsuitable for the job" shall be applied. The crimson red color code shall also be used for discarded or rejected lifting gears that need to be kept in material storage for non-prescribed period of time.

**6.2.1.4.3 Assured Grounding Color Codes**

- ☐ All cords and current carrying conductors used with the portable power tools shall be protected by either a Ground Fault Circuit Interrupter (GFCI) or an Assured Grounding Program; Following Assured Grounding Color Code Calendar shall be used (each new year):

<b>January</b>	<b>February</b>	<b>March</b>
<b>April</b>	<b>May</b>	<b>June</b>
<b>July</b>	<b>August</b>	<b>September</b>
<b>October</b>	<b>November</b>	<b>December</b>

Note:- The colors in the form of "taped bands" shall be pasted on the wire near the plug.

**6.2.1.4.4 Lockout Color Coding**

- ☐ Lockout and Tagout (LOTO) devices shall be singularly identified; shall be the only device(s) used for controlling energy; and shall not be used for other purposes.
- ☐ Tags shall not be required if locks are otherwise "indelibly" marked so as to identify the person(s) to whom the lock belongs.

☐ For each Section/ Department, Locks shall be unique-color-coded to assist in identifying users.

Note: The authorized person applying a lock shall keep the key for that lock in his possession until the lock is removed. No employee should be able to open a lock attached by someone else.

**6.2.1.5 Communication of Impacts, Objectives and Management Programs**

- ☐ Information about vulnerabilities and related impacts (risks), objectives, targets, and management programs shall be communicated to the relevant departments and sections generally through distribution of memos, minutes of meetings, reports and other such documents; applying colour coding schemes, labelling, during toolbox talks and through HSE System awareness/ training sessions.



**6.2.1.6 Safety Alerts**

- ☐ Safety Alert shall provide advisory information and be issued after occurrence of an incident or when there is a current or emerging HSE issue that needs immediate corrective & preventive action.
- ☐ HSE Department shall notify all workforce members and concerned stakeholders regarding the description of associated dangers so that lessons be timely shared. It is encouraged that the Recipients of Safety Alert to share them further within their coworkers.

**6.2.1.7 Feed Back on HSE System and HSE System Performance**

- ☐ HSE improvement shall require collecting documents, information and data on vulnerabilities (threats & opportunities) and impacts, implementation of management programs, progress toward achieving objectives and targets, HSE performance status and results, compliance with legal and regulatory requirements, and other activities of the HSE System.
- ☐ This feedback information and data shall periodically be reported during the Location HSE Management Review Committee (MRC), and shall be used in making decisions regarding the HSE objectives, targets, and management programs.

**6.2.1.8 Suggestion and Feedback from Personnel**

- ☐ Personnel at all levels shall be encouraged to report problems and their concerns with HSE issues and the HSE System, and offer suggestions on how to improve HSE performance.
- ☐ They may communicate those HSE issues to their immediate departmental heads or directly to the HSE Department / Section.
- ☐ Departmental Heads shall be required to bring all relevant issues to the attention of the HSE Department / Section and during the Location HSE Management Review Committee (MRC) meetings.

**6.2.1.9 HSE Awareness Events**

- ☐ Annual HSE Awareness Event shall be arranged as a regular corporate feature.
- ☐ The objective of this location/ field-wide event shall be:
  - a) to promote best HSE practices and acknowledge the existing ones;
  - b) to reinforce HSE messages & increase employees awareness;
  - c) to promote a healthy lifestyle a benefit to the employees;
  - d) to provide better communication opportunities to employees on issues of work and safety; and
  - e) to enable learning through fun.

☐ HSE Awareness Event shall be organized as half, one or two day event depending upon the strength of the field and security conditions.

**6.2.2 External Communication**

- ☐ The external communication channels used for communicating HSE information shall include:

HSE Information	External Communication Channel
a) HSE Policy, Procedures & Work Instructions, Handbooks	<ul style="list-style-type: none"> <li>▣ Service Orders/ Contracts</li> <li>▣ Website / Newsletters / Inter Office Memos / Bulletin &amp; Notice Boards</li> <li>▣ Service level agreements (SLAs), contracts and pre-project HSE planning meetings</li> <li>▣ On-site Induction</li> <li>▣ STOP Cards</li> <li>▣ Toolbox Talks</li> </ul>
b) Identification & Management of HSE vulnerabilities, impacts (Risk Register) and	<ul style="list-style-type: none"> <li>▣ On-site Induction</li> <li>▣ Signs / Labels / MSDS/ PSDS</li> <li>▣ PTW/ Energy Isolation</li> <li>▣ Standardization through Color Coding Schemes</li> <li>▣ Area Classification &amp; Signs / Labels</li> </ul>

<b>Objectives &amp; Management Programs</b>	<ul style="list-style-type: none"> <li>▣ Minimum Approach Distance (Safe Distance Communication)</li> </ul>
<b>c) Hazardous Materials / Chemicals / Processes</b>	<ul style="list-style-type: none"> <li>▣ On-site Induction</li> <li>▣ Signs / Labels / MSDS/ PSDS</li> <li>▣ PTW/ Energy Isolation</li> </ul>
<b>d) External Environmental Complaint (Locals/ Communities)</b>	<ul style="list-style-type: none"> <li>▣ Application/ Email/ Memos</li> </ul>
<b>e) Legal Notices from Regulatory Bodies</b>	<ul style="list-style-type: none"> <li>▣ Office Memos/ Notices/ Orders</li> </ul>
<b>f) Annual Returns and Reports (compliance obligation)</b>	<ul style="list-style-type: none"> <li>▣ Prescribed Templates</li> </ul>

- ▣ All communication from interested parties, whether written or verbal, received at site or any office shall be forwarded to HSE Department / Section.
  - ▣ External Environmental Complaint Sheet (EECS) shall be established and made available in the reception / security office for interested parties to lodge their complaint, if any: EECS shall provide the following information:
    - a) Particulars (Name, Address, Contact No.) of the complainant
    - b) Type / Nature of Complaint
    - c) Summary of the Complaint
    - d) Time and Date of Entry
    - e) Mode by which complaint was communicated / registered
    - f) Any Reference of the Litigation given in the complaint
  - ▣ HSE Department/ Section shall maintain documents related to external communication with the interested parties.
  - ▣ Area Manager and Location IC shall review the complaint and try to resolve the matter at field level.
- ▣ Critical issues shall be forwarded to GM HSE to determine which other departments should be informed or involved, what response should be given to the originator (if any), and whether any internal actions should be considered to address the issues raised in the communication.
- ▣ All inquiries from interested parties shall be responded in same manner on which they were logged.

**6.2.2.1 External Communication of the HSE Policy**

- ▣ The full text of HSE policy shall be available to the public at main entrance gate, both in English / Urdu and local language.
- ▣ The policy shall be displayed both inside and outside the main offices at appropriate places.
- ▣ Any requests for the HSE policy shall be responded to by mailing / emailing a copy of the same.
- ▣ All the same, HSE Policy shall be made available in company's official website for ready reference.

**6.2.2.2 External Communication of Significant Vulnerabilities and Impacts (Risks)**

- ▣ Location HSE Management Review Committee (MRC) while reviewing the HSE System shall consider whether information on significant HSE vulnerabilities & related impacts is required to be communicated externally.
- ▣ The decision shall be recorded in the minutes of this review.
  - ▣ In case it is decided to communicate the significant HSE vulnerabilities and related impacts to interested parties, HSE Department / Section shall make arrangements for external communication. The decision may be revised at any subsequent review / meeting.

### 6.2.2.3 External Communication during Emergencies

- External communication processes, in emergency situations where regular updates are required to be delivered in a clear and unambiguous manner, shall include the identification of designated contact personnel from the location to allow for appropriate information to be communicated in a timely and consistent manner.

*(Further information already defined in a) Emergency Preparedness & Response b) Crisis Management and c) HSE Protocol for Management of Project Contractors & Service Companies procedures)*

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# Support: OGDCL's Integrated HSE System Manual

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OGF/XXX-HSE-011(00)

PRODUCT NAME: \_\_\_\_\_

**PRODUCT SAFETY DATA SHEET**

Effective Date: \_\_\_\_\_

This PSDS is a detailed information bulletin of OGDCL's product describing, among other things, the physical and chemical properties, physical and health hazards, routes of exposure, precautions for safe handling and use, emergency and first-aid procedures, and control measures. This information must be disseminated / conveyed to the downstream customers including product transporters to timely & effectively respond to daily exposure situations as well as to emergency situations.

<LOCATION NAME>  
<LOCATION ADDRESS>  
<LOCATION FAX>  
<LOCATION TEL>  
<LOCATION EMAIL>

I – PRODUCT IDENTIFICATION		
CHEMICAL NAME	CHEMICAL FORMULA	MOLECULAR WEIGHT
Trade Name	SYNONYMS	CONTRACT REFERENCE #

II – COMPOSITION/INFORMATION ON INGREDIENTS				
COMPONENT(S) CHEMICAL NAME	CAS REGISTRY NO	Concentration (by wt)	MSHA/OSHA PEL	ACGIH TLV- TWA

\*There are no exposure limits for crude oil / condensate published by ACGIH or OSHA. The limit for mineral oil mist is to be used only as a reference.

III – HAZARDS IDENTIFICATION	
Primary route(s) of exposure:	<input type="checkbox"/> Inhalation <input type="checkbox"/> Skin <input type="checkbox"/> Ingestion
EYE CONTACT:	
SKIN CONTACT:	
SKIN ABSORPTION:	
INGESTION:	
INHALATION:	
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE	

IV – FIRST AID MEASURES	
Primary route(s) of exposure:	<input type="checkbox"/> Inhalation <input type="checkbox"/> Skin <input type="checkbox"/> Ingestion
EYES:	
SKIN:	
INGESTION:	
INHALATION:	



# Support: OGDCL's Integrated HSE System Manual

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OGF/XXX-HSE-011(00)

**PRODUCT NAME:** \_\_\_\_\_

**PRODUCT SAFETY DATA SHEET**

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- <LOCATION NAME>
- <LOCATION ADDRESS>
- <LOCATION FAX>
- <LOCATION TEL.>
- <LOCATION EMAIL>

V - FIRE FIGHTING MEASURES	
FLASHPOINT	FLAMMABLE LIMITS IN AIR
EXTINGUISHING AGENT	
UNUSUAL FIRE AND EXPLOSION HAZARD	

VI - ACCIDENTAL RELEASE MEASURES
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

VII - HANDLING AND STORAGE

VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION
ENGINEERING CONTROLS
EYE/FACE PROTECTION
SKIN PROTECTION
RESPIRATORY PROTECTION
GENERAL HYGIENE CONSIDERATIONS

IX - PHYSICAL AND CHEMICAL PROPERTIES	
APPEARANCE AND ODOR	SPECIFIC GRAVITY
BOILING POINT	API Gravity
VAPOR PRESSURE	% VOLATILE, BY VOLUME
EVAPORATION RATE	SOLUBILITY IN WATER





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OGF/XXX-HSE-011(00)

**PRODUCT NAME:** \_\_\_\_\_

**PRODUCT SAFETY DATA SHEET**

Effective Date: \_\_\_\_\_

This PSDS is a detailed information bulletin of OGDCL's product describing, among other things, the physical and chemical properties, physical and health hazards, routes of exposure, precautions for safe handling and use, emergency and first-aid procedures, and control measures. This information must be disseminated / conveyed to the downstream customers including product transporters to timely & effectively respond to daily exposure situations as well as to emergency situations.

- <LOCATION NAME>
- <LOCATION ADDRESS>
- <LOCATION FAX>
- <LOCATION TEL>
- <LOCATION EMAIL>

X - STABILITY AND REACTIVITY	
STABILITY	CONDITIONS TO AVOID
INCOMPATIBILITY (Materials to avoid)	
HAZARDOUS DECOMPOSITION PRODUCTS	

XI - TOXICOLOGICAL INFORMATION
Exposure Routes:
Target Organs:
Acute Effect:
Chronic Effect/Carcinogenicity:

XII - ECOLOGICAL INFORMATION

XIII - DISPOSAL CONSIDERATIONS
WASTE DISPOSAL METHOD

XIV - TRANSPORT INFORMATION
PROPER SHIPPING NAME
DOT HAZARD CLASSIFICATION
PLACARD REQUIRED
LABEL REQUIRED

XV - REGULATORY INFORMATION
CLEAN WATER ACT (OIL SPILLS)
SARA 311 CATEGORIES



# Support: OGDCL's Integrated HSE System Manual

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OGF/XXX-HSE-011(00)

**PRODUCT NAME:** \_\_\_\_\_

<b>PRODUCT SAFETY DATA SHEET</b>
Effective Date: _____

This PSDS is a detailed information bulletin of OGDCL's product describing, among other things, the physical and chemical properties, physical and health hazards, routes of exposure, precautions for safe handling and use, emergency and first-aid procedures, and control measures. This information must be disseminated / conveyed to the downstream customers including product transporters to timely & effectively respond to daily exposure situations as well as to emergency situations.

- <LOCATION NAME>
- <LOCATION ADDRESS>
- <LOCATION FAX>
- <LOCATION TEL.>
- <LOCATION EMAIL>

XVI – OTHER INFORMATION
ACGIH: American Conference of Governmental Industrial Hygienists
CFR: US Code of Federal Regulations
IARC: International Agency for Research on Cancer
NIOSH: National Institute for Occupational Safety and Health, US Department of Health and Human Services
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration, US Department of Labor
PEL: Permissible Exposure Limit
SARA Title III: Title III of the Superfund Amendments and Reauthorization Act, 1986
TLV: Threshold Limit Value
TWA: Time-weighted Average
<b>FOR FURTHER INFORMATION CONTACT:</b> HSEQ Department, OGDCL House, Blue Area, Islamabad, Pakistan.

Disclaimer: OGDCL assumes no responsibility for injury or death to any person or persons caused by the product if reasonable safety procedures or conditions are not met as stated within the PSDS. We also assume no responsibility for injury or death to any person or persons caused by abnormal use of this product or mixing of this product even if reasonable safety precautions were followed. Furthermore, all third person parties assume the risk in their use of this product. The information contained herein is based on the information at the indicated date of preparation with best available knowledge.

OGF/XXX-HSE-011(00)

Prepared By	Reviewed By	Approved By
<div style="border: 1px solid black; height: 60px; width: 100%;"></div>	<div style="border: 1px solid black; height: 60px; width: 100%;"></div>	<div style="border: 1px solid black; height: 60px; width: 100%;"></div>
Signature Field I/C Laboratory	Signature Field I/C HSEQ	Signature Field / Plant Manager



## Oil & Gas Development Company Limited External Environmental Complaint Sheet (EECS)

This form is to be used for complaints regarding environmental issues including dust, smoke, odor, noise issues, or any health complaint. After discussing the issue with the concerned community person(s), Location HSE Rep. shall write down as much detail as possible to allow conduct of a thorough investigation/ follow-up.

<b>Ref. No.:</b>	
<b>Complainant's Full Name:</b>	
<b>Postal Address:</b>	
<b>Residential Address:</b>	
<b>Phone Number:</b>	
<b>Email:</b>	
<b>Nature of Complaint:</b>	

Signature

Date

<b>Forward to (For action required):</b>	
--	--

Ref. Section 06 (Support) of OGDCL's Integrated HSE System Manual

## 6.3 HSE Documented Information and Control

OGM/P-HSE-6.3(08) Revision Number 8

Original Issue: June 25, 2007  
 This Issue: March 14, 2022

**Updated By:**

**Muhammad Sameem Hussain Qaiser**  
 Senior HSEQ Officer, OGDCL

**Reviewed By:**

**Muhammad Mubashir Abbas**  
 Manager HSEQ, OGDCL

**Checked By:**

**Mahmood-ul-Hassan Khan**  
 General Manager HSEQ, OGDCL

**Approved By:**

**Syed Khalid Siraj Subhani**  
 Managing Director, OGDCL

### Change/ Revision Log

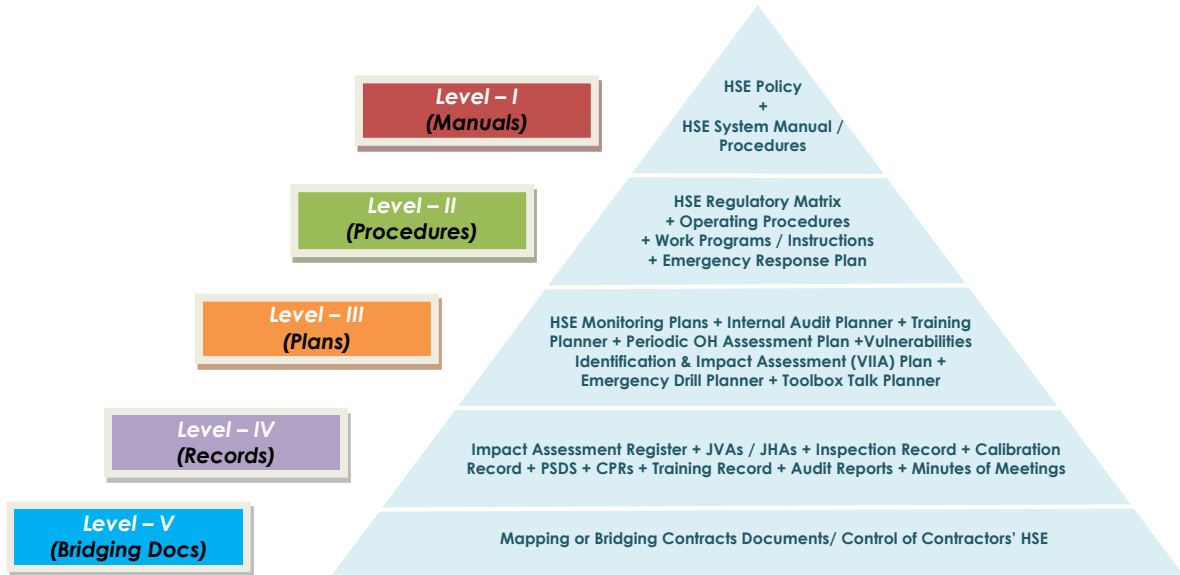
#	Description of Change
1.	Amended: An HSE Management System document shall be reviewed as required but at least <u>once</u> every year and updated if required.

### Associated Documents Approval & Issue

Related Document/ Record	Initiated by	Reviewed by	Checked/ Verified / Approved by
OGF – HSE – 014 Master List of Documents	Section / Department Rep.	HSE Rep.	Concerned Departmental IC
OGF – HSE – 015 List of External Documents	Section / Department Rep.	Location HSE IC	Location IC
OGF – HSE – 016 Document Change Request (Corporate)	Initiator	Manager/ Chief HSE	GM HSE
OGF – HSE – 016 Document Change Request (Field)	Initiator	Location HSE IC	Area Manager / Location IC
OGF – HSE – 017 Document Distribution Log	Section / Department Rep.	HSE Rep.	Concerned Departmental IC

### 6.3.1 General

OGDCL's Integrated HSE Management System shall comprise of **FIVE LEVELS** as exhibited below:-



### 6.3.2 Document Numbering

OGDCL HSE Documents shall have a structured unique number based on variable codes, complete nomenclature of which can be understood by the following table:

Document	Format	Example
Control of System Manual Procedures	OGM/P-Location Name - Name of Department - Serial# (Revision #)	OGM/P-HSE-001 (00A) or OGM/P-DDK-HSE-001 (00A)
Control of HSE Policy	OGM/Policy- Name of Department - Serial# (Revision #)	OGM/Policy-HSE-001 (001)
Control of Regulatory Matrix	OGM/RM- Name of Department - Serial# (Revision #)	OGM/RM-HSE-001 (00A)
Control of Forms	OGF/Location Name - Name of Department - Serial# (Revision #)	OGF/HSE-001 (00) or OGF/DDK-HSE-001A (00)
Control of Work Instruction	OGW/Location Name - Name of Department- Serial# (Revision#)	OGW/HSE-001 (00) or OGW/DDK-HSE-001A (00)
Control of Inspection & Maintenance Plan	OGI/Location Name -Name of Department- Serial# (Revision #)	OGI/ HSE-001 (00) or OGI/DDK-HSE-001A (00)
Control of Checklist	OGC/Location Name -Name of Department- Serial# (Revision #)	OGC/HSE-001 (00) or OGC/DDK-HSE-001A (00)

Where,

OG = OGDCL  
 M = Management System  
 OGM/P = Procedure (-Location abbreviation where required)  
 OGM/Policy = HSE Policy  
 OGM/RM = Regulatory Matrix

OGF = Form (-Location abbreviation where required)  
 OGW = Work Instruction (-Location abbreviation where required)  
 OGI = Inspection/Maintenance Program (-Location abbreviation where required)  
 OGC = OGDC Checklist (-Location abbreviation where required)

DDK = Dhodak Location  
 HSE= HSE Department / Section H.O.

001A= A three digit Serial Number of Procedure, Form, Work Instruction, Inspection and Maintenance Plan, Checklist (with Serial Alphabet only in case of additional relevant document to achieve continuity)  
 (00A) = A two digit Revision Number for the Manual, Procedure, Form, Work Instruction, Inspection and Maintenance Plan, Checklist (with Serial Alphabet only in case of minor changes where approval of IC HSE is sufficient)

### 6.3.3 Document Approval & Issue

- After the preparation and numbering of documents, these shall be reviewed and approved by the competent authorities.
- The personnel / authorities responsible for initiating, reviewing and approving of various HSE documents are mentioned at the start of every individual procedure.
- These shall then be entered in the Master List of documents along with their revision number and retention period by the HSE Department / Section and



then issued to the concerned personnel as per distribution list.

- ☐ A controlled document shall meet the following conditions:
  - a) It must be numbered or coded according to the defined numbering scheme
  - b) It must be reviewed and approved before issue
  - c) Changes to these documents must be authorized and controlled
- ☐ All the controlled documents shall be identified as "Controlled Copy, Do Not Duplicate" typed in red color (font seen in soft copy), on the left bottom or top corner on all pages of the document, and "For Internal Use Only" to avoid their unauthorized copying and usage.
- ☐ Uncontrolled documents or copies shall not contain any "controlled document" identification.

#### 6.3.4 External Documents

- ☐ Following documents used in OGDCL shall be of external origin:
  - a) HSE standards and other standards / specifications
  - b) HSE related federal and provincial acts, laws and regulations or applicable guidelines
  - c) Technical manuals, machine manuals and process diagrams / drawings
- ☐ Concerned Departmental Heads shall be responsible for controlling external documents related to their Department.
- ☐ Whereas HSE Department / Section shall be responsible for maintaining current copies of management systems related applicable Standards and current copies of Legislations / Acts / Regulations.
- ☐ The external origin documents shall not be required to be coded or approved.
- ☐ Related person enters the external origin document in the List of External Documents, shall stamp it "EXTERNAL DOCUMENT" with Red Ink and maintains distribution record of copies of external documents.

#### 6.3.5 Changes/ Amendment In Documents

- ☐ **An HSE Management System document shall be reviewed as required but at least once every year and updated if required.**
- ☐ When required, Departmental / Sectional Heads shall initiate changes in HSE management system document by filling in Document Change Request (DCR). The DCR shall at least include a description of change requested and the reason for change.
- ☐ The DCR signed by the concerned Departmental Head shall be sent to HSE Department / Section. HSE Head, in consultation with the concerned Departmental Heads, shall review the nature of change requested. It shall then be sent to the approving authority who approves/rejects the DCR.
- ☐ After the approval, HSE Department / Section shall incorporate the changes in the concerned document and describe the nature of change on the amendment sheet. The revision number of the document shall be incremented and the revised document shall get approval from the concerned approving authority.
- ☐ The revised document shall then be distributed to all the concerned persons in the distribution list and the obsolete documents retrieved. Obsolete documents shall either be destroyed or stamped "OBSOLETE" with Red Ink to properly identify it. One copy of obsolete document shall be maintained for record purposes with the HSE Department / Section.







**Document Change Request**

(Use DCR in case you recommend change(s) in any of the controlled HSE Document.)

Document Number:	Document Name:
Revision:	Attached Document Reference:
Recommended Changes:	
Originator Signature:	Signature:
Originator Name:	Approved By Concerned Departmental Head:
Date:	Date:
<b>To be completed by the HSE Section / Department</b>	
Recommendation Accepted?	Reason for change
Yes ___ Yes w/ modification ___ No ___	
Comments:	
Signature of HSE Representative:	Date:
<b>Approving Authority [ Corporate → GM HSE; Location → Area Manager / PC/ OM/ FM / PM ]</b>	
<input type="checkbox"/> Approved	<input type="checkbox"/> Not Approved
<b>To be filled by HSE Section / Department</b>	
Document/Record Revision Number:	Document/Record Revision Date:

Ref. Section 06 (Support) of OGDCL's Integrated HSE System Manual







## 6.4 Control of Records

OGM/P-HSE-6.4(08) Revision Number 8

Original Issue: June 25, 2007  
This Issue: March 14, 2022

**Prepared By:**

**Muhammad Sameem Hussain Qaiser**  
Senior HSEQ Officer, OGDCL

**Reviewed By:**

**Muhammad Mubashir Abbas**  
Manager HSEQ, OGDCL

**Checked By:**

**Mahmood-ul-Hassan Khan**  
General Manager HSEQ, OGDCL

**Approved By:**

**Syed Khalid Siraj Subhani**  
Managing Director, OGDCL

### Change/ Revision Log

#	Description of Change
	Reviewed, no change suggested.

### Associated Documents Approval & Issue

Related Document/ Record	Initiated by	Reviewed by	Checked/ Verified / Approved by
OGF – HSE – 018 Master List of Records (Field)	Section / Department Rep.	HSE Rep.	Concerned Departmental IC

### 6.4.1 Filing and Indexing

- ☐ Hardcopies of records shall be filed in cardboard or plastic files. These files shall be numbered and indexed for easy retrieval and safe storage.
- ☐ Following labeling format shall be used for files:

<b>File #:</b>
<b>Department:</b>
<b>File Title:</b>
<b>Date Started:</b>
<b>Date Closed:</b>
<b>Maintained by:</b>
<b>Location:</b>

**Example**

<b>File #:</b> MMD-1
<b>Department:</b> MMD
<b>File Title:</b> Operational Control Procedures
<b>Date Started:</b> 1st January, 2005
<b>Date Closed:</b> 31st March, 2005
<b>Maintained by:</b> MMD Section
<b>Location:</b> DDK

### 6.4.2 Reference Numbering System

- ☐ Following format shall be implemented at organizational and unit level for controlling Audit records, CPRs, CCRs, Management Reviews, Impact Assessment Register, and JVAs / JHAs:

Document	Format	Example
Control of Internal HSE Audit Noncompliance Report	HSE / Abbreviation of Location / Year – NCR###	HSE/DDK/2007-NCR001
Control of Corrective Action Request	HSE / Abbreviation of Location / Year – CPR###	HSE/DDK/2007-CPR003
Control of Review Minutes	HSE / Abbreviation of Location / Year – MR###	HSE/DDK/2007-MR002
Control of Impact Assessment Register	HSE / Abbreviation of Location / Year – IAR(##)	HSE/DDK/2007-IAR(00)
Control of Job Vulnerabilities / Hazard Analysis	HSE / Abbreviation of Location / Section – JVA###(##)	HSE/DDK/LAB-JVA001(00)
Control of Change Control Requisition	HSE / Abbreviation of Location / Section – CCR###(##)	HSE/DDK/LAB-CCR001(02)

Where,

- HSE = HSE Domain
- DDK = Dhodak Plant
- 2007= Year record is taken
- NCR = Audit Noncompliance Report
- CPR = Corrective and Preventive Action Request
- MR = Management Reviews
- RR= Impact Assessment Register
- JVA / JHA = Job Vulnerabilities / Hazard Analysis
- CCR= Change Control Requisition & and Pre-Startup Safety Review Completion Form
- 001 = Serial Number of the record
- 02 = Revision number

### 6.4.3 Record Approval & Issue

- ☐ After the preparation and numbering of records, these shall be reviewed and approved by the competent authorities.
- ☐ The personnel / authorities responsible for initiating, reviewing and approving of various HSE records are mentioned at the start of every individual procedure.

### 6.4.4 Storage of Records

- ☐ The record files shall be stored in cabinets and drawers, and concerned persons in the Sections shall be responsible for ensuring the security and safety of records in their custody.
- ☐ Computer-maintained files shall be stored in directories or folders on the hard disk or main server following the parent-child directory setup.
- ☐ View/ Read, Write/ Edit/ Modify, & Delete/ Un-Delete rights of the computer records shall be specified.
- ☐ Back-ups & security/ protection from viruses, etc. of the computer records shall

be ensured.

#### **6.4.5 Retention of Records**

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- ☐ The retention period of records shall be established for certain periods during which the record may be required for study or verification.
- ☐ After the retention period, the record shall be disposed off through appropriate means.
- ☐ Retention period shall be defined based on the following factors:
  - a) Frequency of record generation
  - b) Criticality of the record
  - c) Legal obligations
- ☐ Retention period for each record shall be defined in the Master List of Records maintained by HSE Department / Section

#### **6.4.6 Disposition of Expired or Obsolete Records**

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- ☐ After the expiry of retention period of records, head of section shall review the validity and usefulness of records and segregate the record to be disposed.
  - ☐ The record shall be disposed off by:
    - a) Shredding,
    - b) Selling off, or
    - c) Archiving in store room
-



**Oil & Gas Development Company Limited**

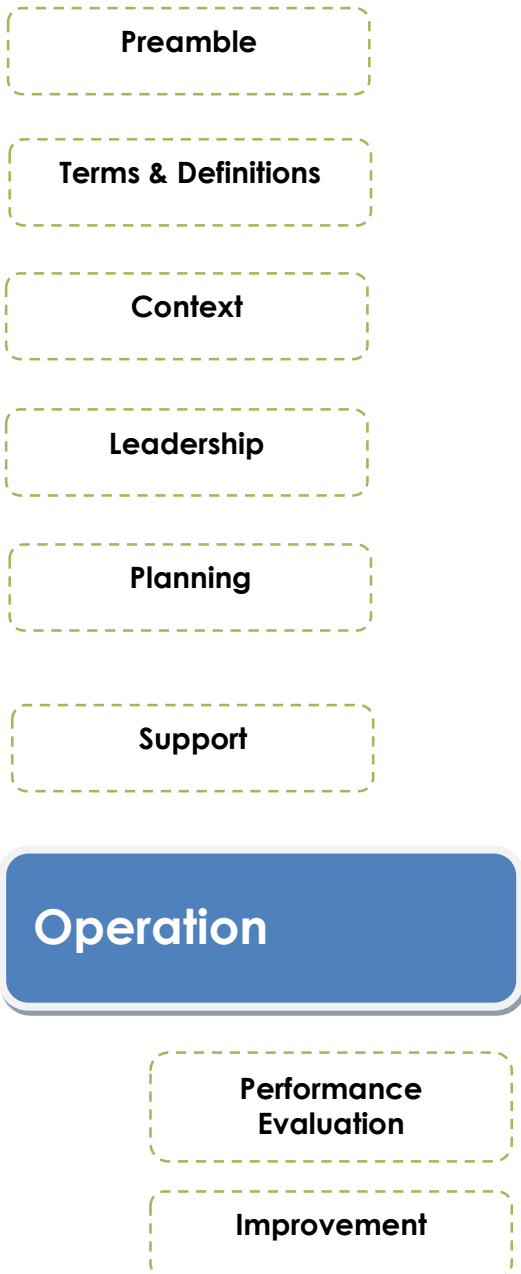
OGF - HSE - 018(01)

**MASTER LIST OF RECORDS**

SR NO	DESCRIPTION OF RECORD	RECORD ID#	RETENTION PERIOD	DISTRIBUTION								

PREPARED BY	REVIEWED BY	APPROVED BY

Ref. Section 06 (Support) of OGDCL's Integrated HSE System Manual



**Reference Standards**  
ISO14001:2015 & ISO45001:2018  
 Clause 8.1: Operational Planning and Control.  
 Clause 8.3: Outsourcing.  
 Clause 8.4: Procurement.  
 Clause 8.5: Contractors.  
 Clause 8.2/8.6: Emergency Preparedness and Response.  
PSM (22 Elements) Model  
**Procedure and Performance Standards:** This element provides standards of performance including such items as rules, procedures, and design criteria that specify how activities are to be done. They should be written, practical, and available at the point of action, reviewed regularly, followed, and enforced. Adherence to standards must be enforced, even to the point where adherence becomes a condition of employment.  
**Pre Startup Safety Review (PSSR):** PSSR provides a final checkpoint for new and modified equipment and facilities to confirm that all appropriate elements of Process Safety Management have been addressed satisfactorily and the equipment / facility is safe to start-up. It is mainly intended to make sure that alterations / additions to the process or system do not create hazards to personnel at the site, surrounding facilities, community and environment by inadequate, incomplete, or unauthorized design or installation.  
**Contractor Safety Management:** The intent of this element is to make contractors responsible for effectively meeting the safety, health and environmental requirements. It covers safety expectations of contractors with safety performance of the contractor as the top most priority.

**This Section's Objectives**

- ❑ Establish & enable HSE MS processes related to pollution and accident prevention and control how they operate
- ❑ Establish & enable hydrogen sulfide emergency preparedness and response framework



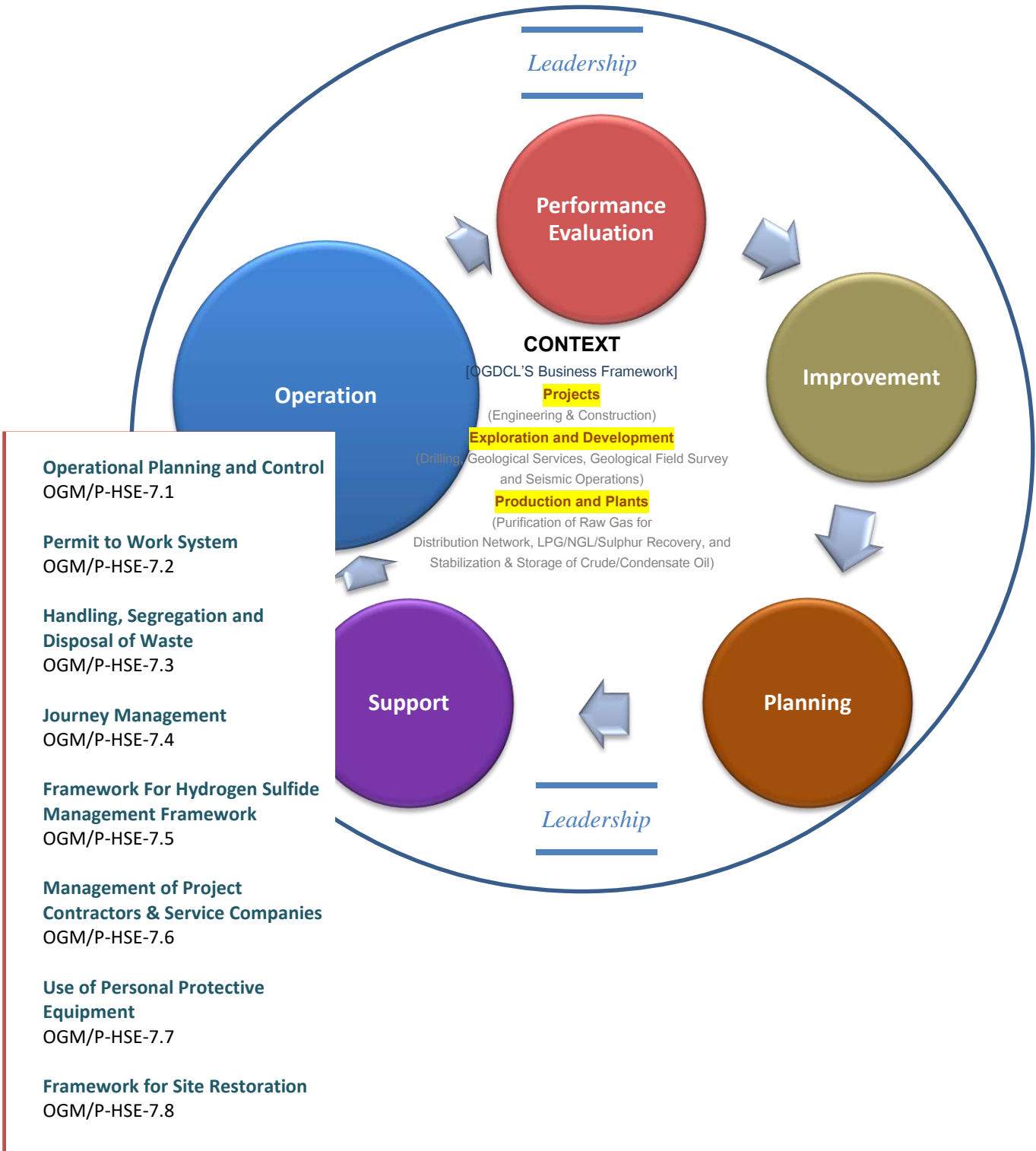
**Associated Documents**

- 📄 Operational Controls – Plans; Procedures
- 📄 Operational Controls – Work Instructions
- 📄 Operational Controls –Maintenance Programs
- 📄 Operational Controls – Calibration Plans
- 📄 Cold Work Permit
- 📄 Sour/Hot Work Permit
- 📄 Electrical Work Permit
- 📄 Confined Space/Vessel Entry Work Permit
- 📄 Radiography Work Permit
- 📄 Excavation & Civil Work Permit
- 📄 Working at Height Permit
- 📄 Vehicle Entry Permit
- 📄 Power Isolation Slip
- 📄 Energy Isolation Log Sheet
- 📄 Safety System Defeat Certificate
- 📄 Onsite Waste Management Plan
- 📄 Section Waste Register
- 📄 Waste Consignment Note
- 📄 Waste Disposal Log
- 📄 Journey Management Plan
- 📄 Vehicle Inspection Checklist
- 📄 PPE Need Assessment Matrix
- 📄 Well(site) Handing Over Taking Over Checklist
- 📄 QC Checklist (Treatment & Restoration)
- 📄 Production site/ Well(site) Plugging and Abandonment (P&A) Checklist

**Applicable Documents**

- 📄 OGDCL Safety Handbook For Oil & Gas Exploration Leases (Seismic Surveys)
- 📄 OGDCL Safety Handbook For Oil & Gas Well Drilling and Servicing Operations
- 📄 OGDCL Safety Handbook For Oil & Gas Development and Production Leases
- 📄 HSE Pledge Handbook For Contractors & Service Companies







## 7.1 Operational Planning and Control

OGM/P-HSE-7.1(08) Revision Number 8

Original Issue: June 25, 2007  
This Issue: March 14, 2022

**Updated By:**

**Muhammad Sameem Hussain Qaiser**  
Senior HSEQ Officer, OGDCL

**Reviewed By:**

**Muhammad Mubashir Abbas**  
Manager HSEQ, OGDCL

**Checked By:**

**Mahmood-ul-Hassan Khan**  
General Manager HSEQ, OGDCL

**Approved By:**

**Syed Khalid Siraj Subhani**  
Managing Director, OGDCL

### Change/ Revision Log

#	Description of Change
1.	Added: Shutdown Levels to be used after tailoring/ custom-designing as per requirements at each gas processing plant.

### Associated Documents Approval & Issue

Related Document/ Record	Initiated by	Reviewed by	Approved by
Operational Control Procedures	Concerned Section IC	Location IC	Area Manager/ Concerned GM
Operational Control Work Instructions	Concerned Section Rep.	Concerned Section IC	Location IC
Operational Control Maintenance Plans	Concerned Section IC	Location IC	Area Manager/ Concerned GM
Operational Control Calibration Plans	Concerned Section Rep.	Concerned Section IC	Location IC

- ☐ Consistent with a life cycle perspective, the management shall:
  - ⊕ apply impact control hierarchy with the aid of any tool like Layers Of Protection Analysis (LOPA) for assessing the “adequacy of protection layers”. The methodology helps to identify safeguards that meet the Independent Protection Layer (IPL) criteria,
  - ⊕ establish controls as appropriate to ensure that its HSE requirement(s) are addressed in the design, processes, production, and dispatch of the products, considering each stage of its life cycle;
  - ⊕ determine its HSE requirement(s) for the procurement of material, equipment and services as appropriate;
  - ⊕ communicate its relevant HSE requirement(s) to external providers, including contractors and service companies;
  - ⊕ consider the need to provide information about potential significant HSE impacts associated with the transportation or dispatch, use, end-of-life treatment and final disposal of materials, equipment, and products.

☐ When processes are outsourced, or when services are supplied by (an) external provider(s), the management's ability to exert control or influence may vary from direct control to limited or no influence. When determining the type and extent of operational controls related to external providers, including contractors and service companies, the management shall consider one or more factors such as vulnerabilities, threats & opportunities and associated impacts related to the outsourced process or services and the compliance obligations. Subsequently the operational controls can be agreed upon during the signing of contract / agreement.

- ☐ The documented information to the extent necessary to have confidence that the processes have been carried out as planned shall be maintained as follows:-

Coverage & Scope →	Handling, Segregation and Disposal of Waste	Permit to Work System	Emergency Preparedness & Response	Specific SOPs (Pre-Startup, Shutdown, etc.)	*Specific Work Instructions	Specific Maintenance Programs (In-house)	Specific Calibration Plans (External)
↓ Job/ Activity							

**Main Functions**

Specific Seismic Job, Drilling Activity, Production Activity, Process/ Sub-Process	☑	☑	☑	☑	☑	☑	☑
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**Corollary Functions/ Activities**

Chemical (Material) Handling	☑	☑	☑	☑	☑	--	--
Excavation Work	☑	☑	☑	☑	☑	--	--
Working in Confined Space	☑	☑	☑	☑	☑	--	--
Work At Height	☑	☑	☑	☑	☑	--	--
Explosives Handling	☑	☑	☑	☑	☑	--	--
Controls for Mechanical Integrity	☑	☑	☑	☑	☑	☑	☑
Noise/ Vibration Controls	☑	☑	☑	☑	☑	☑	☑
Lifting and Hoisting Controls	☑	☑	☑	☑	☑	☑	☑
Electrical & Instrumentation Controls	☑	☑	☑	☑	☑	☑	☑
Power Management	☑	☑	☑	☑	☑	☑	☑
Water Management	☑	☑	☑	☑	☑	☑	--
Energy (Emissions/Flare/Vent) Mgt.	☑	☑	☑	☑	☑	☑	☑
Effluents Management	☑	☑	☑	☑	☑	☑	--
Journey Management	☑	☑	☑	☑	☑	--	--

- ☐ **SOPs** shall be established by all Sections/ Departments where their absence could lead to deviation from HSE policy, objectives, or targets; or could cause significant HSE impact.
- ☐ **Work Instructions** shall be established by all Sections/ Departments to stipulate the operational criteria for carrying out operations having significant HSE aspects and impacts.
- ☐ **Maintenance Programs** shall be developed by concerned Sections/ Departments and implemented for equipment, machines and systems to ensure smooth, safe, energy-efficient and reliable operations.

- ☐ **Calibration Plans** shall be developed by concerned Sections/ Departments and implemented for equipment, machines and systems associated with significant HSE aspects and impacts (& emergencies).
- ☐ It is noteworthy to mention that every person engaged in the operations and every other person who may be exposed to the risk of injury, poisoning or disease arising from the operations should be provided with appropriate **Personal Protective Equipment (PPE)**; No person should be allowed to work in a field boundary unless he is wearing a suitable coverall, safety helmet, and safety shoes which should be provided by the Location Management.
- ☐ **Shutdown Levels:** Following shutdown levels may be used after tailoring/ custom-designing as per requirements at each gas processing plant:

Shutdown Levels	Scope	Initiation	Isolation	Blow down
<b>Level 1</b> (F&G Failure)	Total Plant Shutdown with automatic depressurization	<ul style="list-style-type: none"> <li>- Manually (from the Control Room),</li> <li>- Automatically from the F&amp;G (confirmed fire) or</li> <li>- Automatically on SD/F&amp;G system power failure.</li> </ul>	Total Plant Shutdown will include shutdown of all wellhead valves and isolation of the plant from all incoming and outgoing pipelines by closure of all shutdown valves.	This level of shutdown will result in an automatic plant blow down. If it is necessary, blow down of the Chiller Package, Propane Storage Vessel and Dehydration Inlet Coolers (shell side) will be activated manually from the MCR Common Services Panel.
<b>Level 2</b> (Process Failure)	Total Plant Shutdown without automatic depressurization	<ul style="list-style-type: none"> <li>- Manually (from the Control Room),</li> <li>- Automatically from process shutdowns (Instrument air failure, LP Flare KO Drum high liquid level and LP Flare KO Drum high pressure),</li> <li>- Automatically from the F&amp;G (confirmed gas detection) or</li> <li>- Automatically from total main power generation failure.</li> </ul>	Total Plant shutdown to include shutdown of all wellhead valves and isolation of the plant from all incoming and outgoing pipelines by closure of all shutdown valves without depressurization of gaseous streams.	Shutdown is Blow down, if required, will be manually initiated from the MCR Common Services Panel.
<b>Level 3</b> (Train Failure)	Single Train Shutdown without automatic depressurization	<ul style="list-style-type: none"> <li>- Manually for a train, from the Control Room,</li> <li>- Via local pushbuttons located within the process train or</li> <li>- Automatically from process shutdowns.</li> </ul>	Shutdown to include isolation of the relevant train from incoming and outgoing pipelines without depressurization of gaseous streams.	Blow down, if required, will be manually initiated from the Control Room's common services panel.
<b>Level 4</b> (Equipment/ Package Failure)	Process Shutdown without automatic depressurization	<ul style="list-style-type: none"> <li>- Automatically from process shutdowns or</li> <li>- Automatically by machine monitoring shutdowns.</li> </ul>	In the event of a process shutdown, the remainder of the appropriate unit/ package will continue to operate and will only shutdown under cascade of the affected trip actions.	Blow down not required.

## 7.2 Permit to Work (PTW) System

OGM/P-HSE-7.2(08) Revision Number 8

Original Issue: June 25, 2007  
This Issue: March 14, 2022

**Updated By:**

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**Reviewed By:**

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Manager HSEQ, OGDCL

**Checked By:**

**Mahmood-ul-Hassan Khan**  
General Manager HSEQ, OGDCL

**Approved By:**

**Syed Khalid Siraj Subhani**  
Managing Director, OGDCL

### Change/ Revision Log

#	Description of Change
1.	Amended: The authorization of various types of permits to be decided after evaluation by the concerned Dept. Head / Location IC and Location HSE Representative stating as follows: "Mr. _____ was evaluated for the PTW Authority as Performing / Issuing Authority for the Work Permits / Certificates. Based on the evaluation, he / she is Recommended for the _____, _____, _____, _____, & _____ and Not-Recommended for the _____, _____, & _____ as PTW Authority."
2.	Amended: HSE Representative shall not sign any work permit: however, in case he is required to sign a specific permit under unusual circumstances, it would only be an act of endorsement that Permit Issuing Authority and Permit Receiving Authority both have taken all applicable safety measures against the Checklist prior to execution of safety critical job.
3.	Added: Any of Tool Box Talks conducted must be supported by the signatures of participants on backside of the Permit
4.	Added: Safety System Defeat Certificate
5.	Added: All entities/ columns of PTW shall be filled. Fields which are not required shall be crossed out and nothing shall be left unfilled. Cutting and over writing in PTW shall render it invalid and a new form shall be filled. Alteration done in any entity/ column of the PTW, after issuance of the permit / certificates, specifically in job description will make the permit/ certificate invalid
6.	Added: PTW Exemption
7.	Amended: Permits revalidation

### Associated Documents Approval & Issue

Related Document/ Record	Initiated by	Reviewed by	Checked/ Verified / Approved by
OGF – HSE – 019 Cold Work Permit	Issuing Authority	Receiving Authority, Job Performer	Receiving Authority
OGF – HSE – 020 Hot / Sour Jobs Work Permit	Issuing Authority	Receiving Authority, HSE, Job Performer	Receiving Authority
OGF – HSE – 021 Electrical Work Permit	Issuing Authority	Receiving Authority, Job Performer	Receiving Authority
OGF – HSE – 022 Confined Space / Vessel Entry Work Permit	Issuing Authority	Receiving Authority, HSE, Job Performer	Receiving Authority
OGF – HSE – 023 Radiography Work Permit	Issuing Authority	Receiving Authority, Job Performer	Receiving Authority
OGF – HSE – 024 Excavation & Civil works Work Permit	Issuing Authority	Receiving Authority, Job Performer	Receiving Authority
OGF – HSE – 025 Work at Height Work Permit	Issuing Authority	Receiving Authority, HSE, Job Performer	Receiving Authority
OGF – HSE – 026 Vehicle Entry Permit	Section / Department Rep.	IC Shift	Location IC
OGF – HSE – 027 Lock-out Tag-out (LOTO) Record	Electrical	Electrical	Electrical
OGF – HSE – 028 Power Isolation Slip	IC Shift	IC Shift	IC Shift
OGF – HSE – 029 Safety System Defeat Certificate	Receiving Authority	Isolating Authority	Area Authority

**IMPORTANT:-** IT IS EVERYBODY'S RESPONSIBILITY TO ENSURE THAT THE OGDCL'S HSE MANAGEMENT SYSTEM IS IN PLACE.

**7.2.1 General**

- ☐ PTW System shall provide a system for the control of potentially hazardous jobs in order to ensure that various types of maintenance and inspection work are carried out in a safe manner and without impacts to the personnel and equipment.
  - ☐ PTW System shall ensure proper understanding of the details of the job to be performed, vulnerabilities involved and various precautionary measures to be taken, before commencing the job, during the execution of the job and on the completion of the job.
- ☐ PTW System shall be applicable to all types of maintenance, repairs, modifications, construction, project activities, assembling and dismantling carried out by the employees of the company as well as by any contractors and service companies.

**7.2.2 Types of Work Permits/ Certificates**

- ☐ Following types of work permits/ certificates shall generally be in use;

Permit	Background Colour
Cold Work Permit	Blue Colour
Sour/Hot Work permit	Red Colour
Electrical Work Permit	Green Colour
Confined Space/Vessel Entry Work Permit	Grey Colour
Radiography Work Permit	Yellow Colour
Excavation & Civil Work Permit	Brown Colour
Working at Height Permit	Pink Colour
Vehicle Entry Permit	Purple Colour
Power Isolation Slip	Aqua Colour
Safety System Defeat Certificate	Light Yellow Colour

**7.2.3 Role of Permit Issuing Authority & Receiving Authority**

- ☐ Concerned Dept. Head / Location IC in consultation with Location HSE Representative shall decide the nominees suitable for issuing and receiving work permits on the basis of training, skills, roles/ responsibilities and a comprehensive evaluation of individuals' competency and understanding of workplace. The authorization of various types of permits to be decided after evaluation by the concerned Dept. Head / Location IC and Location HSE Representative stating as follows:

"Mr. \_\_\_\_\_ was evaluated for the **PTW Authority** as Performing / Issuing Authority for the Work Permits / Certificates. Based on the evaluation, he / she is **Recommended** for the \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, & \_\_\_\_\_ and **Not-Recommended** for the \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_ & \_\_\_\_\_ as PTW Authority."

- ☐ A consolidated "List of Authorized Permit Issuing Authorities and Receiving Authorities" for various types of permits & certificates (duly signed by Location IC) shall be maintained by Location HSE Section in following format:

**List of Authorized Permit Issuing Authorities and Receiving Authorities**

PERMIT ISSUING AUTHORITIES						
#	Date	Name, Designation	Section	Authorized For		
				Area	Permit Type	Isolation

PERMIT RECEIVING AUTHORITIES						
#	Date	Name, Designation	Section	Authorized For		
				Area	Permit Type	Isolation

- ☐ Before issuing the work permit, **Issuing Authority** will:
  - ⊕ Ensures that the scope of work is clearly defined.



- ⊕ Determine the type(s) of permit(s) to be issued relevant to task.
- ⊕ Ensure fulfillment of mandatory requirement of job hazard analysis.
- ⊕ Physically inspect or delegate any competent person (in situation where his present responsibility does not allow leaving office) for inspection of site along with permit receiver to evaluate the physical conditions and control measures.
- ⊕ Discuss mutually with the Receiving Authority on vulnerabilities involved in carrying out proposed activity and other activities in parallel in the area / close vicinity.
- ⊕ Ensure that the necessary tags, lockouts, isolation procedure are fully implemented as required.
- ☐ The **Receiving Authority** will:
  - ⊕ Carryout impact assessment for the identification of impacts associated in proposed activity and that control measures are adequately implemented and recorded.
  - ⊕ Ensure that the trained and experienced personnel perform the task.
  - ⊕ Communicate the existing vulnerabilities involved in proposed activity to all concerned staff in safe accomplishment of activity.
  - ⊕ Ensure that all workers for this particular job understand the safe procedure for carrying out the job.
  - ⊕ Ensure that the work site is left in safe condition upon completion of work. Carryout all housekeeping prior to handing over the site / permit closure.
- ☐ In case the activity is performed by the Contractor or Service Company, then he will:
  - ⊕ Ensure that his representative at Location understands the PTW requirements.
  - ⊕ Ensure that formal job hazard analysis has been completed with assistance from OGDCL representative.
  - ⊕ Provide appropriate training to his staff on safe execution of work and that mandatory PPE are fully enforced at worksite.
  - ⊕ Act as Issuing Authority where long-term construction/ project activities are planned.
- ☐ **HSE Representative shall not sign any work permit: however, in case he is required to sign a specific permit under unusual circumstances, it would only be an act of endorsement that Permit Issuing Authority and Permit Receiving Authority both have taken all applicable safety measures against the Checklist prior to execution of safety critical job.**
- ☐ No maintenance, repairs, modifications, excavation, construction, radiography or confined space entry shall be carried out without a valid work permit by the employees or by any contractors and service companies.
- ☐ All entities / columns of PTW shall be filled. Fields which are not required shall be crossed out and nothing shall be left unfilled.
- ☐ Cutting and over writing in PTW shall render it invalid and a new form shall be filled. Alteration done in any entity / column of the PTW, after issuance of the permit / certificates, specifically in job description will make the permit/ certificate invalid.
- ☐ If during the course of its work, a confined space is encountered that has not been previously identified, the space must be immediately brought to the attention of the HSE representative, and entry to be delayed until HSE representative has examined the space.
- ☐ The record of all permits (hard copy) along with supporting documentation shall be maintained for 02 years
- ☐ Where applicable, locks and tags (standardized) shall be used to control the start-up of equipment that is being serviced or maintained. At no time any locks or tags to be overridden that are encountered during the performance of work.

### 7.2.4 Energy Isolation

- ☐ For any work involving the need to prior-isolate plant and equipment to protect against hazards of the system or process, the positive isolation shall be preferred. This is used for all energy isolations (electrical, mechanical, process, pneumatic, hydraulic, chemical and thermal).
- ☐ Any isolation of energy systems; mechanical, electrical, process, hydraulic and others, shall not be allowed to proceed unless:
  - ⊕ the method of isolation and discharge of stored energy are agreed and executed by an authorized person(s) in compliance with the applicable Lock-out Tag-out (LOTO) standards,
  - ⊕ any stored energy is discharged,
  - ⊕ a system of locks and tags is utilized at isolation points,
  - ⊕ a test is conducted to ensure the isolation is effective, and
  - ⊕ isolation effectiveness is periodically monitored.
- ☐ Location management in conjunction with Sectional ICs shall be responsible for implementing energy isolation system by ensuring following:
  - ⊕ that extent of energy isolation shall be identified in the light of best practices jointly by Issuing and Performing Authorities.
  - ⊕ that all energy isolation activity is effectively communicated to affected personnel and proper controls are maintained on energy isolations devices.
  - ⊕ that all relevant personnel are trained on energy isolation.
- ☐ Electrical isolation, lockout, and use of hold tag procedures shall be used before and during any activity requiring personnel to work on or near de-energized circuit parts or where there is danger of injury due to an unexpected startup of equipment (e.g., a motor-driven pump). The hierarchy of controls & types of lock out/ tag out devices is given below:

Device type	Details
<b>Physical Restraint Devices</b>	-Used in conjunction with clasps, locks and tags. -Used to protect personnel and machinery in conjunction with tags.
<b>Isolation Clasp</b>	-Used in conjunction with multiple locks and tags. -Each lock on a clasp represents an individual associated with the task.
<b>Isolation Padlocks</b>	-In energy isolation, the use of a padlock or similar device to hold an energy isolating device in the safe position and prevent the energizing of a machine or equipment. Where locks cannot be used, a prominent warning device, such as a tag and a means of attachment, is fastened to an energy isolating device to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

- ☐ Other energy sources such as pressurized gas, process fluids, and hydraulic, pneumatic, thermal, chemical, and mechanical systems shall be isolated by valves, blinding, double block & bleed, or disconnecting.

### 7.2.5 PTW Exemption:

- ☐ PTW shall not be applicable to routine & formally authorized minor jobs, and non-process areas / permit-free areas which may include:

Routine & Formally Authorized Minor Jobs

- Monitoring of plant parameters and visual inspection of any equipment
- Machine oil / grease make-up by operator
- Fused bulb replacement on alarm panel
- Plugging of electrical apparatus
- Painting, tagging and marking of lines / equipment etc.
- Small civil / masonry work without the involvement of excavation such as flooring, installation of safety boards, levelling of open plot, etc.

Non-Process Areas / Permit-Free Areas

- Vehicle maintenance workshop
- Maintenance workshop

- Warehouses
- Chemical / lube storage areas
- Waste yards
- Access roads and
- Roads in the camps area
- ☐ Permit Free Areas shall be reviewed and PTW Exemption List be maintained.
- ☐ However, PTW for the following jobs (even including above mentioned areas) shall continue to be controlled by the designated "Issuing Authority" and "Area Authority":
  - Hot Work (Welding, grinding, cutting),
  - Excavation jobs beyond 0.5 meter,
  - Electrical and mechanical work on confined spaces, live circuits, & HVAC system, and where electrical and / or mechanical isolation is required,
  - Work on smoke detectors and fire water main,
  - Work at height, and
  - Heavy lifting operations
- ☐ PTW Exemption List shall consist of low risk routine activities; however the exempted jobs must be assessed, risk-ranked and controls put in place like written safety instructions / precautions before nominating them as candidate.
- ☐ List of exempted lists shall be reviewed on annual basis in the HSE MRC meetings.

**7.2.6 Rules for Permit To Work (PTW) System:**

**a) Site Inspection:** The Issuing Authority shall ensure that site is visited by him or suitable delegate along with the Receiving Authority to determine the conditions and identifying vulnerabilities involved in proposed activity. The physical condition of equipment e.g., welding machine, tools etc. shall also be checked by the permit issuer or his delegate for appropriateness. If condition of surrounding work area are satisfactory and vulnerabilities are evaluated and controlled then the permit issuer shall issue the permit and if surrounding conditions of work area are not satisfactory for the work to proceed the work permit will not be issued until certain mitigation measures are taken.

**b) Gas Test (LEL, O2, CO & H2S):** Gas test, if required as per the condition of the applicable work permit shall be conducted by the Issuing Authority / his delegate in presence of Receiving Authority prior to issuing the Work Permit, for likely presence of flammable / toxic gases / oxygen level at work site. **Permit will be issued only if the results of gas test are satisfactory.** Periodic testing during job execution is mandatory on frequency of 2 hours by Issuing Authority/ his delegate. However the duration may be reduced to a suitable frequency say 1 hr. by the Issuing Authority keeping in view the criticality of job. The frequency of gas testing for such activities must be specified while issuing permit and recorded on permit document. Calibration of gas testing equipment to be ensured prior to use by trained staff.

**c) Pre Job Safety Meeting For Hazard Awareness / Communication:** It is the responsibility of Issuing Authority to brief the Receiving Authority the specific conditions existing in the work area, related vulnerabilities, special precaution required for the job, PPE requirement etc. The Receiving Authority will communicate the same to all workers involved in the job by conducting a separate briefing / toolbox talk prior to job execution. **Any of Tool Box Talks conducted must be supported by the signatures of participants on backside of the Permit.**

**d) Permit Distribution and Display:** The Receiving Authority is responsible for ensuring that the display of permit at prominent location at the worksite (and in the Motor Control Center (MCC) in case of electrical isolation), and will remain there until completion of job. In case of extension / closure the receiver

brings the copy of permit to issuer for extension / closure as per prevailing condition mentioned in this procedure.

- e) **Work Supervision:** Receiving Authority is responsible for ensuring that the workers comply with work permit system requirements during the entire activity. The Receiving Authority or his representative must remain at worksite till completion of job in all activities performed by company staff. In contractor executed activities, contractor's or service company's supervisor must remain at site to ensure full compliance of permit system.
- f) **Work Monitoring:** Concerned Dept. Head / Location IC, Issuing Authority, Location HSE Representative or any delegate (defined in the permit) may frequently visit the work area to monitor the conditions. For critical jobs visit frequency may be fixed to monitor the conditions or any suitable person may be deputed to remain at site all time till completion of job.
- g) **Simultaneous Activities:** Simultaneous activities are required to be identified at the time of issuing work permit, recorded in permit checklist and the same to be communicated to Receiving Authority for his information and necessary precautions during work execution. The Issuing Authority may designate a competent person to ensure that the interfaces between working parties are properly managed as per authorization on work permits.
- h) **Work Permit Validity:** Work permit is valid only for the time specified on the permit for which it is issued. Incomplete jobs within specified time period the permit requires revalidation / reissuance by the Issuing Authority. **The maximum validity of a permit is One Shift, after which the permit is revalidated upon detailed inspection / checks.** A permit is revalidated only once for another shift, after which the permit requires reissuance through reassessment / check for work area conditions. Permits shall also be revalidated if any of the following is observed during work:
  - ⊕ Change in scope of work,
  - ⊕ Significant change in the workgroup,
  - ⊕ New hazard become apparent which may have significant impact and
  - ⊕ Permit suspended due to an emergency or a lapse of two hours from the time Area Authority signed the permit.

In case there is a change in any of the PTW authorities, then all signatories have to endorse the permit. It will be the responsibility of the authority that has been replaced to get the signatures.

**Blanket Work Permit:** For any **Cold Work** and **Line Break Job** which is likely to continue more than 2 work shifts where project activities of similar nature are planned during ATA jobs and instances allowing work on a grouping of closely interrelated or similar pieces of equipment (e.g., groups of exchangers, pumps, vessels and connecting piping, etc.), blanket safe work permitting of crafts can be done with prior agreement and a Blanket Permit may be issued by concerned Dept. Head / Location IC after carrying out assessment / checks and other requirements of PTW system. The validity of permit is up to a maximum of 7 days and a new permit is to be issued afterwards. Concerned Dept. Head / Location IC may delegate responsibilities for the monitoring during execution of job to any suitable nominee in order validate the work permit requirements. The responsibility for conducting safety briefing, impact assessments lies with the Receiving Authority and that is timely informed to Issuing Authority/ his delegate for his information and record. Concerned Dept. Head/ Location IC may be approached for advice on critical jobs requiring decision making and approvals.

- i) **Work Delay / Stoppage:** If the work is delayed or stopped for over 2 hours for any reason other than safety consideration, the permit receiver must return the permit to Issuing Authority. Before restarting the job the Issuing Authority shall recheck the condition contained in initial permit and validate the initial permit.



- j) **Work Suspension:** The work in progress under the PTW System may be stopped / suspended by the Issuing Authority / Concerned Dept. Head / Location IC/ Location HSE Representative under following circumstances but not limited to:
- ⊕ Upon observance of any major HSE Non-conformance
  - ⊕ In event of Emergency
  - ⊕ A lapse of two hours from the time Area Authority signed the permit
  - ⊕ For operational reasons to prevent interaction with another activity
  - ⊕ Awaiting receipt of materials etc.
- k) **Handing Back:** Once the job is completed and the area is cleared, the work permit requires handing back. The Receiving Authority will return the hard copy of permit to Issuing Authority after signing it and providing status of job i.e. Complete / Incomplete. The Issuing Authority will then initiate the removal of isolation (if any), verify the work site condition returned to normal and close the permit. The Issuing Authority may carry out the test run of equipment prior to closing the work permit.
- The work permit copies will then be exchanged i.e. the card copy will go to Issuing Authority and top page copy to be handed over to Receiving Authority receiver for record. The Issuing Authority will ensure on day to day basis that the relevant record of permits is maintained.
- l) **Permit to Work Documentation:** Permit to work documentation shall be subjected to a documentation control process including:
- ⊕ Unique reference numbers with traceability within each Dept. / Location
  - ⊕ Version control
  - ⊕ Work Permit Log
  - ⊕ Controlled storage of closed out permits and associated documentation
- The open & closed permits to be properly segregated in Control Room with record maintained in Work Permit Log on daily basis. The closed permits and supporting certificates / documentation are then maintained in proper file folders. Each Dept. / Location will define the retention period for permit records based on the frequency of issuance.
- Note: *Maintenance Work Order (MWO) is raised by operations department for corrective/ breakdown maintenance. The MWO unique reference number may be reflected in permit for traceability.*
- m) **Change of Circumstances/ Scope:** When circumstances/ scope is changed, work is stopped. Following are some of the conditions:
- ⊕ *Change of Work Scope/ Circumstances:* Where the work scope or circumstances change e.g. boundaries of intended job exceeding agreed scope etc., work shall immediately cease and the situation referred back to the Issuing Authority for review and advice. A revised JHA may be carried out to evaluate the change and its impacts.
  - ⊕ *Emergency Situation:* In emergency situation, permit shall be suspended until the facility has returned to its normal status. The permit shall be revalidated or reissued prior to work commencement.
- n) **Precautions for Confined Space Entry:** A "Confined Space Entry Permit" shall be issued for personnel to enter into the confined space after the following precautions are satisfied:
- The atmosphere inside the confined space has a normal oxygen content of 20.8% and it is free from toxic vapours and gases.
- The personnel shall not enter the confined space if:
- Oxygen content is less than 19.5%.
  - Oxygen content is greater than 23.5%.
  - Presence of flammable vapours or gases at concentration above the 10% LFL (Lower flammable limit).
  - Presence of toxic vapours and gases above the occupational exposure standard for a 10 minute exposure.
- Personnel may enter the confined space wearing suitable and approved respiratory equipment if the presence of toxic vapours and gases below the Lower Threshold Limit Value (LTLV).



- o) **Safety System Defeat Certificate:** Safety critical devices are those which are in place to prevent or mitigate the major process accidents. Safety System Critical Defeat Certificate shall be required whenever a safety critical device is to be inhibited and cross referenced in PTW.
  - p) **Training and Competence:** Personnel involved in issuing & receiving work permit are formally trained and competent on work permit system. The issuer and receiver should be aware of the following, but not limited to work permit conditions e.g. validity, requirement specific to type of permit, precautions measures; responsibilities of issuing and receiving authority; documentation requirement; and emergency procedures.
-





<b>OIL &amp; GAS DEVELOPMENT COMPANY LIMITED</b>						
Ref. Section 07 (Operation) of OGDCL's Integrated HSE System Manual	OGF - HSE - 019(01)					
<b>COLD WORK PERMIT</b>						
WO No.....						
WP S.No.....						
<i>Record TBT proceedings on back of the card copy</i>						
<b>INITIATION</b>						
Permit Begins _____	Hours Date _____					
Permit Expires _____	Hours Date _____					
Extended upto _____	Hours Date _____					
Extended by _____						
This permit authorizes Mr. _____						
of _____ Section, to perform the following work						
At _____						
<b>NOTE: Tick Respective one Job Type</b>						
<input type="checkbox"/> Corrective Maintenance	<input type="checkbox"/> Non Process Activity	<input type="checkbox"/> HSE Function				
<input type="checkbox"/> Emergency Shut Down	<input type="checkbox"/> Project/ New Job	<input type="checkbox"/> Preventive Maintenance				
<input type="checkbox"/> Routine Process Activity	<input type="checkbox"/> Modification	<input type="checkbox"/> Productive Analysis				
<input type="checkbox"/> Annual Turn Around						
<b>SAFETY CHECKLIST</b>						
Tick 'Yes' or 'No' or 'NA' as applicable	Yes	No	NA			
1. Has the Tool Box Talk been conducted?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
2. Is the electrical power of equipment disconnected?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
3. Have all valves been closed and tagged?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
4. Is equipment depressurized / purged and flashed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
5. Is equipment under pressure and hot?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
6. Is area condition sufficiently open to allow for adequate ventilation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
7. Is the breaker locked and tagged?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
8. Is scaffolding arranged for safe execution of job? (Attach checklist)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
9. Is residual risk (s) in this job acceptable?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
10. Are the barricading and warning signs in place?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
11. Is JHA required and attached to complete this job?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
12. Who will monitor the operating conditions? _____						
13. Fire Fighting Arrangements: _____						
14. Personal Protective Equipment requirements						
<input type="checkbox"/> Helmet	<input type="checkbox"/> Goggles	<input type="checkbox"/> Apron				
<input type="checkbox"/> Coverall	<input type="checkbox"/> Gas Mask/ Respirator	<input type="checkbox"/> Ear Muffs/Plugs				
<input type="checkbox"/> Safety Shoes/Gum Boots	<input type="checkbox"/> Dust Mask	<input type="checkbox"/> Full Body Harness/ Safety Belt				
<input type="checkbox"/> Rubber/Cotton Gloves	<input type="checkbox"/> Face Shield	<input type="checkbox"/> SCBA				
15. Special Instructions: _____						
<b>Authorization</b> →	<b>Permit Issue Authority</b>	<b>Relevant Section</b>	<b>Permit Receiver</b>			
_____	_____	_____	_____			
<b>JOB COMPLETION</b>						
This job has been completed and area is cleared for any unwanted material / housekeeping is good enough.						
Date/Time _____						
However the summary of "incidents" encountered during the job is given below:-						
	Asset Damage	Environment Damage	Fatal	Non-Fatal	First Aid	Near Hits
(Tick/Cross)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Description:						
Signed by Supervisor/Performing Technician	Checked by Area Operator	Verified by Receiving Authority				
<b>ALL WORK PERMIT AREAS ARE NON-SMOKING AREAS</b>						



**OIL & GAS DEVELOPMENT COMPANY LIMITED**  
Ref. Section 07 (Operation) of OGDCL's Integrated HSE System Manual

OGF – HSE – 020(01)

## SOUR/HOT WORK PERMIT

*Record TBT proceedings on back of the card copy*

WO No.....  
WP S.No.....

**INITIATION**

Permit Begins \_\_\_\_\_ Hours Date \_\_\_\_\_  
 Permit Expires \_\_\_\_\_ Hours Date \_\_\_\_\_  
 Extended upto \_\_\_\_\_ Hours Date \_\_\_\_\_  
 Extended by \_\_\_\_\_

This permit authorizes Mr. \_\_\_\_\_  
 of \_\_\_\_\_ Section, to perform the following work  
 At \_\_\_\_\_

**NOTE: Tick Respective one 'Job Type'**

<input type="checkbox"/> Corrective Maintenance	<input type="checkbox"/> Non Process Activity	<input type="checkbox"/> HSE Function
<input type="checkbox"/> Emergency Shut Down	<input type="checkbox"/> Project/ New Job	<input type="checkbox"/> Preventive Maintenance
<input type="checkbox"/> Routine Process Activity	<input type="checkbox"/> Modification	<input type="checkbox"/> Productive Analysis
		<input type="checkbox"/> Annual Turn Around

**PERIODIC INSPECTION (To be carried out before and during the work)**

MEASUREMENT BY \_\_\_\_\_ DATE \_\_\_\_\_

TEST INTERVAL	TIME	RESULT	TIME	RESULT	TIME	RESULT	TIME	RESULT	TIME	RESULT
%LEL										
%OXYGEN										
H <sub>2</sub> S(ppm)										

**SAFETY CHECKLIST**

Tick 'Yes' or 'No' or 'NA' as applicable

	Yes	No	NA
1. Has the Tool Box Talk been conducted?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Is area provided with suitable access and egress?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Is area free of flammable / combustible materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Is the Continuous gas detection present?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Is floor dry where electrical arc welding is used?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Have operation maintenance and safety engineers conducted prior joint inspection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Is scaffolding arranged for safe execution of job? (Attach checklists)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Are barricading and warning signs displayed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Is the equipment disconnected or completely isolated by blinding?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Is the electric power of the equipment disconnected?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Are electrical switches tagged?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Welding / burning equipment to be checked before use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Is the breaker blocked or tagged?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Is the equipment depressurized and flushed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Is adequate ventilation in and around the equipment made?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Is wind direction suitable for hot work?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Is adjacent area safe for spark?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Is fire extinguisher / fire blanket placed nearby?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Is JHA attached with the permit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Name of the fireman / Fire Watch assigned: _____			
21. Equipment to be use in hot work: _____			
22. Who will monitor the operating condition: _____			
23. Fire Fighting arrangements: _____			
24. Personal Protective Equipment requirement			
<input type="checkbox"/> Helmet <input type="checkbox"/> Coverall <input type="checkbox"/> Safety Shoes/Gum Boots <input type="checkbox"/> Rubber/Cotton Gloves	<input type="checkbox"/> Goggles <input type="checkbox"/> Gas Mask/ Respirator <input type="checkbox"/> Dust Mask <input type="checkbox"/> Face Shield	<input type="checkbox"/> Apron <input type="checkbox"/> Ear Muffs/Plugs <input type="checkbox"/> Full Body Harness/ Safety Belt <input type="checkbox"/> SCBA	
13. Special Instructions: _____			

Authorization → Permit Issue Authority    Relevant Section    Permit Receiver

**JOB COMPLETION**

This job has been completed and area is cleared for any unwanted material / housekeeping is good enough.  
 Date/Time \_\_\_\_\_

However the summary of "incidents" encountered during the job is given below:-

	Asset Damage	Environment Damage	Fatal	Non-Fatal	First Aid	Near Hits
(Tick/Cross)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Description:						

\_\_\_\_\_  
Signed by  
Supervisor/Performing Technician

\_\_\_\_\_  
Checked by  
Area Operator

\_\_\_\_\_  
Verified by  
Receiving Authority

**ALL WORK PERMIT AREAS ARE NON-SMOKING AREAS**







**OIL & GAS DEVELOPMENT COMPANY LIMITED**

Ref. Section 07 (Operation) of OGDCL's Integrated HSE System Manual

OGF – HSE – 022(01)

**CONFINED SPACE/ VESSEL ENTRY PERMIT**

WO No.....

WP S.No.....

Record TBT proceedings on back of the card copy

**INITIATION**

Permit Begins \_\_\_\_\_ Hours Date \_\_\_\_\_  
 Permit Expires \_\_\_\_\_ Hours Date \_\_\_\_\_  
 Extended upto \_\_\_\_\_ Hours Date \_\_\_\_\_  
 Extended by \_\_\_\_\_

This permit authorizes Mr. \_\_\_\_\_  
 of \_\_\_\_\_ section, to perform the following work  
 \_\_\_\_\_  
 At \_\_\_\_\_

NOTE: Tick Respective one 'Job Type'

- |   |   |   |
|---|---|---|
| <input type="checkbox"/> Corrective Maintenance   | <input type="checkbox"/> Non Process Activity | <input type="checkbox"/> HSE Function           |
| <input type="checkbox"/> Emergency Shut Down      | <input type="checkbox"/> Project/ New Job     | <input type="checkbox"/> Preventive Maintenance |
| <input type="checkbox"/> Routine Process Activity | <input type="checkbox"/> Modification         | <input type="checkbox"/> Productive Analysis    |
|   |   | <input type="checkbox"/> Annual Turn Around     |

**PERIODIC INSPECTION: (To be carried out before and during the work)**

TEST INTERVAL	MEASUREMENT BY		DATE		TIME	RESULT	TIME	RESULT	TIME	RESULT
	TIME	RESULT	TIME	RESULT						
% LEL										
%OXYGEN										
H <sub>2</sub> S(ppm)										

**SAFETY CHECKLIST**

Tick 'Yes' or 'No' or 'NA' as applicable

	Yes	No	NA
1. Has the Tool Box Talk been conducted?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Has Worker received safety training?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Is electrically driven equipment disconnected?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Are electrical switches tagged?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Is the breaker locked and tagged?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Are all lines disconnected or blinded?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Are all valves closed and in-between bleeders opened?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Is the equipment depressurized, flushed and purged?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Is the atmosphere around (including wind direction, explosive gas leakage) suitable for entry?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Is the person fit for entry?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Is work site barricaded and warning signs posted?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Is any sludge or rust present?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Is the vessel cold enough to enter?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Is adequate ventilation and lighting ( 24 V) arranged?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Name of the Standby/Rescue/Fireman assigned	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Protective Equipment required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Is JHA required and attached to complete this job?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Who will monitor the operating conditions? _____			
19. Fire Fighting Arrangements: _____			
20. Personal Protective Equipment requirement			
<input type="checkbox"/> Helmet	<input type="checkbox"/> Goggles	<input type="checkbox"/> Apron	
<input type="checkbox"/> Coverall	<input type="checkbox"/> Gas Mask/ Respirator	<input type="checkbox"/> Ear Muffs/Plugs	
<input type="checkbox"/> Safety Shoes/Gum Boots	<input type="checkbox"/> Dust Mask	<input type="checkbox"/> Full Body Harness/ Safety Belt	
<input type="checkbox"/> Rubber/Cotton Gloves	<input type="checkbox"/> Face Shield	<input type="checkbox"/> SCBA	
21. Special Instructions: _____			

Authorization →	Permit Issue Authority	Relevant Section	Permit Receiver

**JOB COMPLETION**

This entry-job has been completed and area has been cleared.  
 Date/Time \_\_\_\_\_

However the summary of 'incidents' encountered during the job is given below:-

	Asset Damage	Environment Damage	Fatal	Non-Fatal	First Aid	Near Hits
(Tick/Cross)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Description:						

Signed by \_\_\_\_\_ Checked by \_\_\_\_\_ Verified by \_\_\_\_\_  
 Supervisor/Performing Technician Area Operator Receiving Authority

**ALL WORK PERMIT AREAS ARE NON-SMOKING AREAS**



**OIL & GAS DEVELOPMENT COMPANY LIMITED**

Ref. Section 07 (Operation) of OGDCL's Integrated HSE System Manual

OGF – HSE – 023(01)

**Radiography Work Permit**

WO No.....

Record TBT proceedings on back of the card copy

WP S.No.....

**INITIATION**

Permit Begins \_\_\_\_\_ Hours Date \_\_\_\_\_  
 Permit Expires \_\_\_\_\_ Hours Date \_\_\_\_\_  
 Extended upto \_\_\_\_\_ Hours Date \_\_\_\_\_  
 Extended by \_\_\_\_\_  
 This permit authorizes Mr. \_\_\_\_\_  
 of \_\_\_\_\_ section, to perform the following work  
 \_\_\_\_\_  
 At \_\_\_\_\_

NOTE: Tick Respective one 'Job Type'

- |   |   |   |
|---|---|---|
| <input type="checkbox"/> Corrective Maintenance   | <input type="checkbox"/> Non Process Activity | <input type="checkbox"/> HSE Function           |
| <input type="checkbox"/> Emergency Shut Down      | <input type="checkbox"/> Project/ New Job     | <input type="checkbox"/> Preventive Maintenance |
| <input type="checkbox"/> Routine Process Activity | <input type="checkbox"/> Modification         | <input type="checkbox"/> Productive Analysis    |
|   |   | <input type="checkbox"/> Annual Turn Around     |

**PERIODIC INSPECTION (To be carried out before and during the work)**

**SAFETY CHECKLIST**

Tick 'Yes' or 'No' or 'NA' as applicable	Yes	No	NA
1. Has the Tool Box Talk been conducted?			
2. Is the radiography sources adequate for the job?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Are all radiographers qualified "Registered" persons?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Are all radiographers wearing film badges?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Is audible warning system available?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Is radiation survey meter/dosimeter calibrated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Is adequate lighting in place?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Has the radiation zone been posted?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Have radiation zone been barricaded/ cordoned off?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Is flashing light / beacon in place?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Is scaffolding arranged for safe execution of job? (Attach checklist)			
12. Is JHA required and attached to complete this job?			
13. Who will monitor the operating conditions?	_____		
14. Name of the stand by person assigned:	_____		
15. Fire Fighting arrangements:	_____		
16. Personal Protective Equipment requirement			
<input type="checkbox"/> Helmet	<input type="checkbox"/> Goggles	<input type="checkbox"/> Apron	
<input type="checkbox"/> Coverall	<input type="checkbox"/> Gas Mask/ Respirator	<input type="checkbox"/> Ear Muffs/Plugs	
<input type="checkbox"/> Safety Shoes/Gum Boots	<input type="checkbox"/> Dust Mask	<input type="checkbox"/> Full Body Harness/ Belt	
<input type="checkbox"/> Heat/Cotton Gloves	<input type="checkbox"/> Face Shield	<input type="checkbox"/> SCBA	
17. Special Instructions:	_____		

Authorization →	Permit Issue Authority	Relevant Section	Permit Receiver
_____	_____	_____	_____

**JOB COMPLETION**

This job has been completed and area is clear for any unwanted material/housekeeping is good enough.

Date/Time: \_\_\_\_\_

However the summary of "Incidents" encountered during the job is given below:-

	Asset Damage	Environment Damage	Fatal	Non-Fatal	First Aid	Near Hits
(Tick/Cross)						
Description:						

Signed by \_\_\_\_\_  
Supervisor/Performing Technician

Checked by \_\_\_\_\_  
Area Operator

Verified by \_\_\_\_\_  
Receiving Authority

ALL WORK PERMIT AREAS ARE NON-SMOKING AREAS



**OIL & GAS DEVELOPMENT COMPANY LIMITED**

Ref. Section 07 (Operation) of OGDCL's Integrated HSE System Manual

OGF – HSE – 024(01)

**Excavation & Civil Work Permit**

WO No.....

Record TBT proceedings on back of the card copy

WP S.No.....

**INITIATION**

Permit Begins \_\_\_\_\_ Hours Date \_\_\_\_\_  
 Permit Expires \_\_\_\_\_ Hours Date \_\_\_\_\_  
 Extended upto \_\_\_\_\_ Hours Date \_\_\_\_\_  
 Extended by \_\_\_\_\_

This permit authorizes Mr. \_\_\_\_\_  
 of \_\_\_\_\_ section, to perform the following work  
 \_\_\_\_\_  
 At \_\_\_\_\_

NOTE: Tick Respective one 'Job Type'

<input type="checkbox"/> Corrective Maintenance	<input type="checkbox"/> Non Process Activity	<input type="checkbox"/> HSE Function
<input type="checkbox"/> Emergency Shut Down	<input type="checkbox"/> Project/ New Job	<input type="checkbox"/> Preventive Maintenance
<input type="checkbox"/> Routine Process Activity	<input type="checkbox"/> Modification	<input type="checkbox"/> Productive Analysis
		<input type="checkbox"/> Annual Turn Around

**PERIODIC INSPECTION (To be carried out before and during the work)**

MEASUREMENT BY		DATE										
TEST INTERVAL	TIME	RESULT	TIME	RESULT	TIME	RESULT	TIME	RESULT	TIME	RESULT	TIME	RESULT
% LEL												
% OXY GEN												
H <sub>2</sub> S(ppm)												

**SAFETY CHECKLIST**

Tick 'Yes' or 'No' or 'NA' as applicable

	Yes	No	NA
1. Has the Tool Box Talk been conducted?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Is there any electrical or cable under ground?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Is the underground cable de-energized?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Are electric switches / breakers locked & tagged?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Are there any underground interment lines?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Are underground pipeline(s) under pressure?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Are the instrument cable de-energized and disconnected?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Are there any gas pipelines, water lines or any other line underground?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Are pipelines underground emptied / isolated and blinded?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Is power driven equipment permitted for chipping & grinding etc?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Is showering required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Is scaffolding arranged for safe execution of job? (Attach checklist)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Are the barricading and warning signs in place?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Is JHA required and attached to complete this job?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Who will monitor the operating conditions? _____			
16. Fire Fighting arrangements: _____			
17. Personal Protective Equipment requirement			
<input type="checkbox"/> Helmet	<input type="checkbox"/> Goggles	<input type="checkbox"/> Apron	
<input type="checkbox"/> Coverall	<input type="checkbox"/> Gas Mask/ Respirator	<input type="checkbox"/> Ear Muffs/Plugs	
<input type="checkbox"/> Safety Shoes/Gum Boots	<input type="checkbox"/> Dust Mask	<input type="checkbox"/> Full Body Harness/ Belt	
<input type="checkbox"/> Heat/Cotton Gloves	<input type="checkbox"/> Face Shield	<input type="checkbox"/> SCBA	
18. Special Instructions: _____			

Authorization →	Permit Issue Authority	Relevant Section	Permit Receiver

**JOB COMPLETION**

This job has been completed and area is cleared for any unwanted material / housekeeping is good enough.

Date/Time \_\_\_\_\_

However the summary of "incidents" encountered during the job is given below:-

	Asset Damage	Environment Damage	Fatal	Non-Fatal	First Aid	Near Hits
(Tick/Cross)						
Description:						

Signed by _____ Supervisor/Performing Technician	Checked by _____ Area Operator	Verified by _____ Receiving Authority
---	-----------------------------------	--

ALL WORK PERMIT AREAS ARE NON-SMOKING AREAS





# Operation: OGDCL's Integrated HSE System Manual

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**OIL & GAS DEVELOPMENT COMPANY LIMITED**

Ref. Section 07 (Operation) of OGDCL's Integrated HSE System Manual OGF - HSE - 025(01)

## WORKING AT HEIGHT PERMIT

WO No.....  
WP S.No.....

*Record TBT proceedings on back of the card copy*

---

**INITIATION**

Permit Begins \_\_\_\_\_ Hours Date \_\_\_\_\_  
 Permit Expires \_\_\_\_\_ Hours Date \_\_\_\_\_  
 Extended upto \_\_\_\_\_ Hours Date \_\_\_\_\_  
 Extended by \_\_\_\_\_

This permit authorizes Mr. \_\_\_\_\_  
 of \_\_\_\_\_ Section, to perform the following work  
 \_\_\_\_\_  
 At \_\_\_\_\_

---

**NOTE: Tick Respective one Job Type!**

<input type="checkbox"/> Corrective Maintenance	<input type="checkbox"/> Non Process Activity	<input type="checkbox"/> HSE Function
<input type="checkbox"/> Emergency Shut Down	<input type="checkbox"/> Project/ New Job	<input type="checkbox"/> Preventive Maintenance
<input type="checkbox"/> Routine Process Activity	<input type="checkbox"/> Modification	<input type="checkbox"/> Productive Analysis
		<input type="checkbox"/> Annual Turn Around

---

**CHECKLIST**

Tick 'Yes' or 'No' or 'NA' as applicable

	Yes	No	NA
1. Has the Tool Box Talk been conducted?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Is Area below been cleared?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Are the personnel performing job trained?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Are emergency arrangements adequate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Is scaffolding arranged for safe execution of job? (Attach checklist)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Is residual risk (s) in this job acceptable?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Are the barricading and warning signs in place?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Is JHA required and attached to complete this job?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Who will monitor the operating conditions? _____			
10. Equipment to be used: _____			
11. Height in feet: _____			
12. Associated Permits: _____			
13. Personal Protective Equipment requirement			
<input type="checkbox"/> Helmet	<input type="checkbox"/> Goggles	<input type="checkbox"/> Apron	
<input type="checkbox"/> Coverall	<input type="checkbox"/> Gas Mask/ Respirator	<input type="checkbox"/> Ear Muffs/Plugs	
<input type="checkbox"/> Safety Shoes/Gum Boots	<input type="checkbox"/> Dust Mask	<input type="checkbox"/> Full Body Harness/ Safety Belt	
<input type="checkbox"/> Rubber/Cotton Gloves	<input type="checkbox"/> Face Shield	<input type="checkbox"/> SCBA	
14. Special Instructions: _____			

---

<b>Authorization</b> →	<b>Permit Issue Authority</b>	<b>Relevant Section</b>	<b>Permit Receiver</b>
	Shift Engineer/Production Engineer	IC / Shift Engineer	Supervisor/Performing Technician

---

**JOB COMPLETION**

Work at height has been completed and area is cleared for any unwanted material / housekeeping is good enough.  
 Date/Time: \_\_\_\_\_

However the summary of "accidents" encountered during the job is given below:-

	Asset Damage	Environment Damage	Fatal	Non-Fatal	First Aid	Near Hits
(Tick/Cross)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Description:						

Signed by \_\_\_\_\_  
 Supervisor/Performing Technician

Checked by \_\_\_\_\_  
 HSE Section/Area Operator

Verified by \_\_\_\_\_  
 Receiving Authority

**ALL WORK PERMIT AREAS ARE NON-SMOKING AREAS**



**PERMIT TO WORK TOOLBOX TALK PROCEEDINGS**

Section 1 - Toolbox Talk Considerations (tick)			
The following must be considered prior to commencing the work:			
Objectives of the work	Equipment / tools	Additional PPE	
Specific plans, methods and guidelines	Hazardous equipment	Previous lessons learned	
Responsibilities	Materials	Feedback / questions from Work Party	
Manpower and skill	Communications paths / protocols	Applicable OGDCL Lifesaving Golden Rule(s)	
Access and evacuation (what to do in case of emergency)	Manual handling		
Work environment / site conditions	Work preparation		
Risk assessment: hazards, precautions and mitigations	Isolations / Permits / Certificates		
Have the conditions changed	Performing the work		
Has the activity changed	Reinstatement		
Conflicting activities	Weather		

Other Topics Discussed:

e.g. Job Hazard Analysis (JHA)

**Section 2 - Work Party Attendance Record**

By signing this form, I confirm that I have received and fully understood the information contained in and referenced during the Toolbox Talk.

Name:	Signature:	Name:	Signature:	Name:	Signature:

**Section 3 - Conducted**

I confirm I have conducted the Toolbox Talk with the Work Party and other involved persons.			I have taken part in the Toolbox Talk with the Work Party and other involved persons to address specific Operations related matters.		
Performing Authority Name:	Signature:	Date / Time:	Area Authority Name:	Signature:	Date / Time:

(optional)



Ref. Section 07 (Operation) of OGDCL's Integrated HSE System Manual OGF- HSE - 026(01)

**Oil & Gas Development Company**  
**Location:** \_\_\_\_\_

## Vehicle Entry Permit

Date: \_\_\_\_\_ No: \_\_\_\_\_

Validity \_\_\_\_\_  
 Time In \_\_\_\_\_ Time out \_\_\_\_\_  
 Driver's Name \_\_\_\_\_  
 Vehicle Number OGDCL / Private \_\_\_\_\_  
 Type of Vehicle: \_\_\_\_\_

Purpose: \_\_\_\_\_

Vehicle Inspected by \_\_\_\_\_

**'Tick' for OK, 'Cross' for Not-OK**

No Leakage       Tyres Condition       Spark Arrestor  
 Battery Connection (Covered & Tight)       **Entry Allowed?**

Remarks \_\_\_\_\_

*Authorized Signature* \_\_\_\_\_

**Important Instructions:**

- All Vehicle Permits to be closed out after the job is completed.
- Permit copy should always be with the vehicle's driver while inside the plant/well site.
- Only diesel powered engine is allowed in the plant (gasoline powered is not allowed).
- Vehicles must follow the designated routes only.
- Speed limit should be strictly followed.
- Fire Extinguisher & First Aid Kit must remain available within the vehicle.





Ref. Section 07 (Operation) of OGDCL's Integrated HSE System Manual OGF - HSE - 028(01)

**OIL & GAS DEVELOPMENT COMPANY LIMITED** No: \_\_\_\_\_

**POWER ISOLATION SLIP**

Date of issue \_\_\_\_\_ Time of issue \_\_\_\_\_ hrs

This AUTHORIZES Electrical Section to turn ON/OFF the electrical supply of (Unit) \_\_\_\_\_ Location \_\_\_\_\_ at \_\_\_\_\_ hrs

**InCharge Shift** \_\_\_\_\_

It is certified that the electrical supply of (unit) \_\_\_\_\_ has been turned ON/OFF at \_\_\_\_\_ hrs date \_\_\_\_\_ and respective circuit breaker(s) locked & tagged. \_\_\_\_\_

**InCharge Shift** \_\_\_\_\_





Ref. Section 07 (Operation) of OGDCL's Integrated HSE System Manual

OGF – HSE – 029(00)

**SAFETY SYSTEM DEFEAT CERTIFICATE**

Certificate No.: \_\_\_\_\_

<b>Section 1 - Description of Defeat</b>			
Location / Installation:		Original Associated Work Permit No.:	
System/ Equipment to be Defeated:		Work Continuing on Permit No.:	
Tag No.:		Loop Drawing / Cause & Effects Attached:	YES / NO
<b>Reason of Safety System / Safety Equipment Defeat</b>			

<b>Section 2 - Defeat Implementation Request (by Requester/Performing Authority)</b>			<b>Section 5 - Defeat Removal Request (by Requester/Performing Authority)</b>		
Contractor/Dept.:			I hereby certify that work is sufficiently completed to allow for reinstatement		
Name:	Signature:	Date / Time:	Name:	Signature:	Date / Time:

<b>Section 3a - Details of Defeat<sup>1</sup> (by Isolating Authority) - Inhibit/Override/Isolation</b>

<b>Section 3b - Details of Safeguards (Precautions and Mitigations) while System/Equipment is Defeated</b>

1: Isolating Authority for the application and removal of Defeats/Inhibits/Overrides is typically the Control Room Operator or an Instrument Technician  
 2: Where applicable, isolation points to be tagged

<b>Section 4 - Implementation of Defeat</b>		<b>Section 6 - Removal of Defeat</b>	
<b>4a. I hereby approve<sup>2</sup> the defeat as described in Section 3</b> Approving Authority(Incharge of Process/Productio) Signature: _____ Date / Time: _____  I hereby authorise the defeat as described in Section 3 Issuing Authority Name: _____ Signature: _____ Date / Time: _____		<b>6a. I hereby authorise removal of the defeat as described in Section 3</b> Issuing Authority Name: _____ Signature: _____ Date / Time: _____	
<b>4b. I hereby certify that the defeat has been applied as described in Section 3</b> Isolating Authority <sup>1</sup> Name: _____ Signature: _____ Date / Time: _____		<b>6b. I hereby certify that the defeat has been removed</b> Isolating Authority <sup>1</sup> Name: _____ Signature: _____ Date / Time: _____	
<b>4c. I hereby certify that the defeat is in place</b> Area Authority Name: _____ Signature: _____ Date / Time: _____		<b>6c. I hereby confirm that the defeat has been removed and site has been returned to its initial state</b> Area Authority Name: _____ Signature: _____ Date / Time: _____	

## 7.3 Handling, Segregation and Disposal of Waste

OGM/P-HSE-7.3(08) Revision Number 8

Original Issue: June 25, 2007  
 This Issue: March 14, 2022

**Updated By:**  
**Muhammad Sameem Hussain Qaiser**  
 Senior HSEQ Officer, OGDCL

**Reviewed By:**  
**Muhammad Mubashir Abbas**  
 Manager HSEQ, OGDCL

**Checked By:**  
**Mahmood-ul-Hassan Khan**  
 General Manager HSEQ, OGDCL

**Approved By:**  
**Syed Khalid Siraj Subhani**  
 Managing Director, OGDCL

### Change/ Revision Log

#	Description of Change
	<i>Reviewed, no change suggested.</i>

### Associated Documents Approval & Issue

Related Document/ Record	Initiated by	Reviewed by	Checked/ Verified / Approved by
OGF – HSE – 030 Onsite Waste Management Plan	Location HSE IC	Location HSE MRC	Location IC
OGF – HSE – 031 Section Waste Register	Concerned Section Rep.	Concerned Section IC	Concerned Section IC
OGF – HSE – 032 Waste Consignment Note	Concerned Section IC	Material Store IC	Concerned Section IC Material Store IC
OGF – HSE – 033 Waste Disposal Log	Material Store Rep.	Material Store IC	Material Store IC

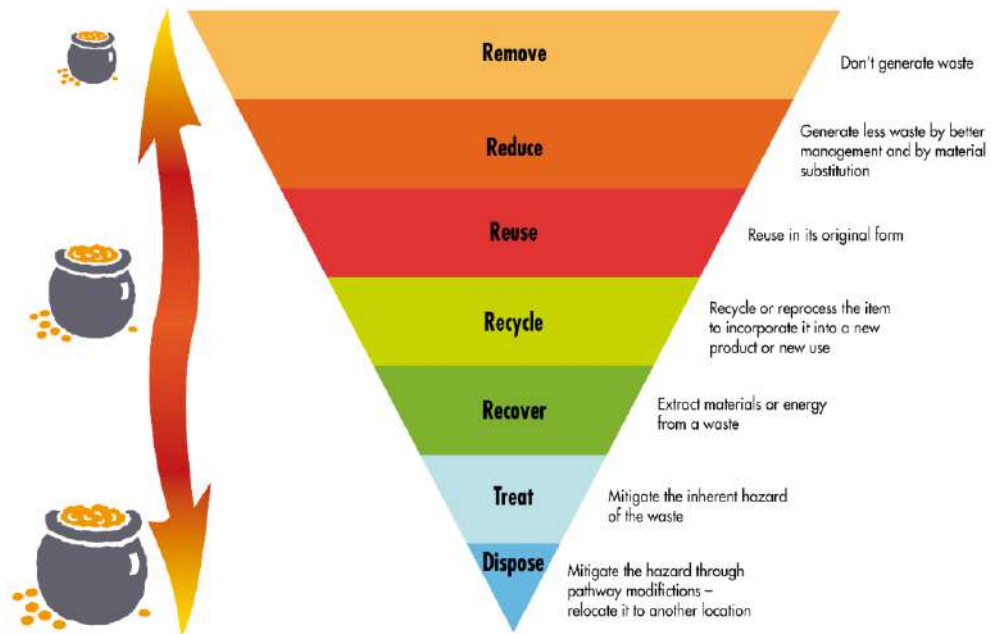
### 7.3.1 Waste Management Planning

- ☐ Waste is classified as Hazardous and Nonhazardous by identifying the physical, chemical and toxicological properties. This information may be found via Material Safety Data Sheets (MSDS), manufacturer's information, process knowledge, historic information or lab analysis. A system to categorize wastes streams according to their health and environmental vulnerabilities is then be developed.
- ☐ Location HSE Section shall develop an **On-Site Waste Management Plan** based on this procedure.
- ☐ To properly address each segregated wastes, the most suitable Disposal Method; Frequency of Disposal; and Disposal Responsibility shall be determined by documenting where the acceptability of each disposal option for the different ecological domains shall be determined by virtue of evaluation which shall include: environmental considerations; location; engineering limitations; regulatory restrictions; operating feasibility; economics; potential long-term liability; etc.
- ☐ Designated drums, containers, bins, etc. with specific labels shall be placed as Collection Method for the Waste Generating Areas. Color coding of drums, containers, bins, etc. for various types of wastes is to be as follows:

Waste Type	Bin Color
Hazardous Waste	Red Color
Food/Paper/Wood Waste (Organic Waste)	Green Color
Plastic Waste	Yellow Color

### 7.3.2 Waste Management Methods

- ☐ OGDCL understands the capabilities and limitations of different Waste Management Options for the various types of wastes generated in order to make cost-effective Waste Management Decisions that are protective of human health and the environment. As a general matter, OGDCL has a Waste Management Hierarchy (as recommended by EPA), with a preference for reuse and recycling options.



- ☐ **Source Reduction Methods:** Source reduction means eliminating or decreasing, to the extent practical, the volume or relative toxicity of wastes generated by using alternate materials, processes or procedures. Since the opportunities to achieve significant wastes volume reductions for some wastes are limited as their volumes are primarily a function of activity level and age or state of reservoir depletion. For example, the proportion of discharged produced water typically increases as the reservoir is depleted. Also, the volume of drilling mud generated is generally a function of the number of wells

drilled and their depth. Nevertheless, OGDCL makes use of opportunities for source reduction and efforts are made to exploit them. For example, use of proper solids control equipment reduces the volume of mud discharged.

- ⊕ OGDCL also believes in process modification which is possible through more effective use of mechanical components, such as more effective drill bits, rather than chemical additions. Gravel packs and screens significantly reduce the volume of formation solids/ sludge produced. Improved controls aid OGDCL to minimize mud changes, engine oil changes and solvent usage.
- ⊕ Substitution of products that result in the generation of less toxic wastes is preferred. For example, biocides, corrosion inhibitors, coagulants, cleaners, solvents, dispersants, emulsion breakers, scale inhibitors, viscosifiers and weighting agents are selected with potential environmental impacts and disposal needs in mind. Some examples are the selection of mud and additives that do not contain significant levels of biologically available heavy metals or toxic compounds, and the use of mineral oils in place of diesel oil for stuck drill pipe.
- ⊕ Other efforts include efficient planning so that all commercial chemical products are used on the site or returned unused to the vendors; consideration of bulk chemical purchases to eliminate drums; and use of drains and sumps to collect and segregate spills.

Typical examples of cost-effective waste management options are tabulated below:

WASTE	WASTE CLASSIFICATION	WASTE MANAGEMENT OPTIONS							REMARKS
		REUSE	RECYCLE	DEEP WELL/ LINED PIT	SURFACE TREATMENT/ LANDFILL	INCINERATION	RETURN TO VENDOR	OTHER (MENTION)	
Adsorbent & Desiccants (Like MG-3, MG-5, Activated Carbon, Ceramic Balls, Silica gel etc.)	Hazardous					Yes			
Batteries (Dry and wet batteries; one time use or rechargeable)	Hazardous		Yes						1. Battery acid to be neutralized before offsite departure 2. To be returned to vendor
Batteries Cell	Hazardous					Yes			
Catalysts	Hazardous					Yes			
Chemical Waste (expired chemicals, laboratory chemicals, cleaning chemicals etc.)	Hazardous					Yes			To be returned to vendor where possible

Clinical Waste	Hazardous					Yes			Legal requirements to be complied with
Construction & Demolish waste	Non-Hazardous				Yes				
Contaminated Debris & Soil	Hazardous					Yes			
Dip Slides	Hazardous					Yes			
Drilling Pit Waste	Hazardous		Yes	Yes	Yes				In Case OBM bioremediation shall be considered.
Empty Chemical Drums (Plastic + Metal)	Hazardous		Yes						Drums to be punctured before handing over to waste contractor.
Electronic Waste	Hazardous						Yes		Buyback option for the users.
Filter Backwash Liquids	Hazardous			Yes					
Filters (lube oil, air, fuel & raw gas, chemical treatment and water filter etc.)	Hazardous					Yes			
Food Waste	Non-Hazardous				Yes				
Garbage - Domestic Waste	Non-Hazardous				Yes				
Gas Cylinders	Non-Hazardous							Yes	Cylinders to be punctured before handing over to scrap recycler
Glass waste- Window panes, Bottles, Jars	Non-Hazardous		Yes						To be incinerated in case of contamination with hazardous substance



## Operation: OGDCL's Integrated HSE System Manual

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Glass waste- Tube Rods, Lamps , Bulbs and Energy Savers	Hazardous		Yes						
Hydrotest Fluids	Hazardous				Yes				
Insulation	Hazardous					Yes			
Paint Associated Waste	Hazardous					Yes			
Paper and Cardboard Waste	Non- Hazardous		Yes						
Pressurized Containers	Hazardous		Yes						To be punctured before disposal
Printer Cartridges	Hazardous						Yes		Return to Vendor
Produced Sand	Non- Hazardous				Yes				
Produced Water	Hazardous			Yes					
Radioactive Waste	Hazardous							Yes	To be disposed through Pakistan Atomic Energy Commission according to legal requirements
Rags - Oily	Hazardous					Yes			
Rainwater Drainage	Non- Hazardous				Yes				
Refractory Materials	Hazardous					Yes			
Rubber & Plastic Waste	Non- Hazardous		Yes						
Scrap Metal	Non- Hazardous		Yes						Contaminated metal to be decontaminated before disposal
Sludge - Tank & Vessel Bottoms	Hazardous					Yes			
Sludge - Water Treatment	Hazardous				Yes				
Tetra packs	Non- Hazardous		Yes						
Waste Oil - Diesel and condensate	Hazardous		Yes						
Waste Oil - Lubricating oils	Hazardous		Yes						
Well Workover Fluids	Hazardous			Yes					

### 7.3.3 Modus Operandi

#	Activities	Responsible Person	Related Document
1	Proper placement of generated wastes in a designated place / (wastes drum / bin).	Actual Waste Generating Section	Recording of wastes into the Section's Waste Register
2	Inform to Camp Maintenance Section / Housekeeping Supervisor in case of Common Scrap Item	Actual Waste Generating Section	Recording of wastes into the Section's Waste Register
	Inform to Material Management Section in case of Valued / Hazardous Salvage Waste.		
3	Segregation and shifting of Valued / Hazardous Salvage Waste into the Designated Salvage Waste Yard.	Actual Waste Generating Section	Waste Consignment Note
4	Weighing of wastes / note down its quantity and other necessary information.	Housekeeping Supervisor (for Common Scrap Waste)	Common Scrap Waste Disposal Log (by Housekeeping Supervisor)
		Material Management Section (for Valued / Hazardous Salvage Waste)	Waste Consignment Note
5	Placement of Valued / Hazardous Waste into the designated section of Salvage Waste Yard.	Material Management Section	Approved Waste Segregation / Placement Plan (developed by Material Management Section)
6	Disposal of Common Scrap Waste as per the Onsite Waste Management Plan.	Local Waste Picker through Field Level Committee	Common Scrap Waste Disposal Log (by Housekeeping Supervisor)
7	Disposal of Valued / Hazardous Salvage Waste as per the Onsite Waste Management Plan.	Auction → Material Management	Salvage Waste Disposal Log (by Material Management Section / HSE)
		Approved 3 <sup>rd</sup> party contractor → HSE	
8	Checking compliance.	HSE Audit Team	HSE Inspection Report / Audit Report/ Disposal Certificates

### 7.3.4 Safe Disposal of Waste

- ☐ Transfer waste from Designated Scrap Yard to Contractor's Waste Yard should be using preferably Contractor's own vehicle (or approved subcontracted vehicles), licensed for this purpose. Modes of transport and routes from the waste generation site to the Contractor Waste Yard should be selected to reduce risks of release.
- ☐ All waste consignments leaving the Contractor Waste Yard to licensed and approved Waste Treatment & Disposal Facility shall be tracked using Waste Treatment Certificates. The treatment certificates should contain the following information:
  - Waste type(s) and sources
  - Consignment reference number
  - Form (e.g. solid, liquid, sludge)
  - Treatment / disposal method



- Quantities and units collected
- Date and time of collection and disposal
- Flue gas / ash analysis where applicable
- The Waste Management Contractors shall provide treatment and disposal certificates to respective sites.

☐ Waste disposal record (evidence like Lab. Reports and Waste Treatment Certificates) shall be maintained by Location Material Management (original) and HSE Department / Section (copy).



# Operation: OGDCL's Integrated HSE System Manual

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OGF/XXX – HSE – 030(01)

## OIL AND GAS DEVELOPMENT COMPANY LTD. On-Site Waste Management Plan

Location: \_\_\_\_\_

### Part-II: Non-Hazardous Wastes

Nature of Waste	Segregation	Collection Method for the Wastes Generating Section	Responsibility to Collect and Drop in the Designated Scrap Yard	Designated Scrap Yard	Disposal Method							Frequency of Disposal	Disposal Responsibility
					Reuse	Recycle	Deep well / lined pit	Surface treatment / landfill	Incineration	Return to vendor	Other		

Prepared by  
Location HSE InCharge

Reviewed by  
Location HSE MRC

Approved by  
Location InCharge

Ref. Section 07 (Operation) of OGDCL's Integrated HSE System Manual



OGF/XXX – HSE – 030(01)

## OIL AND GAS DEVELOPMENT COMPANY LTD. On-Site Waste Management Plan

Location: \_\_\_\_\_

### Part-I: Hazardous Wastes

Nature of Waste	Segregation	Collection Method for the Wastes Generating Section	Responsibility to Collect and Drop in the Designated Scrap Yard	Designated Scrap Yard	Disposal Method							Frequency of Disposal	Disposal Responsibility
					Reuse	Recycle	Deep well / lined pit	Surface treatment / landfill	Incineration	Return to vendor	Other		

Prepared by  
Location HSE InCharge

Reviewed by  
Location HSE MRC

Approved by  
Location InCharge

Ref. Section 07 (Operation) of OGDCL's Integrated HSE System Manual







### Oil & Gas Development Company Limited Waste Consignment Note

The Waste being removed/ shifted from: (specify area)	
Waste Nomenclature:	
Quantity of Waste:	
Nature of Waste: (hazardous/ non-hazardous)	
Physical Form (gas, liquid, solid, powder, sludge or mixed)	
MSDS Handed Over with the waste – Y/N?	
Bin/ Container Type, Number and Size? (if available)	
How going to be transported?	
Any other details to be mentioned:	

I certify that I today collected the consignment and that the above mentioned details are correct and I have been advised of any specific handling requirements.

**Carrier's Certificate  
(Transporter)**

I certify that the above mentioned information is complete and is correct, that the carrier was advised of the appropriate precautionary measures. All of the waste is packaged and labeled correctly and the carrier has been advised of any special handling requirements.

**Consignor's Certificate  
(Waste generating Section)**

I have received the above mentioned waste in safe condition, except \_\_\_\_\_  
\_\_\_\_\_  
(if any).

**Consignee's Certificate  
(Material Management/ Store)**

Sign: \_\_\_\_\_  
Date: \_\_\_\_\_

Sign: \_\_\_\_\_  
Date: \_\_\_\_\_

Sign: \_\_\_\_\_  
Date: \_\_\_\_\_

Ref. Section 07 (Operation) of OGDCL's Integrated HSE System Manual

## 7.4 Journey Management

OGM/P-HSE-7.4(01) Revision Number 1

Original Issue: March 02, 2018  
 This Issue: March 14, 2022

**Updated By:**

**Muhammad Sameem Hussain Qaiser**  
 Senior HSEQ Officer, OGDCL

**Reviewed By:**

**Muhammad Mubashir Abbas**  
 Manager HSEQ, OGDCL

**Checked By:**

**Mahmood-ul-Hassan Khan**  
 General Manager HSEQ, OGDCL

**Approved By:**

**Syed Khalid Siraj Subhani**  
 Managing Director, OGDCL

### Change/ Revision Log

#	Description of Change
1.	Added: <i>Installation of dashcams</i>

### Associated Documents Approval & Issue

Related Document/ Record	Initiated by	Reviewed by	Checked/ Verified / Approved by
OGF/TPT-001 Journey Management Plan	InCharge Transport (TPT)	Security Rep. HSE Rep.	IC Admin./ Location IC
OGC/TPT-001 Vehicle Inspection Checklist	Daily: Driver Yearly: Maint. Rep.	Daily: TPT Rep. Yearly: InCharge TPT	Daily: TPT Rep. Yearly: InCharge Maint.

### 7.4.1 Purpose

- ☐ The purpose of this procedure is to ensure that safe travelling conditions are provided to OGDCL employees, contractors and visitors by mitigating the hazards and associated risks regarding the work related road travel.

### 7.4.2 Scope

- ☐ A routine or non-routine journey for the purpose of this procedure is a work related road travel that is covered by the list below:
  - ✳ Movement between an oil & gas installation\* to other oil & gas installation.
  - ✳ Movement between an office building\*\* to other office building.
  - ✳ Movement between an oil & gas installation to an office building.
  - ✳ Inter or Intra field/ block/ lease/ concession movement.
  - ✳ Movement for any business matter out of oil & gas installation/ field/ block/ lease/ concession/ city (e.g. meeting, fact-finding/ inquiry, audit/ inspection, conference/ workshop/ training, etc.).
  - ✳ Movement for general matters (e.g. surveillance, operational or mess purchasing, pick & drop (on-duty/ days-off/ shift-duty), etc.)
  - ✳ Movement in remote locations that lacks proper infrastructure and emergency support (e.g. seismic parties, drilling rigs, EFPs, FGCPs, etc.).
  - ✳ Movement during any emergency/ operational breakdown at wellsite, pipeline, metering station, or other connected unit/ sub-unit.
  - ✳ Movement for any support services to district management, local community, etc.
  - ✳ Movement of foreign technical teams, consultants & delegations.
  - ✳ Movement in the security sensitive areas (as notified from time to time by Security Deptt.)

\*Oil & gas installation = OGDCL Field/ Rig/ Party/ Stores/ Logistics Base/ G&R Lab.

\*\*Office building = OGDCL Head office, Regional offices, Medical centers, Training center.

### 7.4.3 Responsibility

- ☐ Implementation of this procedure at an oil & gas installation → Respective Location InCharge through *nominated* InCharge Transport (TPT)
- ☐ Implementation of this procedure at an office building → Respective InCharge Admin. through *designated* InCharge Transport (TPT)

### 7.4.4 Journey Planning

- ☐ A journey shall require prior approval of respective HOD/ Location InCharge.
- ☐ HOD/ Location InCharge shall consider all viable options e.g., tele or video conferencing before endorsing a *Travel Requisition* to avoid unnecessary journeys.
- ☐ InCharge Transport (TPT) shall ensure that journeys are planned and carried out in ways that minimize exposure to hazards and associated risks using *Journey Management Plan*.
- ☐ For all routine journeys, *Journey Management Plan* shall be readily available in vehicles with *predetermined risks* especially considering below hazardous situations;
  - ▣ where paved roads are not available/ off road driving conditions.
  - ▣ routes with security threats, dangerous intersections, sharp turns, landslide areas, slippery conditions, and/ or blind-spots.
  - ▣ areas with potentially limited cellular phone coverage.
  - ▣ indistinct stopovers.
  - ▣ environmentally protected areas, wildlife sanctuaries, etc.
  - ▣ transportation of heavy/ fragile/ hazardous material or equipment.
  - ▣ night travel or any other high rated risk aspect.
- ☐ However for the non-routine journeys, *Journey Management Plan* shall be chalked out on situational basis, accordingly.

- ☐ Following operational controls shall be ensured according to the identified hazards and underlying risks:
  - ▣ safety & security briefing.
  - ▣ security escort\*\*\* (frontier corps/ rangers/ guards).
  - ▣ communication system (cellular phone; radio set, etc.).
  - ▣ route (gps) maps (especially for non-routine journeys).
  - ▣ first aid kit.
  - ▣ fire extinguisher.
  - ▣ flashlight/ torch.
  - ▣ warning triangle.
  - ▣ vehicular checks (as per Checklist attached).
  - ▣ special requirements (e.g. under-run protection; rollover protection devices).
  - ▣ others (like reversing alarm system for heavy vehicles).
- ☐ While assigning duties, InCharge Transport (TPT) shall ensure following about driver(s):
  - ▣ physical & mental fitness.
  - ▣ good energy levels/ food intake.
  - ▣ not overloaded/ fatigued with any recent hours of work.
  - ▣ slept sufficiently before the trip & owing natural alertness cycle.
- ☐ InCharge Transport (TPT) shall plan a journey considering human risk factor by opting daytime driving and avoiding bad weather.
- ☐ No journey shall be allowed from sunset to sunrise (If inevitable, driving at these sensitive times shall be made conditional with respective HOD's permission).
- ☐ HOD (Security) and Security Rep./ Regional Security Officer (RSO) must be intimated regarding night time travels so that exclusive security measures like security escort be arranged and the concerned Law Enforcement Agencies (LEAs) be informed accordingly.
- ☐ In case of low visibility particularly during foggy, rainy or stormy conditions, journey shall not be allowed (If inevitable, driving under these circumstances shall be made conditional with respective HOD's permission).
- ☐ For the security sensitive journeys, intermediate radio contact feedback stations shall be configured by Security Deptt. to monitor the ongoing safety of the convoy and a Journey Coordinator be appointed.
- ☐ However, Location InCharge/ InCharge Admin./ InCharge Transport (TPT) shall ensure that vehicle(s) have base communication systems configured so that the vehicle(s)/ convoy remain in communication with the destination point uninterruptedly.

\*\*\* Security Escort

- ⊕ Frontier Corps (FC) Baluchistan shall provide escort for the journeys in Baluchistan Province.
- ⊕ Frontier Corps (FC) Khyber Pakhtunkhwa shall provide escort for the journeys in sensitive areas of Khyber Pakhtunkhwa Province.
- ⊕ In case of expatriates' movement, journeys shall be carried out in bullet proof vehicles with the escort of Frontier Corps (FC)/ Rangers and Police.

### 7.4.5 Journey Execution

- ☐ A formal pre-trip briefing shall be held with driver(s) which includes discussion of route, identified hazards/ risks and operational controls.
- ☐ Drivers shall always carry out a basic physical check of their vehicles before a journey using the following table:

<b>P</b>	Petrol: Is there enough fuel for the planned journey?
<b>O</b>	Oil: oil level ok? And no obvious leaks?
<b>W</b>	Water: If water-cooled, is the radiator level correct? Is there enough water in the washer reservoir and do the wiper blades effectively clean the windscreen?
<b>E</b>	Electrics: Are all the lights working and does the battery start the engine with ease?
<b>R</b>	Rubber: Are all tyres in good condition with sufficient depth of tread and correctly inflated?

Note:- Vehicles must be inspected on the prescribed Checklist on daily basis for physical inspection and annual basis as vehicle fitness check and record of these inspections be retained for a minimum period of 01 year.

- ☐ Drivers shall not move their vehicles until occupants are wearing seat belts.

- ☐ Drivers shall not operate a vehicle while under influence of alcohol, drugs, or medication that could impair their ability to safely drive.
- ☐ Drivers shall not be allowed to drive more than the time permissible under the law.
- ☐ However more than 10-hour driving in a 24-hour day shall not be allowed in any case.
- ☐ A break of at least 15 minutes shall be required every 2 hours of driving preferably at authorized rest areas.
- ☐ In addition, driving must be stopped and a break taken when a driver is fatigued/ not feeling well and InCharge Transport (TPT) be informed.
- ☐ Drivers must comply with the applicable legal and regulatory requirements for driving and never exceed the posted speed limits or drive at an unsafe speed for the prevailing road conditions (Maximum speed limit within OGDCL's fenced-installations shall be 15 km/hr).
- ☐ While driving, drivers shall not use cellular phones or operate navigation system/ multimedia/ electronic devices and refrain from smoking. If communication is really required, the vehicle shall be pulled over at safe location.
- ☐ Unauthorized passengers (hitchhikers) shall not be carried in vehicles, except in case of emergency or requisition by local authorities.
- ☐ No passenger shall be ever carried in cargo loading area of the vehicle or allowed to hang with the door.
- ☐ In case of security personnel at rear side of the vehicle for security escort, proper fixed seats must be provided.
- ☐ In case of rash driving or violation of traffic rules, it shall be the responsibility of the senior-most travelling employee to advise driver to drive carefully.
- ☐ HOD/ Location InCharge/ InCharge Transport (TPT) must be intimated regarding the behavior of driver on first available opportunity.
- ☐ In case, an alternate route to be opted, driver shall inform InCharge Transport (TPT)/ Journey Coordinator.
- ☐ In case, deviation from the original routes (planned/ alternate) is to be opted, driver shall take permission from InCharge Transport (TPT)/ Location InCharge.
- ☐ Upon reaching the destiny, driver shall report completion of the trip to InCharge Transport (TPT)/ Journey Coordinator.
- ☐ If a driver does not reach/ check-in at the designated destination on the estimated time, InCharge Transport (TPT) shall contact the driver and passenger(s), and in case of no contact, shall inform Security Rep. to take up the matter according to the situation.

#### **7.4.6 Incident/ Emergency Handling During A Journey**

- ☐ There shall be a laminated sticker or low-gauge metal plate posted on the dashboard or at other noticeable place either at front or rear windshield of a vehicle mentioning the names and contact numbers to whom may be informed in case of an incident or emergency.
- ☐ If vehicle encounters an accident or emergency situation, following must be done:
  - ▣ Respective HOD/ Location InCharge/ InCharge Transport (TPT) be reported immediately.
  - ▣ Emergency services be contacted, if required.
  - ▣ Any injured person be provided assistance/ first aid (if possible) until arrival of an ambulance.
  - ▣ Emergency service provider may be assisted as required.
  - ▣ Vehicle be moved away from the roadway and secured, if possible.
  - ▣ Driver and passengers to remain at the incident scene until advised by the police (if relevant).



- ▢ Subsequently, the concerned regulatory authorities shall be intimated accordingly and formal incident investigation carried out as per prevailing procedure.

#### **7.4.7 Drivers Qualification, Competence, Fitness and Monitoring**

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- ▢ Only approved drivers shall be eligible to drive company-owned or hired/ rented vehicles.
  - ▢ Approved drivers shall be those who are appropriately licensed, trained, assessed and medically fit.
  - ▢ Location InCharge/ InCharge Transport (TPT) shall be responsible for maintaining and communicating an updated list of approved drivers.
  - ▢ The approved driver must have the following qualification at the minimum:
    - ▣ Medically fitness as per trade test (e.g. tests for diabetes, eyesight, colorblind, vertigo, etc.).
    - ▣ Valid driving license relevant to the class of vehicle.
    - ▣ Must be at least of 21 years of age.
    - ▣ Minimum 3 years driving experience (preferably of major cities/ facilities/ organizations).
    - ▣ Driven similar type of vehicles before.
  - ▢ Drivers driving OGDCL-owned or hired vehicles shall undergo mandatory defensive driving course.
  - ▢ For the newly hired drivers for OGDCL-owned vehicles, defensive driving course shall be organized by HSEQ Deptt. having following topics:
    - ▣ Review of applicable policies & standards.
    - ▣ Defensive driving techniques.
    - ▣ Journey planning/ management (including alertness & fatigue management).
    - ▣ Effects of medication & substance abuse.
    - ▣ Pre-trip checks & requirements (including restraint/ safety systems).
    - ▣ Skill versus changing driving vulnerabilities (hazards & risks).
  - ▢ Refresher defensive driving training sessions shall be arranged as per annual training plan and drivers who had encountered accident(s) or near hits shall be included specially.
  - ▢ Frequency of refresher's defensive driving trainings shall be three years.
  - ▢ Records of trainings shall be maintained by TPT and HSEQ Deptt..
  - ▢ It shall be the contractual obligation of Contractors to impart defensive driving trainings to drivers of hired/ rented vehicles whereas compliance of this condition shall be ensured by InCharge TPT/ Location InCharge.
  - ▢ Based on risk assessment and/ or local regulations, Location InCharge/ InCharge Admin. may consider installation of dashcams, an In-Vehicle-Monitoring-System (IVMS) or Vehicle Data Recorder (VDR) to acquire journey data (against a driver identification # or key) to be analyzed for driver's performance (like speed, acceleration/ deceleration, kilometers driven, driver overall hours, etc.).
  - ▢ With the installation of IVMS, data management system shall be implemented to ensure data is properly analyzed and feedback is provided to drivers for bringing improvement and safety in their driving skills.
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# Operation: OGDCL's Integrated HSE System Manual

Controlled Copy Do Not Duplicate For Internal Use Only



**Oil & Gas Development Company Limited**  
 Location \_\_\_\_\_

OGF/XXX-TPT-001(00)

TPT Section \_\_\_\_\_

## JOURNEY MANAGEMENT PLAN

GENERAL									
JOURNEY FROM _____					JOURNEY TO _____				
RISK ASSESSMENT									
PLANNED (PRIORITY) ROUTE									
Route (From - To)	Hazards/Threats	Risks (Damage Expected)	Risk Calculation			Operational Controls			
			Probability	Consequence	Risk Rating				
ALTERNATE ROUTE									
Route (From - To)	Hazards/Threats	Risks (Damage Expected)	Risk Calculation			Operational Controls			
			Probability	Consequence	Risk Rating				
STOPOVERS (REST HOUSE/ CAMP/ MOTEL/ AUTHORIZED REST AREA)									
STOPOVER TITLE	LOCATION (ADDRESS)					SHORT/ OVERNIGHT STAY			
PLANNED (PRIORITY) ROUTE									
ALTERNATE ROUTE									
PLANNING CHECKLIST FOR OPERATIONAL CONTROLS									
	Y	NA		Y	NA		Y	NA	
<b>Safety &amp; Security Briefing</b>			<b>First Aid Kit</b>			<b>Drinking Water</b>			<b>Security Escort (Guard/ FC/ Rangers)</b>
<b>Cellular Phones (Two-way Communication)</b>			<b>Radio Set</b>			<b>Protective Clothing</b>			<b>Under-run/ Rollover protection device</b>
<b>Emergency Toeing Kit</b>			<b>Fire Extinguisher</b>			<b>Route Map (GPS)</b>			<b>Shovel for sandy/ desert terrain</b>
<b>Flashlight/ Torch</b>			<b>Warning Triangle</b>			<b>Vehicle Fitness/ Checks</b>			<b>Other</b>
SPECIAL INSTRUCTIONS					CONTACT NUMBERS				
For all routine journeys, Journey Management Plan shall be readily available in vehicles with predetermined risks especially considering hazardous situations: ✓ where paved roads are not available/ off road driving conditions. ✓ routes with security threats, dangerous intersections, sharp turns, landslide areas, slippery conditions, and/ or blind-spots. ✓ areas with potentially limited cellular phone coverage. ✓ indistinct stopovers. ✓ environmentally protected areas, wildlife sanctuaries, etc. ✓ transportation of heavy/ fragile/ hazardous material or equipment. ✓ night travel or any other high rated risk aspect. However for the non-routine journeys, Journey Management Plan shall be chalked out on situational basis, accordingly. <b>Note: Please attach the planned (priority) as well as alternate route map on the back of this form if available.</b>					<b>Location InCharge</b>				
					<b>InCharge Admin.</b>				
					<b>InCharge TPT.</b>				
					<b>HSE Rep.</b>				
					<b>Security Rep.</b>				

Initiated by \_\_\_\_\_ InCharge TPT      Reviewed by \_\_\_\_\_ Security Rep.      Checked by \_\_\_\_\_ HSE Rep.      Endorsed/ Approved by \_\_\_\_\_ Location InCharge/ InCharge Admin.



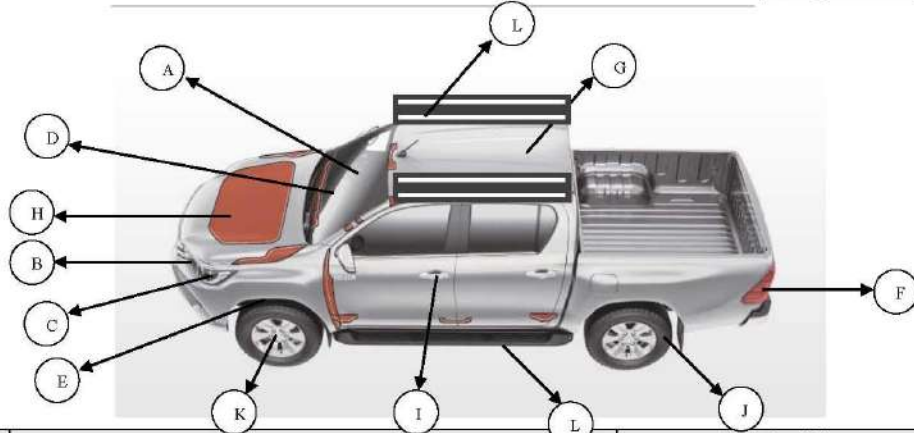
**Oil & Gas Development Company Ltd.**  
 Location: \_\_\_\_\_

OGC/TPT-001(00)

TPT Section \_\_\_\_\_

**VEHICLE INSPECTION CHECKLIST**

Monitoring Frequency:  
 Daily (Physical Inspection)/  
 Annual (Fitness Check)



Sr.	Checkpoint		Condition		
			Good	Fair	Defective
1.	Steering	A			
2.	Antilock Breaking System / Foot Paddle / Handbrake				
3.	Air Bags (esp. at driver's end)				
4.	Parking / Headlights	B			
5.	Hazards & Indicator Lights	C			
6.	Horn				
7.	Windscreen / Washers / Wipers	D			
8.	Shock Absorbers	E			
9.	Suspension				
10.	Speedometer / RPM Meter				
11.	Battery (Connectors Greased / Clamped / Properly Fixed / No Rust)				
12.	Visual General Wiring Condition				
13.	Spare Fuses (Available)				
14.	Brake / Rear Lights & Hi / Low Beams	F			
15.	Cabin Light				
16.	Electric Cables & Wiring				
17.	Starting Performance				
18.	Fluid Level				
19.	Exhaust Manifold & Silencer Condition (Leaks / Hole / Loose Fitting)				
20.	Visual Hoses / Belt & Pipe Condition				
21.	Visual Radiator Condition				
22.	Air Condition & Heating System				
23.	Gears Conditions				
24.	Selt Belts				
25.	Central Locking Sysetm				
26.	Body's Visual Condition	G			
27.	Engine's Apparent Condition	H			
28.	Doors / Lock / Handle Condition	I			
29.	Tyres / Spare Tyre Condition	J			
30.	Wheel Aligment	K			
31.	Under-run Protection; Rollover Protection Devices	L			
32.	Head Restraints				
33.	Reversing alarm system (for heavy vehicles)				

Remarks:

Initiated by Daily: Driver Yearly: Maint. Rep.	Reviewed by Daily: TPT Rep. Yearly: InCharge TPT	Verified/ Approved by Daily: TPT Rep. Yearly: InCharge Maint.



## 7.5 Framework for Hydrogen Sulfide (H<sub>2</sub>S) Management

OGM/P-HSE-7.5(00) Revision Number 00

Original Issue: November 28, 2019  
This Issue: --

**Updated By:**

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**Checked By:**

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General Manager HSEQ, OGDCL

**Approved By:**

**Syed Khalid Siraj Subhani**  
Managing Director, OGDCL

### Change/ Revision Log

#	Description of Change
	<i>Reviewed, no change suggested.</i>

### Associated Documents Approval & Issue

Related Document/ Record/ Appendix	Initiated by	Reviewed by	Checked/ Verified / Approved by
H <sub>2</sub> S Detection Equipment (Location &Quantities) for Drilling Rigs	Manager HSE	GM HSE	MD/ CEO

### 7.5.1 Purpose

- ☐ Hydrogen Sulfide (H<sub>2</sub>S) is one of the most toxic gas and at a concentration of 100 ppm is considered to be immediately dangerous to life and health (IDLH) by National Institute of Occupational Safety and Health (NIOSH). H<sub>2</sub>S is so dangerous because the level (concentration) that can kill is much lower than that of many other toxic gases. Therefore, the purpose of this procedure is to provide a basic framework for hydrogen sulfide management for all OGDCL operation facilities.

### 7.5.2 Hydrogen Sulfide(H<sub>2</sub>S) Emergency Management during Rig Operations

- ☐ H<sub>2</sub>S potential risk assessment shall be conducted jointly by Exploration and Petroserv Directorates prior to commencement of drilling operations.
- ☐ Each proposed well shall be categorized either as sweet or sour depending upon expectancy of encountering H<sub>2</sub>S during the drilling operation.
- ☐ Where the well is categorized as sour, following steps shall be taken by Petroserv Directorate:
  - ▣ Drilling Rig's Emergency Response Plan (ERP) shall be updated as per guidelines provided in this document.
  - ▣ H<sub>2</sub>S detection equipment (sensors, alarms, monitors) shall be made available in quantities as per Appendix-A, before commencement of work.
  - ▣ Continuous supply of compressed air through Breathing Air Manifolds connected with Cascade Breathing Air Supply System shall be made available at rig floor, derrick, cellar, shale shaker, trip tank/ degasser, and choke manifold (to be made operational when H<sub>2</sub>S is encountered).
  - ▣ 30/60-Minute Self Contained Breathing Apparatus (SCBA) units shall be made available at emergency response post, muster points, rig floor, dog house, mud cabin and data unit.
  - ▣ 10/15-Minute Emergency Escape Breathing Apparatus (EEBA) shall be made available at OM office, HSE cabin, rig floor, dog house, mud cabin, rig maintenance office/ workshops, power control cabin, engine driver cabin, admin room, and data unit.
- ☐ Subsequently, the Operations team shall take following steps during drilling:
  - ▣ Number of personnel on the drilling rig shall be restricted to a minimum when entering H<sub>2</sub>S gas bearing zones, especially during testing or coring.
  - ▣ Drilling crew must carry personnel H<sub>2</sub>S monitors while working at or around the rig.
  - ▣ Two suitable muster points shall be made available keeping in view the wind pattern to avoid exposure in the event of emergency involving release of H<sub>2</sub>S.
  - ▣ Rig crew must practice "wind consciousness" to know where the wind indicators are; make the habit to check regularly and always be prepared to quickly move upwind or cross-wind.
  - ▣ All personnel shall receive safety induction prior to start of work and have knowledge of the location of the Muster Points.
  - ▣ The rig crew shall be made to participate in the H<sub>2</sub>S rescue mockup drills and practice wearing and using breathing apparatus.
  - ▣ Periodic inspection shall be undertaken to assure that all safety / emergency equipment and gadgets are properly stored, maintained and fully operational. Drilling crew must make a habit to check the H<sub>2</sub>S alarms as during daytime alarm lights can be difficult to see.
  - ▣ Safe operating conditions shall be maintained and alert shall be made for any changes in conditions especially when approaching suspected gas bearing zones or during well testing.
  - ▣ Each team working in the hazardous zone shall have the requisite number of Advanced First Aiders.
  - ▣ Mechanism of community evacuation in case of emergency must be incorporated into Drilling Rig's Emergency Response Plan (ERP).
- ☐ H<sub>2</sub>SEmergency Conditions can be subdivided into three conditions:

<b>Condition-I: Caution</b> (When H <sub>2</sub> S concentration is more than zero but less than 10ppm)	<ul style="list-style-type: none"> <li>∞ Continuous <b>Yellow Light</b> flash over rig with no alarm</li> <li>∞ Be alert for a condition change</li> <li>∞ Keep emergency Breathing Apparatus (BA) like EEBA and SCBA nearby and ready in case H<sub>2</sub>S levels increase beyond 10ppm</li> </ul>
<b>Condition-II: Potential Danger to Life and Health</b> (When H <sub>2</sub> S concentration is 10ppm to 15 ppm)	<ul style="list-style-type: none"> <li>∞ <b>Red Light</b> flashover rig with no alarm</li> <li>∞ All Rig site personnel shall be advised of the change in the condition level</li> <li>∞ Use the buddy system (i.e. work in pairs) to prevent anyone from entering or being left in an area alone</li> <li>∞ Condition-II will remain in effect until the H<sub>2</sub>S concentration drops below 10ppm and the yellow flashing light deactivates or Condition III develops</li> </ul>

<p><b>Condition-III: Extreme Danger</b> (When H<sub>2</sub>S concentration is greater than 15 ppm)</p>	<ul style="list-style-type: none"> <li>∞ <b>Red Light Flash over Rig with continuous alarm</b></li> <li>∞ All non-essential personnel will mask-up and proceed to the upwind muster point</li> <li>∞ A list of key personnel shall be compiled and included in Site Emergency Procedure who shall remain on site.</li> <li>∞ All non-essential personnel or all personnel, as appropriate, shall be evacuated</li> <li>∞ The "buddy" system (working in pairs) will be used to prevent anyone from entering or being left in an area alone, even wearing SCBA</li> <li>∞ Do not remove masks until absolutely certain the air is safe to breath. Replenish air supply from cascade system as needed</li> <li>∞ If a sudden gas release occurs without warning, you should:             <ul style="list-style-type: none"> <li>– Hold your breath but do not inhale to do so and don BA (EEBA and SCBA). If a BA set is not readily available hold your breath and move rapidly upwind or cross wind muster point. Don BA ASAP. Don't panic.</li> <li>– If H<sub>2</sub>S gas comes to surface, it is to be burned at the flare if possible. Check for SO<sub>2</sub> inboard of the flare. Do not assume the area is safe after the gas is ignited. Additions of scavengers to the mud should be made as deemed prudent.</li> </ul> </li> <li>∞ When circulation with less than 10ppm H<sub>2</sub>S can be achieved and the detector readings show less than 10 ppm (alarms not activated) the condition level will revert to condition I or II depending on the operation and drilling zone.</li> <li>∞ After consulting H.O., Operation Manager shall be responsible for igniting the well in the event of severe well control problems. This decision should be made only as last resort in situations where it is clear that;             <ul style="list-style-type: none"> <li>– Human life and property are endangered.</li> <li>– There is no hope of controlling the gas release under the prevailing conditions at the well.                 <ul style="list-style-type: none"> <li>▣ If the well is ignited, the burning H<sub>2</sub>S will be converted to sulphur dioxide (SO<sub>2</sub>), which is also highly toxic and heavier than air. Do not assume that area is safe after the well is ignited.</li> <li>▣ If the well must have to be ignited, the primary method will be with a flare gun.</li> </ul> </li> </ul> </li> </ul>
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Note:-

- ▣ Air Manifolds of Cascade Breathing Air Supply System shall be used for working in an H<sub>2</sub>S drilling environment.
- ▣ Emergency Escape Breathing Apparatus (EEBA) shall be used for "evacuation" only and neither for search and rescue operation, nor for working in an H<sub>2</sub>S environment.
- ▣ Self-Contained Breathing Apparatus (SCBA) shall be used for "rescue" and "search" operation only.

### 7.5.3 Hydrogen Sulfide (H<sub>2</sub>S) Emergency Management during Plant Operations

#### 7.5.3.1 H<sub>2</sub>S Hazards

- ☐ An evaluation of gas processing facilities shall be carried out to determine if fixed H<sub>2</sub>S detection and alarm systems are needed. This evaluation should consider the likelihood of H<sub>2</sub>S gas accumulating in high concentrations in enclosed workplaces, where workers may be unknowingly exposed.
- ☐ Individual response to exposures may vary according to frequency of exposure, duration of exposure, intensity of exposure, age, fitness & health and personal susceptibilities. Therefore, all personnel must receive safety induction prior to start of work and have knowledge of the location of the Muster Points. The field personnel shall be made to participate in the H<sub>2</sub>S rescue mockup drills and practice wearing and using breathing apparatus.
- ☐ Since concentration of H<sub>2</sub>S in process stream when release into atmosphere is diluted in ratio of 100:1, based on this rule facilities are categorised as:

Classification	Concentration in the Feed Gas
Sweet facility	0 to 49 ppm
Low Risk Sour facility	50 to 499 ppm
High Risk Sour facility	+500 ppm



**7.5.3.2 Detection and Protective Measures:**

<b>Low Risk Sour Facility: (50 to 499 ppm)</b>	
<b>H2S Detection:</b>	<ul style="list-style-type: none"> <li>∞ Hydrogen Sulfide Risk assessment of the facility shall be conducted to identify locations of Hydrogen Sulfide Fixed Gas Detectors.</li> <li>∞ Fixed Gas Detector Reading shall be made available in plant control room and shall activate plant emergency alarm in case of H<sub>2</sub>S detection &gt; 10 ppm.</li> </ul>
<b>H2S Protection:</b>	<ul style="list-style-type: none"> <li>∞ If H<sub>2</sub>S level has a tendency to fluctuate, strict access control to plant and wellhead facilities shall be incorporated into location management system and no person shall be allowed to enter or leave plant and wellhead area without personal H<sub>2</sub>S detectors.</li> <li>∞ Two suitable muster points shall be made available at all wellheads and plant facilities keeping in view the wind pattern to avoid exposure in the event of emergency involving release of H<sub>2</sub>S.</li> <li>∞ Wind Socks shall be installed and maintained at all prominent locations.</li> <li>∞ All employees shall be imparted with H<sub>2</sub>S training as part of induction including Competencies in H<sub>2</sub>S, breathing apparatus, sour work practices.</li> <li>∞ Company personnel, contractors shall be made aware of the hazard and the appropriate actions to escape or shelter from a credible H<sub>2</sub>S release.</li> <li>∞ Facilities shall have Emergency Response Procedures (ERPs) which specifically address the sour aspects of the operation and steps to be taken in case of loss of containment.</li> <li>∞ Sour equipment shall be properly isolated and made safe prior to breaking of containment. When returning to service, proper assembly, tightening, purging and leak testing shall be carried out to ensure integrity.</li> <li>∞ Sampling of sour fluids will be strictly controlled and managed, using engineered sample points, breathing apparatus and the buddy system.</li> </ul>
<b>High Risk Sour Facility: (+500 ppm)</b>	
<b>H2S Detection:</b>	<ul style="list-style-type: none"> <li>∞ All employees shall be required to carry personnel H<sub>2</sub>S Monitors when entering plant or wellhead facilities.</li> <li>∞ Fixed H<sub>2</sub>S Detector must be installed at all high risk sour wellhead and plant locations. The number and location of fixed Gas detectors shall be ascertained after Risk Assessment by competent personnel.</li> <li>∞ Fixed Gas Detector's real-time readings shall be made available in plant control room and shall activate plant emergency alarm in case of H<sub>2</sub>S detection &gt; 10 ppm.</li> <li>∞ The Plant shall be configured to automatically blow down to flare in case H<sub>2</sub>S is released due to leakage / loss of containment in excess of 50 ppm.</li> <li>∞ Due to community risk, pipelines from wellheads must have some adequate mechanism of leak detections which should activate well shutdown and blow down of pipelines to flare in case a leak is detected.</li> </ul>
<b>H2S Protection:</b>	<ul style="list-style-type: none"> <li>∞ Sufficient number of 5/10 minute Emergency Escape Breathing Apparatus (EEBA) sets shall be made available to all personnel who shall enter plant/ wellhead facilities so that in case, safe evacuation is made.</li> <li>∞ Sufficient number of 30 minute Self Contained Breathing Apparatus (SCBA) sets shall be made available to all emergency personnel who have the potential for exposure to H<sub>2</sub>S during rescue and search operations in the event of loss of containment or the failure of flare systems that may combust fluids containing H<sub>2</sub>S.</li> <li>∞ Strict access control to plant and wellhead facilities shall be incorporated into location management system and no person shall be allowed to enter or leave plant and wellhead area without personal H<sub>2</sub>S detectors and 5/10 minute EEBA.</li> </ul>

- ∞ Two suitable muster points shall be made available at all wellheads and plant facilities keeping in view the wind pattern to avoid exposure in the event of emergency involving release of H<sub>2</sub>S.
- ∞ Wind Socks shall be installed and maintained at all prominent locations.
- ∞ All employees shall be imparted with H<sub>2</sub>S training as part of induction including competencies in H<sub>2</sub>S breathing apparatus, sour work practices.
- ∞ Company personnel, contractors shall be made aware of the hazard and the appropriate actions to escape or shelter from a credible H<sub>2</sub>S release.
- ∞ Facilities shall have Emergency Response Procedures (ERP's) which specifically address the sour aspects of the operation. Emergency drills shall be conducted regularly to keep personnel trained on the ERP's.
- ∞ Each team working in the hazardous zone must have the requisite number of Advanced First Aiders.
- ∞ Mechanism of community evacuation in case of emergency must be incorporated into Location's Emergency Response Plan.
- ∞ Sour equipment shall be properly isolated and made safe prior to breaking of containment. When returning to service, proper assembly, tightening, purging and leak testing be carried out to ensure integrity.
- ∞ Sampling of sour fluids will be strictly controlled and managed, using engineered sample points, breathing apparatus and the buddy system.
- ∞ Risk assessments shall be done for sour activities, and the job procedures, hazards and controls shall be identified to ensure the work is done safely.
- ∞ High Risk H<sub>2</sub>S Areas shall be specified and access to High Risk H<sub>2</sub>S designated areas shall only be allowed provided the following have been adhered to:
  - Permit Issuing/ Area Authority has completed a gas test of the area and the recorded results indicate < 5 ppm of H<sub>2</sub>S in air.
  - Valid Permit to Work has been issued, authorized by the Responsible Supervisor, validated by the Area Authority and specifying clearly the reasons for entry.
  - Persons entering the restricted area have the correct safety equipment for that area which shall include personal H<sub>2</sub>S monitors and EEBA.
  - All persons entering the restricted area are fully conversant with the 'Buddy' system and aware of the escape routes and Muster Points.
  - For long time working in an H<sub>2</sub>S environment in the plant facility, Supplied Air Breathing Apparatus (SABA) shall be used.
  - All persons entering the restricted area have completed and signed the Entry logbook i.e. Name, Department, Entry Pass Number and Time In.

Note:-

- Supplied Air Breathing Apparatus (SABA) shall be used for long time working in an H<sub>2</sub>S environment in the plant facility. Two compressors shall be made available for filling of the SABA cylinders.
  - Emergency Escape Breathing Apparatus (EEBA) shall be used for "evacuation" only and neither for search and rescue operation, nor for working in an H<sub>2</sub>S environment.
- Self-Contained Breathing Apparatus (SCBA) shall be used for "rescue" and "search" operation only.

#### 7.5.4 Treatment After H<sub>2</sub>S Exposure

- ☰ Treatment of life threatening H<sub>2</sub>S exposure, characterized by loss of consciousness and associated respiratory failure, shall be aimed at:
  - Maintaining respiration by first aid measures. Oxygen resuscitator must be used as soon as possible.
  - Treatments of local irritant effects of H<sub>2</sub>S gas on the eyes and mucous membranes of respiratory tract by supportive measures and medical treatment, by field medic.
  - Enhancing detoxification by administration of antidotes, by field medic.

- ☐ Immediately remove victim from the hazardous area to fresh air while wearing SCBA and using the buddy system (i.e. 2 people, 1 rescuing, 1 in standby in safe area). Immediately call field medical officer, advanced first aiders. Check mouth of victim (false teeth, chewing gum, etc.) and clear if needed. If he is breathing, maintain at rest and administer O<sub>2</sub> if available. If breathing has ceased or is labored, start artificial respiration to clear lungs of contaminated air. Prior to applying mouth to mouth respiration, try to expel gas from victim's lungs by pressing down the chest, to prevent rescuer himself from being exposed by breathed H<sub>2</sub>S. Apply O<sub>2</sub> resuscitator as soon as available on site to support respiration, once the victim resumes breathing spontaneously.
  - ☐ If it is impossible to move victim to fresh air, apply resuscitator immediately after checking victim's mouth as above. The role of oxygen in the treatment of H<sub>2</sub>S poisoning is essential: this is the fastest method for counteracting the effects of H<sub>2</sub>S inhalation. Keep then victim at rest and prevent the victim from becoming cold. Then evacuate the victim, if necessary.
  - ☐ If eye contamination has occurred, flush with clear water for up to 10 minutes.
  - ☐ Treatment to enhance detoxification exists but requires extreme care & high medical knowledge and therefore be carried out by a qualified medical practitioner.
  - ☐ First Aid and medical equipment shall include:
    - ☐ Oxygen resuscitator and inhalator
    - ☐ Eye wash solution
    - ☐ Usual first aid equipment
-

**Appendix A**

**H<sub>2</sub>S Detection Equipment (Location & Quantities) for Drilling Rigs**

**Personal H<sub>2</sub>S Monitors**

Minimum **15** (actual to be determined & provided after risk assessment)

**Fixed H<sub>2</sub>S Gas Sensors**

RIG FLOOR	x 2	CELLAR	x 1	WASTE PIT	x 1
MUD TANKS	x 1	SHAKERS	x 1		
TRIP TANK	x 1	CHOKE	x 1		
FLARE PIT	x 1	RIG SITE CAMP	x 1	<b>TOTAL</b>	<b>10</b>

**Fixed LEL Gas Sensors**

RIG FLOOR	x 1	CELLAR	x 1	CHOKE	x 1
MUD TANKS	x 1	SHAKERS	x 1	<b>TOTAL</b>	<b>05</b>

**H<sub>2</sub>S Alarms**

RIG FLOOR STAIRS	x 1	RIG FLOOR	x 1
MUD TANKS	x 1	SHAKERS	x 1
ENGINE ROOM	x 1	MINI CAMP	x 2
GENERATOR	x 1	MAIN GATE	x 1
		<b>TOTAL</b>	<b>09</b>

**LEL Alarms**

SHAKERS	x 1	RIG FLOOR	x 3
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**Multi Gas Detectors (H<sub>2</sub>S, CO, LEL, O<sub>2</sub>)**

HSE OFFICE	x 2
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**Wind Socks**

RIG FLOOR	x 1	WATER PIT	x 1
MUD CABIN	x 1	MUSTER POINT B	x 1
MUSTER POINT A	x 1	NEAR FLARE PIT	x 1
NEAR FUEL TANKS	x 1	<b>TOTAL</b>	<b>07</b>

## 7.6 Management of Contractors, Subcontractors & Service Companies

OGM/P-HSE-7.6(08) Revision Number 8

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### Change/ Revision Log

#	Description of Change
1	Added: Purpose
2	Added: Contract Modes
3	Added: Contract HSE Risk Determination
4	Added: Contractor Management

### Associated Documents Approval & Issue

Related Document/ Record	Initiated by	Reviewed by	Checked/ Verified / Approved by
Supplier's/ Contractor's Performance Evaluation	End User	HSE Rep.	Concerned HOD



### 7.6.1 Purpose

- ☐ The purpose of this procedure is to give guidance for best practice in the HSE management of contractors through a defined structure, content and documentation. The ultimate goal is to identify and manage HSEQ risks related to contracted activities and services appropriately.

### 7.6.2 Contract Modes

(Ref. IOGP Report 423 "HSE management - guidelines for working together in a contract environment")

Contract Mode 1: "The contractor provides people, processes and/or equipment for the execution of the contract under the oversight, instructions and HSE-MS of the client (OGDCL).

The contractor has a management system to provide assurance that the personnel for whom it is responsible are qualified and fit for the work and that the processes, tools, materials and equipment they provide are properly maintained and suitable for the contract. This mode requires the contractor reports HSE performance data, including events and incidents, to the client.

Typically, this could apply to scopes of minor modification or maintenance/ turnaround work on a client owned and/or operated site."

Contract Mode 2: "The contractor provides people, processes, equipment and/or facilities for the execution of the contract, as a main rule, under its own HSE-MS, providing the necessary instructions and oversight and verifying the proper functioning of its HSE-MS.

This mode requires interfacing or bridging with the client's HSE-MS and also reporting HSE performance data including events and incidents to the client. The client is responsible for assuring the overall effectiveness of the HSE management controls put in place by the contractor, including its interface with Subcontractors, and ensuring that both the client's and the contractor's HSE-MS are compatible.

This could apply to scopes of work on either contractor, client or third party owned/operated sites. The location will typically drive the level of interfacing and bridging required based on risk".

Contract Mode 3: "The contractor provides people, process, equipment, and/or facilities for the execution of the contract under its own oversight, instruction, and HSE-MS that requires no interfacing or bridging with the client's HSE-MS and is not required to report HSE performance data including events and incidents to the client. However, this does not exclude the possibility that the client may wish to guide and influence HSE performance under this type of contract; may provide product quality or environmental specifications, quality control and acceptance testing, etc.; and/or may insist that the contractor comply with a code of conduct which addresses human rights, labor rights, corruption, etc.

Typically, this could apply to scopes of work on contractor owned/operated sites or third party sites, and include examples such as:

- manufacturing of products produced for the open market, which client purchases (e.g. vehicles)
- manufacturing of components in a factory together with the manufacture of components for other customers
- construction at contractor sites shared by other customers
- delivery of good or products to client locations by a contractor who is in business to deliver to many other companies
- activities in shared port facilities, in particular the 'international' port areas before customs clearance
- activities of military or law enforcement agencies, over which client cannot exercise control.

Other Mode 3 contractors provide services that can have HSE implications to client such that their service performance and management still require assessing prior to use and ongoing monitoring by client.

Examples include:

- any type of non-dedicated medical services, clinic or hospital
- catering supplied vendors
- hotels and other leased housing or office space
- taxi companies
- public transport including airlines."

**7.6.3 Contract HSE Risk Determination**

- ☰ Each contract must be assessed to determine the HSE risk. This is accomplished by evaluating the activities that are covered in the contract work scope and performed by that contractor. The activity with the highest level of HSE risk determines the overall HSE risk of the contract. OGDCL shall not classify the contractor as an HSE risk but rather assesses their HSE MS and ability to manage that risk. Following provides further guidance on the assignment of contract HSE risk:
  - ⊕ High or medium contract HSE risk is determined only for activities undertaken by "Reporting Contractors" (Mode 1 or 2 contracts).
  - ⊕ **Incidents:** Contract HSE risk is concerned with hazards & associated risks leading to incidents during the performance of the contract. Consequential risks through bad design or materials are addressed through the technical specification of the contract.
  - ⊕ **Exposure through the location/ transportation:** Some activities are not hazardous in themselves but become hazardous because of exposure through the location or transportation. In such cases, OGDCL shall allocate the contract HSE Risk to the contract that can affect the risk. In other words, only the contractor performing the activities and not those simply exposed to the hazard.
  - ⊕ **Competence:** Competence of contractors and subcontractors is critical. Even low contract HSE risk activities can lead to incidents (immediate or delayed) if the competence of the workers involved is not adequate. The contract HSE Risk categorization is based on the assumption that the work will be done by competent workers that are properly trained to perform their assigned tasks.
  - ⊕ **Sublet:** Many contracts allow further subletting the work, either in totality, between worksites or in mobilization activities. Where these activities are explicitly included within the scope of the contract and they are undertaken by a "Reporting Contractor", the contract cannot have low contract HSE Risk.

**7.6.4 HSE Cognizant Procurement Cycle**

- ☰ OGDCL shall deploy a rigorous HSEQ compliant procurement philosophy based on following HSE Cognizant Procurement Cycle and it is reasonably believed that a properly spelled out contract can help to understand the expectations of OGDCL from contractor and anticipated deliverables by contractor:-

Step No.	Phase	Target	OGDCL	Contractor
Step 1	Indent Preparation	Specifications to manage hazards related to the work shall be identified as scope & depth that OGDCL management needs to involve in next phases.	User's/ Indenting Department shall work with IRC and initiate the risk assessment and takes into account Technical, HSE and other domain's input if needed to finalize the specifications.	N/A
Step 2	Advertisement	TOR/ SOW shall be finalized and advertised. Confirmation of major hazards with outline targets criteria and methods for control.	Supply Chain Management (SCM) shall prepare bid documents and finalize advertisement for tendering.	Respond to advertisement: Discuss HSE responsibilities and staffing internally.

Step 3	<i>Tender Period</i>	Preparation of Technical, Commercial, Quality Control and HSE Plans.	User's/ Indenting Department shall work with SCM, HSE and Technical domain, respond to clarification requests. The typical activities shall be to meet with contractor reps, site visits, communicate OGDCL's HSE System to contractors, etc.	Prepare HSE Plan along with the bid: Clarification requests, Meetings, Site Visits.
	<i>Evaluation and Contract Award</i>	Confirmation that contractor HSE Plan meets OGDCL criteria. Agreement with contractor on methods to be used, performance measurement criteria and audit/review strategy.	User's/ Indenting Department shall ensure that HSE requirements be included in the contract. Typical activities shall be to evaluate bids, raise clarifications on contractor's HSE Plan and finalize Contract.	Respond to clarifications / meetings.
Step 4	<i>Mobilization</i>	Confirmation that contractor's HSE Plan has achieved pre-execution targets.	User's/ Indenting Department shall be responsible for this phase. The typical activities may include pre-mobilization meeting, confirmation of contractor's HSE Plan, activities supervision, pre-execution audit.	Kick-off meeting, Confirm HSE Plan activities, Supervision, Induction, Training, Meetings, Inspections, Pre-execution status achievement.
	<i>Kick-off</i>	Assurance and verification that contractor systems are performing in line with contractor's HSE Plan.	User's/ Indenting Department shall be responsible. The typical activities may include kick-off meetings, communicate HSE requirements with fields supervisors, confirm the preparation of people and equipment are line to contract requirements, etc.	Supervision, Inspection, Induction, Training/Drills, Toolbox-Talks, performance review systems.
Step 5	<i>Work in progress</i>	Management of work activities, Milestone Review.	Location management shall be responsible. The typical activities may include routine walk through, site inspection/ observation, investigation of incidents, auditing etc.	Supervision, routine HSE management, such as HSE meeting, inspections, c&tp actions tracking, investigation of incidents, auditing, etc.
Step 6	<i>Evaluation/ Close-out</i>	Analysis and feedback of OGDCL and Contractor HSE Performance.	User's/ Indenting Department and Unit Management shall be responsible. The typical activities shall include Close-out meeting, communicate to contractor, feedback for future contract HSE Plans/Contract clauses.	Close-out report and feedback (to own management).

### 7.6.5 Contractor Management

- ☐ OGDCL shall strive to ensure safety of contractor in line with OGDCL approved HSEQ Policy. The contractors shall be selected against HSEQ requirements.
- ☐ The company shall essentially include HSEQ requirements in the Service Order/ Contract/ PO.
- ☐ Line management shall ensure through rigorous supervision that all contractor comply with HSEQ requirements during their period of engagement.
- ☐ During the project or services, Contractors shall be assessed for their HSEQ performance. Following KPIs will be communicated prior to execution of contract and shall be assessed periodically;
  - ⊕ No. of HSE Inspections
  - ⊕ No. of Hazards Reported (UB/UC) & actions taken within assigned time
  - ⊕ No. of HSE Meetings
  - ⊕ No. of Toolbox held
  - ⊕ No. of JVA/ JHA Meetings
  - ⊕ No. of Emergency Drill
  - ⊕ No. of Near-miss Reported & actions taken within assigned time
  - ⊕ No. of Trainings
- ☐ Concerned Department/ Section shall use Supplier's/ Contractor's Performance Evaluation template to gauge the HSEQ performance of Contractor time to time and outcome shall be discussed in regular review meetings.

#### Meetings with Contractors:

- ☐ Formal meetings shall be convened with contractors with intent to ensure that the contractor is aware of the expectations on behaviors in the execution of the work; a pragmatic understanding of OGDCL commitment to HSEQ is imparted to contractor; all applicable requirements are conveyed to contractor; a list of highlighted areas for improvement in the HSE Plan and agree on actions to remove deficiencies is shared; and performance monitoring is defined based on the capability of the contractor, the activity risk level and concurrence on the reporting requirements & KPIs.
- ☐ Meetings at 3 Stages shall be planned as a) Pre-Job Meeting/Kick-off Meeting; b) Regular Review Meeting and c) Close-Out Meeting.
  - a. Pre-Job Meeting/ Kick-Off Meetings:** These are carried out to explain OGDCL HSEQ commitment and expectations from Contractors with regard to HSEQ. The agenda shall include;
    - ⊕ Scope of work and review of associated major hazards specific to contract.
    - ⊕ Review of high risk activities & control management; confirmation of workers' competence; this includes both OGDCL and Contractor workers who are exposed to workplace hazards as defined in the scope of work.
    - ⊕ Review of arrangements for sub-contractors.
    - ⊕ Review of Contractor HSEQ Plan and/or Bridging Document and confirmation that roles and responsibilities have been clearly defined and understood as tabulated below:

#	Title	Specific Requirement
1.	HSE Policy	Contractors and Service Companies shall be held responsible, as a minimum, for compliance with the OGDCL's HSE Policy, in addition to all governmental regulations applicable to the scope of work being performed.
2.	HSE Field Team	Contractors and Service Companies shall be solely responsible for means and methods and for jobsite HSE by assigning appropriate strength of qualified Location HSE Coordinators, Supervisors and Medical Staff with specific duties at the project site, full time, from the first day.
3.	HSE Roles & Responsibilities	Contractors and Service Companies shall ensure that all personnel assigned on the project can safely perform the essential functions of their job assignment. Contractor shall ensure that personnel maintain the appropriate standards of HSE in connection with the work that is being performed.
4.	HSE Planning	Contractors and Service Companies shall submit, before the start of project, the detailed documents as follows: i. HSE Risk Assessment Plan ii. Health Monitoring Plan iii. Safety Monitoring Plan iv. Environmental Monitoring Plan v. Emergency Preparedness and Response Plan vi. Waste Management & Disposal Plan
5.	Toolbox Talk Program	Contractors and Service Companies shall develop and ensure project-wide Toolbox Talk Program as a series of numbered discussion topics on Safety, Health and Environmental matters as daily HSE briefings by its operational teams.
6.	Work Permit	Contracts and Service Companies shall strictly follow the Work-to-Permit System and shall provide plan of activities in advance, submit THAs/JHAs where required and engage only certified staff for the hot jobs.
7.	Safety Critical Equipment	Contractors and Service Companies shall ensure that the equipment (especially to be used on site for lifting and hoisting purposes) is certified from the third party and operators have proper permits / licenses.
8.	PPE	Contractor shall acquire and maintain adequate PPE and other/related safety gadgets of an approved type as required for the performance of the work to be safely performed.
9.	Hazard Communication	Contractors and Service Companies shall ensure proper labeling at all the pertinent safety risk areas with appropriate warning signs and instructions. It shall also be ensured that all original containers of hazardous chemicals or materials entering the project site to be properly labeled with the hazard warnings and related information.
10.	Incident Reporting	Contractors and Service Companies shall immediately report to OGDCL representative all significant and important incidents involving fatality, injury, illness, environmental impacts, near hits, and/or hazardous situations.
11.	Accident Investigation	Contractors and Service Companies shall investigate and report all accidents regardless of their nature so that the cause and means of prevention can be determined to prevent a reoccurrence.
12.	Environmental Procedures	Contractors and Service Companies shall immediately clean up the trash, spills, food waste, etc. and spills of chemicals, oils, whereas potentially hazardous wastes to be immediately reported to OGDCL representative.
13.	Waste Management	Contractors and Service Companies shall place designated drums, containers, bins, etc with specific labels as Collection Method for each waste-type and further ensure safe disposal of the hazardous waste.
14.	ERP	Contractors and Service Companies shall provide orientation on Emergency Preparedness and Response Procedure to its project team and ensure that its personnel are well aware of what procedures are in practice and who is to notify in the event of any emergency.
15.	HSE Performance Reports	Contractors and Service Companies shall submit to OGDCL representative an HSE Performance Review Report on fortnight basis.
16.	Workforce's Record	Contractors and Service Companies shall issue security pass for the staff engaged and provide a) copy of attested identity cards, b) employment cards, c) HSE training cards and c) health assessment cards of its project's approved staff to OGDCL.
17.	Surveillance Audits	OGDCL's representative shall visit the project site on sporadic basis to monitor the actual level of compliance on the HSE matters. All High risk contracts shall be audited based on pre-established HSE Criteria Checklist. HSE Audit shall be led by the concerned Department/ Sectional Rep. along with HSE Rep. as audit team member.



- ⊕ Mutual consensus on Contractor's auditing schedule (as applicable)
- ⊕ Interaction of OGDCL and Contractor's emergency plans (security, pandemic disease, evacuation)

**b. Regular Review Meetings:** It is preferable for the meetings to be held on site. The recommended minimum frequency for high risk contracts is fortnightly, respectively Monthly for medium risk contracts and Quarterly for low risk contracts. A formal agenda shall be set and minutes recorded. The agenda includes;

- ⊕ Details regarding Contractor's latest works and the way he ensured compliance with the legislative and OGDCL requirements
- ⊕ Review of gaps identified during Supplier's/ Contractor's Performance Evaluation and performance against agreed HSEQ KPIs including identified non-compliance issues, actions and improvement requirements
- ⊕ Progress in implementing the HSEQ Plan formally assessed and approved and any deviations from the HSEQ Plan
- ⊕ Verification of actions agreed during previous meetings/ discussions or inspections
- ⊕ Near misses/ incidents - reports
- ⊕ Request of details regarding Contractor's latest HSEQ trainings, toolbox talks, self-audits and inspections – regular (acc. to schedule) and random
- ⊕ Upcoming works that require special safety measures and any project specific HSEQ issues
- ⊕ Share best practices & lessons learned and reinforce HSEQ importance within OGDCL and the expectation that Contractors share the same commitment (as applicable)

**c. Close-out Meetings:** Items to be discussed during close-out meetings may include, without limitation:

- ⊕ Quality of HSEQ plan and its relevance to the overall contract performance, stipulating what was learned and how future, similar contracts should be structured
- ⊕ Positive aspects of learning and how they can be applied in the future
- ⊕ Analysis of Contractor's HSEQ performance, against both the HSEQ plan and KPIs, for mutual improvement
- ⊕ Critical HSEQ documentation and records associated with the contract
- ⊕ Recognition of excellent HSEQ performance areas and review of identified non-compliance issues
- ⊕ Final remarks about Supplier's/ Contractor's Performance and performance against agreed HSEQ KPIs in context of future relationship



## 7.7 Use of Personal Protective Equipment

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### Change/ Revision Log

#	Description of Change
1	Added: Dress Code Scheme for Head Office/ Office Buildings.
2	Updated: EN531 with EN ISO 11612
3	Updated: EN345-1 S1 with EN ISO 20345

### Associated Documents Approval & Issue

Related Document/ Record	Initiated by	Reviewed by	Checked/ Verified / Approved by
PPE Need Assessment Matrix	Sectional IC	HSE Rep.	Location IC

**7.7.1 Purpose of PPE**

- ☐ The purpose of PPE shall be to protect the OGDCL employees, contractors, service companies and visitors from exposure to workplace hazards.
- ☐ PPE shall not be a substitute for the effective engineering or administrative controls and must be worn for personal protection ensuring that safety arrangements are in place.

**7.7.2 Types of PPE**

- ☐ **Category A: The Basic PPE** shall include a) Coverall/ Dangri, b) Warm Jacket/ Leather Jacket, c) Safety Shoes, d) Safety Glasses, e) Hard Hat, f) Ear Muffs and g) Cotton Gloves.
- ☐ **Category B: The Specific PPE** shall include a) Gloves (Leather, Chemical Resistant, and Latex), b) Face Shields (Welding Shields and Goggles), c) Flame Resistant Clothes, d) Long Safety Shoes, e) Gas Mask, f) Chemical Apron and f) Safety Harness.
- ☐ **Category C: The Emergency PPE** shall include complete Turnout Gear / Fire Kit (Fire Suit), SCBA/30 min., Air-Purifying Respirator (APR), and Safety Vests / Clothing with Reflective Material designed for high nighttime visibility.

**7.7.3 PPE Matrix**

- ☐ Considering practical guidelines for assessing the hazardous situations that are likely to arise under foreseeable work activity conditions and to match employee PPE to the identified hazards, each Location shall develop PPE Matrix for its individual Sections, based upon following:
  - (1) Impact
  - (2) Penetration
  - (3) Compression (roll-over)
  - (4) Chemical
  - (5) Heat
  - (6) Harmful dust
  - (7) Light (optical) radiation
  - (8) Drowning
  - (9) Falling
- ☐ PPE Matrix shall be documented by each Section in the tabular format given below and reviewed on an annual basis.

Task or work functions that are performed by the Sectional workforce members	Safety glasses	Hard hat/Helmet	Safety vest/ harness	Coverall	Muff / plugs	Chemical goggle	Gum boot	Leather (gloves ) / Insulating (gloves )	Chemical Resistance Gloves	Latex (gloves )	Face shield	Chemical apron	Welding goggles	Welding face cover	Welding gloves	Flame resistant cloth	Safety toed shoes	Dielectric safety shoes	Chainsaw chaps	Gas mask	Dust mask	SCBA	Air purifying (HEPA)	Others: (cotton gloves, etc.)
1.																								
2.																								
3.																								
4.																								
5.																								
6.																								

- ☐ Personal factors can impact the effectiveness of PPE or be a hazard in their own right and therefore be avoided/ managed with care as much as possible. Typically, these are as follows:
  - ▣ Rings, arm bangles, jewelry or similar ornaments shall not be worn.
  - ▣ Low profile 'sleeper' ear studs (one per ear) are acceptable
  - ▣ Watches shall have breakable non-metallic bands.
  - ▣ Long hair shall be tied back or enclosed in a hair net
  - ▣ Persons who may have to use breathing apparatus or face-fitting respiratory protection devices (e.g. areas where there is a risk of hydrogen Sulphide gas) shall not have beards and be clean shaven at start of shift. Moustaches that are neatly trimmed and do not interfere with correct functioning of respiratory PPE are permitted.
- ☐ The above list is not exhaustive and there may be other personal factors that should be taken into account on an individual basis. Some disabilities or impairments may have to be treated sensitively and in confidence.

## 7.7.4 Protection Mechanism

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### 7.7.4.1 Head Protection

- ☐ Hard hats, or safety helmets, which meet the requirements of EN397, shall be worn in all designated work areas as outlined in the Location (Sectional) PPE Matrix. Hard hats shall be made of plastic and designed to hold chin straps. Chin straps shall be worn when working at heights.
- ☐ The selection of the helmets shall be made with the intention a) to reduce the force of impact of falling objects, b) to reduce the force of impact resulting from a blow which may be received off center or to the top of the head and c) to reduce the danger of contact with exposed high-voltage electrical conductors.
- ☐ Metal hard hats do not meet the standards for electrical resistance and therefore shall not be permitted.
- ☐ Hard hats shall be checked monthly for signs of damage, and replaced immediately if the hard hat becomes brittle, cracked or is otherwise damaged. Suspensions and shells shall be replaced per the manufacturer's recommendation. It is recommended that suspensions be replaced at least annually and shells be replaced every 3 to 5 years.

### 7.7.4.2 Eye Protection

- ☐ Safety glasses, with side impact protection, or goggles shall be worn in all designated work areas as outlined in the Location (Sectional) PPE Matrix. Glasses shall be designed and constructed to meet EN166-1F (or equivalent standard). Where regular prescription glasses are required to be worn, over protection such as over glasses or goggles shall be used.
- ☐ Both clear and tinted lenses shall be made available, with tinted lenses provided for protection against UV light damage. Tinted lenses shall not be used during hours of darkness.
- ☐ It is the individual's personal responsibility to maintain eye protection in a safe condition. Antifogging compounds for safety glasses/ lenses shall be available and used to maintain clear vision when work conditions are impacted by fogging.
- ☐ Contact lenses are permitted, but their use shall not interfere with or be compromised by the work activity. Contact lenses do not provide eye protection and the wearer may have increased risk of eye injury from exposure to dusts and chemical vapors. Eye protection shall be worn in addition to the contact lenses.
- ☐ Special lenses are required when oxygen fuel cutting. Goggles are required when working with chemicals or in dusty conditions.

#### 7.7.4.3 Face Protection

- ☐ During work activities that involve grinding, chipping, and buffing, or where material could separate and become a projectile, a face shield shall be worn in conjunction with safety glasses/ goggles as defined by the job hazard analysis.
- ☐ Personnel working with chemicals, degreasers, detergents, or equipment that contains a hazardous or pressurized liquid or gas (e.g. wet cell batteries) shall wear non-vented, splash proof goggles. For exposure to hot or corrosive materials, a face shield shall be worn over the goggles.
- ☐ A welding hood, with non-glass visor, shall be worn over standard safety glasses when welding. Personnel engaged in sandblasting, water blasting or spray painting shall wear eye protection under the face shield or air supplied hood to protect the eyes and face from known hazards.

#### 7.7.4.4 Hearing Protection

- ☐ Hearing protection shall be worn in all designated high noise areas. Hearing protection shall meet the requirements EN352-1 for earmuffs and EN352-2 for or ear plugs. Types of hearing protection will depend on the job hazard analysis and must meet personalized fit testing requirements.
- ☐ A quantitative noise survey shall be completed around all machinery and equipment located at the site to document sound level readings and identify areas that require hearing protection. The assessment shall include both permanent and temporary equipment.
- ☐ Signs shall be posted at each work location where continuous noise levels are at 80 dB (A) or greater over an 8 hour time-weighted average. Various forms of hearing protections shall be made available, such as disposable/ reusable ear plugs or hard hat mounted ear protectors, and shall be worn in posted areas. Hearing protection shall also be worn during operations that generate noise in excess of 80 dB (A).

#### 7.7.4.5 Protective Clothing

- ☐ The wearing of Flame Resistant Clothing is required for all employees, contractors and visitors involved in a) production, plant & process operations and maintenance, b) drilling operations, services and maintenance, c) work-over jobs/ live well servicing, d) well testing, e) handling of energized equipment, f) high voltage switching operations & maintenance, g) erection/ modification of project facilities (that are located at a production facility) and h) activities assessed as hazardous during risk assessment.
- ☐ Flame Resistant Clothing is NOT required for workforce members working in field/ site offices (performing desk jobs), seismic operations, routine civil works & support services, logistics, material stores and project facilities (that are not located at a production facility).
- ☐ Flame Resistant Clothing shall comply with the following requirements:
  - ▣ Thermal protection: if the protective material is worn over another layer of fabric, the protective fabric shall exhibit an average Thermal Protective Performance (TPP) value of 4, before and after washing.
  - ▣ Flame Resistant Clothing materials shall comply with EN ISO 11612 or equivalent.
  - ▣ Reflective strips shall be visible across the arms, at a minimum, of each garment and conform to the ANSI/ ISEA 107-1999 Level 2 standards (or equivalent standard).
- ☐ All Flame Resistant Clothing and non-Flame Resistant Clothing shall be worn and maintained accordingly:
  - ▣ Personnel shall wear Flame Resistant Clothing as the outer-most garments except when other personal protective clothing is required (e.g. Chemical resistant suits, welder's leather, personal flotation devices, increased visibility vests).
  - ▣ Personnel should not wear synthetic blends such as nylon, polyester, rayon, polyethylene, etc. under the protective clothing. Natural fibers such as cottons or wools should be worn underneath.
  - ▣ Only long sleeved Flame Resistant Clothing shall be worn in designated Flame Resistant Clothing areas/ jobs.

- ❑ Flame Resistant Clothing shall be worn in such a manner as to completely cover the torso, arms and legs (sleeves rolled down & body fully zipped or buttoned up).
- ❑ Clothing should be laundered, repaired and taken out-of-service per the manufacturer's recommendations.
- ❑ Rain / Winter gear worn over Flame Resistant Clothing can negate the effectiveness of the protective layer, especially if the material would melt in a flash fire. Flame Resistant rain/winter gear is recommended where available.

**Specifications of Coverall**

**Material:** 100% Pre-shrunk Pure Cotton Drill Cloth or Flame Retardant Treatment (FRT) Cotton Drill Cloth (as per actual requirement)

**Feature:** Anti-Static

**Weight:** 180 – 200 gm/ m<sup>2</sup>

**Stitches per Inch:** 14

**Color:** Grayish Blue

**Formation:**

- Upper half with concealed two-way black high-density polyester coil zip with press brass stud closure from top to bottom with neck open
- Straight cuffs of sleeves and trousers (coverall's lower half) with concealed press brass studs on cuffs and ankle openings
- One piece top stitched shirt collar
- Stretchable elasticized waistband/ elastic waist (left & right sides)
- Officer's name tag embroidered on right side above chest pocket

**Pockets:**

- Left sleeve pocket with pen pocket divider, small flap with hook-and-loop fastener (velcro quality)
- Two 5" x 6-½" chest pockets with concealed zip closure
- Tool pocket on right leg/ knee (back side)
- ID card holder loop on chest right side above right front chest pocket
- Two radio loops
- Two back/ hip pockets
- Two side pockets with exterior-to-interior access

**Reflector:** 2" (50mm) wide white reflective FR striping around arms, legs and over the shoulders ANSI/ ISEA 107-1999 Class 2 standard or equivalent

**Logo:** OGDCL logo embroidered above left side chest pocket and on back (white thread)

**Special (where required):**

- The wearing of Flame Resistant Clothing is required for all employees, contractors and visitors involved in a) production, plant & process operations and maintenance, b) drilling operations, services and maintenance, c) work-over jobs/ live well servicing, d) well testing, e) handling of energized equipment, f) high voltage switching operations & maintenance, g) erection/ modification of project facilities (that are located at a production facility) and h) activities assessed as hazardous during risk assessment.
- Flame Resistant Clothing materials must comply with EN ISO 11612 or equivalent.
- Flame Resistant Clothing is NOT required for workforce members working in field/ site offices (performing desk jobs), seismic operations, routine civil works & support services, logistics, material stores and project facilities (that are not located at a production facility)..



**7.7.4.6 Hand Protection**

- ☐ All personnel shall wear gloves on the work site. Exceptions to this requirement, such as performing tasks that require additional finger dexterity, shall be approved by a supervisor and captured on the job hazard assessment or through the PTW system. Personnel shall use hand protection when performing work, not limited to, exposing the hands to absorption of harmful substances, cuts or lacerations, abrasions, punctures, vibrations, chemical burns, thermal burns and other harmful extremes in temperature.
- ☐ The use of fit for purpose protective gloves is mandatory when welding, oxygen fuel cutting, grinding, blasting, working with chemicals and when performing specific electrical functions or using hand tools. Leather gloves are required when rigging or handling materials. Gloves shall be free of holes and defects.
- ☐ The selection of hand protection shall be based on the specific task being performed, conditions present, and duration of exposure, potential hazards identified and performance characteristics of the glove material.

**7.7.4.7 Foot Protection**

- ☐ Safety-toed boots are required in all designated work areas outside the site office. Footwear shall meet the requirements of Safety footwear to EN ISO 20345 or equivalent. Protective footwear shall have leather or rubber uppers that extend above the ankle, an oil resistant sole, and a distinctive heel (raised 3/8 to ½ inch across the entire heel) for climbing stairs and ladders.
- ☐ Lace up or pull on styles are accepted, however lace up boots provide better ankle support and are therefore preferred. Chemical resistant foot protection is required when handling or working with hazardous or corrosive materials. Exceptions to this requirement, such as use of safety shoes by short-term visitors, shall be approved by the Location IC.

**7.7.4.8 Personal Fall Protection**

**IMPORTANT:-** IT IS EVERYBODY'S RESPONSIBILITY TO ENSURE THAT THE OGDCL'S HSE MANAGEMENT SYSTEM IS IN PLACE.



- ☐ Personal fall protection shall be worn in all designated areas and as required by the job risk assessment and Permit to Work. Fall protection shall be worn where there is a risk of falling from a height of 2 meters or more (including work areas within 2 meters of an open edge where there is the potential to fall 2 meters or more) or as detailed by the job risk assessment.
- ☐ The components of the personal fall protection system include:
  - ▣ An engineered and appropriately rated anchor point.
  - ▣ Automatic and/or self-locking connecting mechanisms.
  - ▣ A lanyard with deceleration capability.
  - ▣ A full body harness.
- ☐ All fall protection equipment shall be inspected before each use and maintained according to the manufacturer's recommendations. A register of fall protection equipment shall be maintained, including records of inspections for new and replacement equipment.

**7.7.4.9 Respiratory Protection**

- ☐ Respiratory protection shall be worn in all designated areas and as outlined by Location HSE Matrix. Respiratory protection shall meet the requirements outlined in OSHA 29 CFR Part 1910.134 – Respiratory Protection (or equivalent standard). The PPE Matrix must address the following work environments:
  - ▣ Firefighting or confined spaces when there is a risk of insufficient oxygen.
  - ▣ Protection against H<sub>2</sub>S or other hazardous atmospheres.
  - ▣ Protection against dusts, mists, vapours, gases or particulates.
- ☐ When dealing with chemicals, check the MSDS for specific guidance on respiratory protection requirements. Where there is a risk of inhaling low levels of non-toxic dusts, disposable dust masks shall be required.

**7.7.5 Color Code for Coverall, Dress code and Hard Hat (Safety Helmet):**

- ☐ Standardization in colors shall be as follows:

Color of **Coverall** for use in Operating Fields/ Sites

Grayish Blue	OGDCL Officers
Red	Firefighting Crew
Dark Blue	OGDCL staff members; laborers (other than Officers) Contractors shall comply as per their own company's policy

Dress Code for Head Office/ Office Buildings

Olive Green	Maintenance Staff (Plumber, Electrician, Carpenters etc)
Red	Fire Chief
Dark Green	Fireman/ Fire Supervisor
Head Chef	White
Black	Assistant Cook
Black Trouser with Blue Lining Shirt	Cooking/ Serving Staff
Light Blue	Janitors
Blue	HVAC

Note: No personnel shall wear loose dress and that of inferior quality fabric.

Color of **Safety Helmet** for working in PPE required areas

White	OGDCL Officers (Location ICs, Sectional ICs, Engineers, etc.)
Yellow	OGDCL staff members; laborers (other than Officers)
Green	HSE Reps. (Engineers/ Officers)
Red	Firefighting Crew
Blue	Employees of Contractors / Sub-contractors working at site
Brown	Welders or workers taking up high heat or high voltage jobs
Grey	All types of Guests/ Visitors

### 7.7.6 Issuance of PPE

- ☐ The **Basic PPE (Category A)** shall be provided to all OGDCL employees irrespective of their designation as per entitlement in the existing policy. OGDCL shall provide the **Basic PPE** to contractors, service companies and visitors at operational sites for their stay period only.
  - ☐ Five units of each **Specific PPE (Category B)** shall be allotted for two-year-basis to Sectional Heads at all OGDCL operational sites and they shall be liable to maintain this inventory.
  - ☐ Sectional heads shall issue the **Specific PPE (Category B)** to the employee(s) only against the PPE requirements mentioned in the Work Permit to safely execute the job.
  - ☐ Five units of **Emergency PPE (Category C)** shall be allotted to each Fire Section at all OGDCL operational sites and they shall be liable to maintain this inventory.
- ☐ OGDCL shall not be liable to pay any PPE allowance or associated amount to the employees: However washing allowance shall be provided as per the existing policy.

### 7.7.7 Cleaning and Maintenance

- ☐ All PPE shall be maintained, cared and stored as required in the manufacturer, supplier or user instructions or as the training requires.
- ☐ For the purposes of compliance, PPE shall be inspected, cleaned, and maintained at regular intervals so that the PPE provides the requisite protection.

### 7.7.8 Disposal

- ☐ The contaminated PPE which cannot be decontaminated shall be disposed of in a manner that protects employees from exposure to hazards.

## 7.8 Framework for Site Restoration

OGM/P-HSE-7.8(01) Revision Number 1

Original Issue: January 20, 2021  
 This Issue: March 14, 2022

**Updated By:**  
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 Senior HSEQ Officer, OGDCL

**Reviewed By:**  
**Muhammad Mubashir Abbas**  
 Manager HSEQ, OGDCL

**Checked By:**  
**Mahmood-ul-Hassan Khan**  
 General Manager HSEQ, OGDCL

**Approved By:**  
**Syed Khalid Siraj Subhani**  
 Managing Director, OGDCL

### Change/ Revision Log

#	Description of Change
1.	Amended: <i>Drilling (Operations)</i> replaced with <i>Drilling Services</i> .
2.	Amended: <i>Endorsement of restoration of hazardous pit from Regulatory Body instead of NOC (Ref. RACI Chart)</i> .
3	Added: <i>Production site/ Well(site) Plugging and Abandonment (P&amp;A) Checklist</i> .

### Associated Documents Approval & Issue

Related Document/ Record	Initiated by	Reviewed by	Checked/ Verified / Approved by
OGF – HSE – 033A Well(site) Handing Over Taking Over Checklist	Field HSE Rep.	Drilling Services/ Production Rep.	Location IC
OGF – HSE – 033B QC Checklist (Treatment & Restoration)	Field HSE Rep.	Drilling Services/ Production/ P&P Rep.	Location IC
OGF – HSE – 033c Production site/ Well(site) Plugging and Abandonment (P&A) Checklist	C&ESS/ PE&FD	Drilling Services/ Production/ P&P Rep.	Location IC

### 7.8.1 General

Upon completion of drilling/ testing/ workover/ plugging and abandonment of a well/ abandonment of a production site, and where management, DGPC, local authorities and landowner agrees the facilities have no future use, custodians of the generated-waste shall restore the site to its previous condition as defined in this procedure.

Note-1: An abandoned well may be used as a disposal well to dispose off the produced water/ wastewater/ mud in the well by selecting a suitable formation below the aquifer in consultation with Reservoir Department.

### 7.8.2 Primary Responsibility Towards Treatment & Restoration of Pits

- ★ Treatment and restoration of *drilling pits* shall be the primary responsibility of **Drilling Services** as custodian of the generated-waste.
- ★ Treatment and restoration of *produced water pits* shall be the primary responsibility of **Production Deptt.** as custodian of the generated-waste.
- ★ Treatment and restoration of *pits associated with a Gas Processing and LPG Recovery Plant* shall be the primary responsibility of **P&P Deptt.** as custodian of the generated-waste.

Note-2: After successful completion of a well/ workover, each well(site) shall be handed over to Production Deptt. once all requisite HSE aspects, especially related to wastes including pits, have been duly addressed as mentioned in the *Well(site) Handing Over Taking Over Checklist*.

### 7.8.3 Assessment/ Categorization of Pits

- ☐ A pit wastes usually contains both solid and liquid components. Constituents and characteristics of environmental concern may include salts, hydrocarbons, pH value, chemicals and biologically available heavy metals.
- ☐ The constituents have the possibility of impacting soil and water quality, therefore all pits which have no operational requirement shall be restored.
- ☐ HSEQ Department shall take the lead to carry out laboratory analysis of each pit in the light of EPA regulatory requirements through concerned Department and based upon results, categorize a pit as nonhazardous or hazardous.
- ☐ However, hazardous pits with substantial hydrocarbon content and/ or oily sludge may be auctioned as per company rules and subsequently the pit shall be restored accordingly as defined in this procedure.

### 7.8.4 Pits Restoration Process

#### 7.8.4.1 Nonhazardous Pits

- ☐ Restoration requisition shall be initiated by Drilling Services/ Production/ P&P Deptt. as the case may be and forwarded to C&ESS Deptt.
- ☐ Restoration shall be carried out by C&ESS Deptt. either employing its own resources or outsourcing the job to waste management contractor.
- ☐ In case of outsourcing, TORs/ Invitation-to-Bid (ITB) document shall be prepared by C&ESS Deptt. having inputs from the concerned Departments and perform technical evaluation of the bids accordingly.

#### 7.8.4.2 Hazardous Pits

- ☐ Drilling Services/ Production/ P&P Deptt. may outsource the treatment job to waste management contractor as per requirement.
- ☐ The restoration part may either be referred to C&ESS Deptt. or Drilling Services/ Production/ P&P Deptt. may outsource it directly to the waste management contractor along with the treatment part.
- ☐ TORs/ Invitation-to-Bid (ITB) document shall be prepared by Drilling Services/ Production/ P&P Deptt. having inputs from HSEQ Deptt. in the light of EPA regulatory requirements for the treatment job and technical evaluation of the bids shall be carried out accordingly.

#### 7.8.4.3 Execution and Quality Control

- ☐ Drilling Services/ Production/ P&P Dept. shall ensure that the restoration is executed as per TORs in consultation with HSEQ Deptt..
- ☐ Laboratory results of the treated water/ cuttings/ soil samples shall be benchmarked against the permissible limits defined by regulatory body(ies)

or best industrial practice(s) and may be compared with surrounding undisturbed soil, where required.

- ☐ QC Checklist presenting overview of restoration of hazardous pits shall be developed by HSEQ Deptt.; and the same shall be filled & signed by HSEQ and Drilling Services/ Production/ P&P Reps.

#### 7.8.4.4 Budget Allocation and Invoicing

- ☐ Budget allocation, verification and processing of invoices shall be the responsibility of Drilling Services, Production, P&P and C&ESS Department.

RACI Chart					
Task/ Deliverable	C&ESS	Drilling Services	Production/ P&P	HSEQ	CSR
Initiation/ Custodianship	I	R&A	R&A	C	I
Budget Allocation/ A.F.E.	R&A	R&A	R&A	I	I
Assessment/ Categorization	I	I	I	R&A	I
T.O.R./ I.T.B.	R&A	R&A	R&A	C	I
Technical Evaluation	R&A	R&A	R&A	C	I
Job Execution/ Coordination	R&A	R&A	R&A	C	I
QC/Lab. Analysis/Progress Reporting	R&A	R&A	R&A	C	I
Conflict Resolution	R&A	I	I	I	R&A
Invoice Verification	R&A	R&A	R&A		
N.O.C. from Landowner(s)	I	I	I	I	R&A
Endorsement Certificate from RB*	I	R&A	R&A	C	I

\*RB = Regulatory Body

In case of Nonhazardous Pits	
In case of Hazardous Pits	
In case of Both Pits	

**Note:**

**R = Responsible:** *Doing The Decision;* This Departmental role is responsible for getting the decision and starting the task or deliverable.

**A = Accountable:** *Owning The Task;* This Departmental role is responsible to ensure execution and completion of the task or deliverable.

**C = Consulted:** *Assisting, as subject matter expert;* This Departmental role is responsible to provide information useful to completing the task or deliverable.

**I = Informed:** *Keeping Aware;* This Departmental role is just kept up-to-date on the task or deliverable (as it can be affected by the outcome).

### 7.8.5 Restoration of Production site/ Well(site) after Plugging & Abandoning (P&A)

#### 7.8.5.1 Restoration of Soil

- ☐ Area shall be jointly visited by Representatives of a) Drilling Services/ Production/ P&P, b) Land Management/ CSR, c) C&ESS and d) HSEQ Deptt. and any contaminated soil within and around the wellsite fence boundary shall be marked.
- ☐ Laboratory analysis of the soil shall be the responsibility of concerned Departments.
- ☐ C&ESS Deptt. shall remove the contaminated soil (if any) and where required handover it to waste management contractor/ bioremediation facility for treatment and backfill the area with clean/ treated soil.

#### 7.8.5.2 Surface Facilities Removal

- ☐ Following surface facilities from the wellsite shall be removed by Production/ PE&FD;
  - Oil, gas and water supply lines
  - Solar arrays & batteries for solar panels
  - Wellhead control panels
  - Skid mounted separator
  - Surface piping/ pipe racks/ pig launcher
  - Cables/ cable trays
  - Chemical injection tank
  - Every sort of instrumentation
  - Any other

#### 7.8.5.3 Cellar Area

- ☐ Civil construction in the cellar may be dismantled and cellar backfilled with soil with the consultation of Drilling Services/ Production Deptt.



#### 7.8.5.4 Septic Tank and Soak Pit

- Septic tank shall be broken and after neutralizing the material, the septic tank/ soak pit shall be leveled with clean soil having an extra 1 meter layer.

#### 7.8.5.5 Flow Line

- All the surface and underground flow lines and other facilities shall be removed entirely from end to end by Production/ PE&FD Deptt.

#### 7.8.5.6 Fence and Civil Construction

- Fence including main gate, mesh/ barbed/ razor/ concertina wire and anti-snake sheet around the well-site shall be removed by C&ESS Deptt..
- Civil construction like accommodation facilities, barracks, secondary containment for diesel/ chemicals and foundations may be removed by C&ESS Deptt.
- All concrete structures e.g. pads/ flow line supports, etc. at wellsite shall be removed by C&ESS Deptt.

#### 7.8.5.7 Water Source/ Tubewell

- Decision on the dismantling or usage/ handing over of water sources like tubewell(s) may be made by RC/ CSR Officer/ Land Management Section in consultation with landowner(s)/ local administration.

Note:-3 After successful plugging & abandonment (P&A) of a production site/ well(site), the site shall be handed over to the landowner/ custodian once all the requisite aspects have been duly addressed as mentioned in the *Production site/ Well(site) Plugging and Abandonment (P&A) Checklist*.

#### 7.8.6 Conflict Resolution

---

- Handling of locals' related complaints arising from the waste management services as well as their redressal shall be the responsibility of CSR Deptt.
  - Hiring of legal counsel in case litigation arises from the waste related matters shall be the responsibility of Legal Services Deptt.
  - NOC from landowner(s) shall be acquired by RC/ CSR Officer/ Land Management Section.
  - Endorsement of restoration of hazardous pit from regulatory authority(ies) shall be acquired as per regulatory requirements.
-



**Oil Gas Development Company Limited**

OGC/HSE-33A(01)

Location: \_\_\_\_\_

**Well(site) Handing Over/ Taking Over Checklist**

Nomenclature of Well(site): \_\_\_\_\_

Date: \_\_\_\_\_

#	DESCRIPTION	Yes	No	RESPONSIBILITY
01	Dismantling/ removal of unnecessary auxiliaries from the well(site) have been ensured in a safe manner.			Drilling/ Production
02	Installation/ condition of Xmas Tree and provision of necessary auxiliary equipment at safe distance have been ensured.			Drilling/ Production
03	Installation/ condition of H2S/ HC detectors and fire protection fusible plugs have been ensured.			Drilling/ Production
04	WBM/ OBM drill cuttings have been removed and safely disposed.			Drilling/ C&ESS
05	Pits with "no" future use have been treated/ safely restored and rehabilitated.			Drilling/ C&ESS
06	Pits with future use have been treated/ maintained, decanted and properly fenced.			Drilling/ C&ESS
07	All chemicals and associated areas have been safely cleaned and cleared.			Drilling/ Production
08	All temporary installations have been safely removed.			Drilling/ C&ESS
9	Wellhead cellar pit has been decanted and properly cleaned.			Drilling
10	Wellhead area has been fenced as per requirement.			C&ESS
11	Proper safety signboards have been configured at appropriate places.			Drilling/ Production

Field HSE Rep.  
**Prepared & Initiated by:**

Drilling Services/ Production Rep.  
**Checked & Verified by:**

OM/ PM/ FM  
**Endorsed by**

**It is hereby endorsed that all of the above requisite HSE aspects have been duly checked and found properly addressed and in compliance before handing over/ taking over of the well(site).**

**Handed Over By:**  
(Sign & stamp)

**Taken Over By:**  
(Sign & stamp)



**Oil Gas Development Company Limited**

OGC/-HSE-33B(01)

Location: \_\_\_\_\_

HSEQ  
Department

**QC Checklist for Treatment/ Restoration of Pit**

Frequency: \_\_\_\_\_

Nomenclature of Pit: \_\_\_\_\_

Date: \_\_\_\_\_

#	DESCRIPTION	Y	N	REMARKS
01	Are the equipment/ materials/ chemicals available at site adequate and appropriate to carry out treatment/ safe disposal of wastewater and site restoration?			
02	Are the contractor's workforce available at site adequate and competent to perform the assigned tasks as per TORs or scope of work?			
03	Are the "treatment" methodologies conform/ meet TORs & scope of work for treatment/ safe disposal of wastewater?			
04	Are the "restoration" methodologies conform/ meet TORs & scope of work for rehabilitation/ restoration of hazardous pits?			
05	Is Joint Sampling carried out during the pretreatment/ pre-restoration phase by environmental monitoring laboratory to conduct tests for parameters as mentioned in scope of work? Are the desired lab reports kept in record?			
06	Is Joint Sampling carried out during post-treatment/ post-restoration phase by environmental monitoring laboratory to conduct tests against the regulatory requirements/ best industrial practices? Are the desired lab reports kept in record?			
07	Are photographs taken "before" treatment of wastewater/ restoration of pits for record and reference?			
08	Are photographs taken during and upon completion of the wastewater treatment/ pit restoration preferably on daily basis for submission of progress reports to H.O. and also for record?			
09	Is progress like visual/ physical inspection on wastewater treatment/ pit restoration process found satisfactory?			
10	Has RC/ CSR Officer/ Land Management Section acquired NOC(s) from the landowner(s)?			
11	Has the regulatory body(ies) (where required) endorsed the treatment process in a formal manner?			

Field HSE Rep.  
**Prepared & Initiated by:**

Drilling Services/ Production/ P&P Rep.  
**Checked & Verified by:**

OM/ PM/ FM  
**Endorsed by**



**Oil Gas Development Company Limited**

OGC/HSE-33C(00)

Location: \_\_\_\_\_

**Production site/ Well(site) Plugging and Abandonment (P&A) Checklist**

Nomenclature of Well(site): \_\_\_\_\_

Date: \_\_\_\_\_

#	DESCRIPTION	Yes	No	RESPONSIBILITY
01	Surface facilities have been removed safely including:			Production/ PE&FD
a.	<i>Oil, gas and water supply lines</i>			Production/ PE&FD
b.	<i>Solar arrays &amp; batteries for solar panels</i>			Production/ PE&FD
c.	<i>Wellhead control panels</i>			Production/ PE&FD
d.	<i>Skid mounted separator</i>			Production/ PE&FD
e.	<i>Surface piping/ pipe racks/ pig launcher</i>			Production/ PE&FD
f.	<i>Cables/ cable trays</i>			Production/ PE&FD
g.	<i>Chemical injection tank</i>			Production/ PE&FD
h.	<i>Every sort of instrumentation</i>			Production/ PE&FD
i.	<i>any other</i>			Production/ PE&FD
02	Civil construction like accommodation facilities, barracks, secondary containment for diesel/ chemicals and foundations dismantled?			C&ESS
03	Concrete structures e.g. pads/ flow line supports, etc. removed?			C&ESS
04	Cellar backfilled with soil?			C&ESS
05	Wastewater pit(s) treated /restored/ rehabilitated?			Drilling/ Production/ C&ESS
06	Septic tank(s) and Soak Pit(s) tank neutralized and backfilled with soil having 1 meter extra layer?			C&ESS
08	All the underground flow lines removed?			Production/ PE&FD/ C&ESS
09	Fence including main gate, mesh/ barbed/ razor/ concertina wire and anti-snake sheet removed?			C&ESS



10	Decision amicably taken on the dismantling or usage/ handing over of water sources like tube well(s)?			C&ESS/ CSR
11	Issue resolved with the locals (if any)?			C&ESS/ CSR
12	NOC obtained from land owners?			C&ESS/ CSR
13	Regularity authority(ies) endorsed site restoration (if required)?			Drilling Services/ Production/ P&P/ HSEQ

C&ESS/ PE&FD Rep.  
**Prepared & Initiated by**

Drilling Services/ Production/  
P&P Rep.  
**Checked & Verified by**

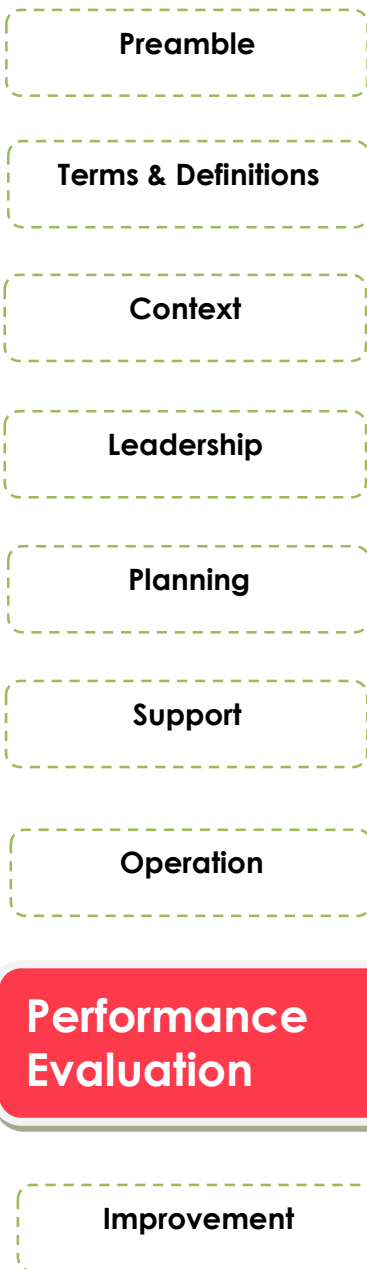
OM/ PM/ FM  
**Endorsed by**

**It is hereby endorsed that all of the above requisite aspects have been duly checked and found properly addressed and in compliance before handing over/ taking over of the plugged & abandoned well(site) to the landowner(s).**

**Handed Over By:**  
(Sign & stamp)

**Taken Over By:**  
(Sign & stamp)





**Reference Standards**  
ISO14001:2015 & ISO45001:2018  
 Section 9.1: Monitoring, Measurement, Analysis and Evaluation.  
 Section 9.2: Internal Audit.  
 Section 9.3: Management Review.  
PSM (22 Elements) Model  
**Quality Assurance (QA):** QA is important for new facilities and revisions or repairs to existing facilities to ensure that safety critical equipment which handles hazardous material (as it is fabricated) is suitable for the process application. It also ensures that safety critical equipment installed is consistent with design specifications and manufacturer's recommendations.  
**Mechanical Integrity:** This element addresses equipment tests and inspections including predictive and preventive maintenance, reliability engineering, maintenance procedures, quality control procedures, training and performance of maintenance personnel. All of these mechanical integrity efforts ensure an incident free and reliable operation, and they help to pin point root causes and avoid incident recurrence and pre-mature failures.  
**Audits and Observations:** This element covers the importance of effective auditing in site safety management and provides guidelines for conducting and evaluating safety audits.  
**Integrated Organization for Safety:** The purpose of the overall safety organization is to mobilize all available talent in the interest of safety, health, and environmental protection. It does not, in any way, relieve individual members of the line organization of their safety responsibilities. Various committees are staffed principally by members of the line organization supplemented by safety staff members and other specialists.  
**Motivation and Awareness:** The purpose of this element is to discuss and provide guidelines on different concepts and recommended practices on progressive motivation. Internal motivation is necessary to sustain high-level safety performance once that level of performance has been reached. External motivation is necessary to make the initial transition to high level safety performance because of established behavior patterns in the individual.  
**Integrated Organization for Safety:** The purpose of the overall safety organization is to mobilize all available talent in the interest of safety, health, and environmental protection. It does not, in any way, relieve individual members of the line organization of their safety responsibilities. Various committees are staffed principally by members of the line organization supplemented by safety staff members and other specialists.

**This Section's Objectives**

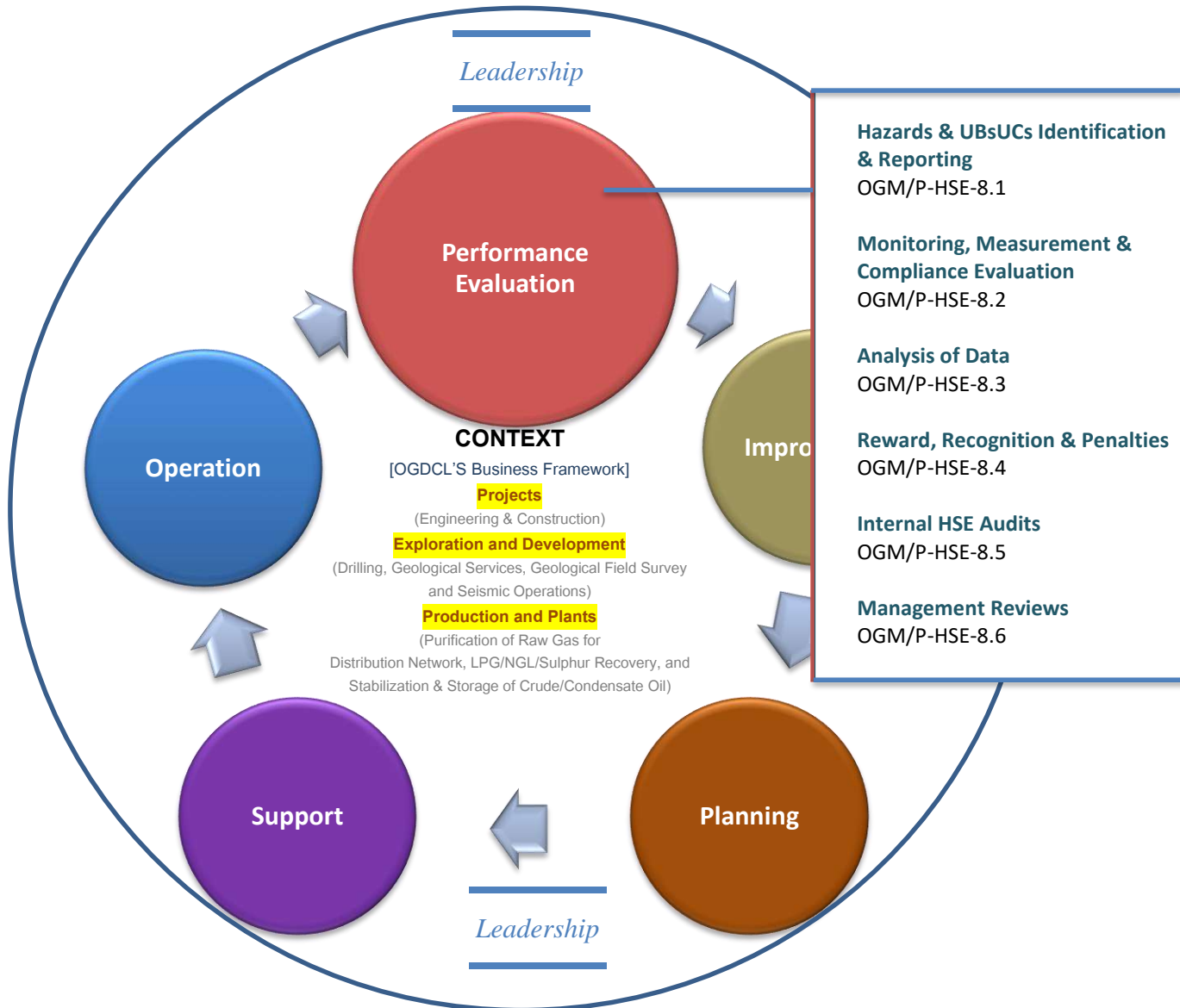
- Hazards identification and reporting.
- Determine & assess HSE System performance and compliance.
- Monitor OGDCL's HSE System.
- Establish internal audit methods, schedules, and requirements.
- Conduct HSE System conformance audits and document results.
- Review organization's HSE System.

**Associated Documents**

- STOP Cards
- Health & Hygiene Monitoring Plan
- Safety Monitoring Plan
- Environmental Monitoring Plan
- Occupational Health Assessment (Trade / Fitness Test) Plan
- HSE Monthly Report
- List of Internal (Qualified) HSE Auditors
- Annual Internal HSE Audit Planner
- Internal HSE Audit Plan (site specific)
- Internal HSE Audit Checklist
- Internal HSE Audit Summary Report
- Internal HSE Audit Non-Conformity Report (NCR)
- Agenda of Location HSE MRC Meeting
- Minutes of Location HSE MRC Meeting

**Applicable Documents**

-- Nil --





## 8.1 Hazards & UBsUCs Identification & Reporting

OGM/P-HSE-8.1 (08) Revision Number 8

Original Issue: June 25, 2007  
This Issue: March 14, 2022

**Updated By:**

**Muhammad Sameem Hussain Qaiser**  
Senior HSEQ Officer, OGDCL

**Reviewed By:**

**Muhammad Mubashir Abbas**  
Manager HSEQ, OGDCL

**Checked By:**

**Mahmood-ul-Hassan Khan**  
General Manager HSEQ, OGDCL

**Approved By:**

**Syed Khalid Siraj Subhani**  
Managing Director, OGDCL

### Change/ Revision Log

#	Description of Change
1	Added : <i>Techniques for Hazard Identification</i>
2	Added : <i>Hazard Hunt Program (HHP)</i>
3	Added: <i>STOP Card for OGDCL House</i>

### Associated Documents Approval & Issue

Related Document/ Record	Initiated by	Reviewed by	Checked/ Verified / Approved by
STOP Card	Any Employee	Location HSE Rep.	Location IC
STOP Analysis	Location HSE Rep.	Location HSE IC	Area Manager / Location IC/ GM HSE

### 8.1.1 Introduction

- ☐ To eliminate incidents and injuries, hazards need to be identified and managed. The foundation of hazards management is proactive and correct identification of hazards. Identified hazards are principally subjected to following stages;
  - Identify all applicable hazards( both based on conditions and having origin in human behavior),
  - Apply hierarchy of controls for managing hazards &
  - Communicating hazards and review the same.
- ☐ All identified hazards are manageable as based on continuous efforts, the hazards and risk profile of a Location is minimized.
- ☐ It is an obligation of every Employee and Contractor to timely report hazards encountered at our sites. Therefore, they shall be encouraged to raise maximum number of hazards so that no one gets hurt.

### 8.1.2 Techniques for Hazard Identification

- ☐ Many techniques are used for identification of hazards; however selection of a technique depends on factors including regulatory requirement, scope, stage in project lifecycle, type and complexity of system under review.
- ☐ During normal operations, reporting of hazards is encouraged to make the workplaces safer. Following scheme of hazard identification shall be employed;
  - ⊕ STOP Card
  - ⊕ Hazard Hunt Program
  - ⊕ JHA/JVA – (separate Procedure)
  - ⊕ Risk Register – (separate Procedure)

#### 8.1.2.1 STOP Observation

- ☐ The basic principle of STOP is that all injuries and occupational illnesses can be prevented. The main objective of the STOP program is to train each member of the line organization on-spot to eliminate incidents and injuries by skillfully observing people as they work, talking with them to correct their unsafe acts, and encouraging them to follow safe work practices.
- ☐ STOP Program aims to modify behaviors, by observing people as they work and by intervening them; hence eliminating at-risk behaviors. For this reason all hazards shall be identified, reported and documented using STOP Cards.

##### 8.1.2.1.1 How to Conduct STOP Observation Tour

- ☐ STOP requires following the intervention cycle;  
Stop – Observe – Act – Report
  - ⊕ One of the most important aspects shall be the communication with the personnel during the STOP intervention. This is when one can encourage good behavior / practice and with the individual, identify and discuss unsafe acts and hazards. Furthermore, it is important to realize that the intent to STOP is not a blame system, STOP is instituted to rectify hazards there and then (if possible) and change behavior and understanding of individuals involved with the task.
  - ⊕ It is important to realize that you “are getting STOP observation tour to keep your fellow employees safe and change their behavior towards safety”.
- ☐ A typical STOP Observation Tour shall be conducted as follows.
  - **STOP** near enough to the person so that you can clearly see what they are doing but far enough as to ensure that they do not impede their task.
  - Observe everything the person is doing in a careful systematic way as you review the audit categories in your mind; i.e. reactions of people, personal protective equipment, positions of people, tools and equipment, specifications and housekeeping.
  - **OBSERVE** activities from a distance and try to spot any unsafe acts. Some unsafe acts happen quickly e.g. lifting etc. So you do need to watch carefully. Try not to focus solely on people's PPE, look also at their body positions, access to the job, type and suitability of tools, people moving around, Rushing etc...
  - **ACT** by talking with the person to reinforce safe work practices and address at-risk behavior. The best method to do so get the job supervisor attention when safe to do

so, enquire about the task at hand, then ask what unsafe behavior or conditions they can observe around them. Your aim is to gently guide the supervisor towards being able to identify the unsafe acts and conditions themselves. This is called Buy-In. If the Supervisor can figure out the unsafe conditions or actions they shall eradicate themselves without requiring interventions.

- ⊕ Try to engage workers; Ask open-ended questions. Speak less, listen more.
- ⊕ It's better not to say 'I am conducting a STOP visit' as this tends to put people on the defensive immediately.
- ⊕ Ask them if they can leave the job for a few minutes while you have a chat about HSE.
- ⊕ Act in a friendly manner.
- ⊕ Ask them to explain "what the job is" and "what is it for/about".
- ⊕ Ask them how they think the task can be made safer
- ⊕ Ask them about suggestions to improve HSE
- ⊕ Only talk once the employee has finished telling you what they think
- ⊕ In case of witnessing an unsafe behavior or action. Your aim is to gently guide the worker towards being able to identify the unsafe acts and conditions themselves. This is called Buy-In. If he can figure out the unsafe conditions or actions themselves, they shall eradicate it themselves without requiring interventions.
- ⊕ Try to get to the root cause of the problem in order to know what the appropriate corrective action should be. Remember it may not be the individuals fault it could be due to:
  - Inadequate training.
  - Non recognition of the hazard or the associated impact.
  - Impracticality of the official system or procedure.
  - Unavailability/suitability of safety equipment.
  - Perceived time pressure.
- ⊕ Try and agree when and what needs to be done by whom.
- ⊕ Try to get them to conclude what should be done rather than just telling them the answer. They are then much more likely to do this when you have gone.
- ⊕ If the activities are already being conducted in safe manner, do not forget to encourage workers. This will reinforce the positive behaviors.

**REPORT** your interventions and actions on a STOP intervention card without naming the person.

#### 8.1.2.1.2 STOP Administration

- ☐ STOP Cards shall be available on every prominent area along with the Drop Boxes.
- ☐ Location IC shall ensure that Observation Tours are made and STOP Cards are filled-in as per following frequency:-
  - ☐ Once every day for HSE IC
  - ☐ Once every week for Departmental / Sectional IC
  - ☐ Once every fortnight for Location IC
- ☐ Different employees/ operations to be picked at a time; the objective is to train all employees to get acquainted with the use of STOP Cards, observe the unsafe conditions/ acts anytime.

#### 8.1.2.2 Hazard Hunt Program (HHP)

- ☐ HHP is an effective hazard identification process that aims at identifying the hazards through structured and team based approach by following an approved calendar plan.
- ☐ Corporate Annual Management Walk Around (MWA) Plan For Hazards Hunting & Reporting shall be developed by HSEQ Department emphasizing HSE commitment and visibility by OGDCL Leadership (EDs; GMs/ HODs; Area Managers) as best industry practices as per following frequency:-
  - ☐ Twice every year by ED
  - ☐ Twice every year by GM/ HOD
  - ☐ Once every quarter for Area Manager
- ☐ Location's Annual Hazard Hunt Plan shall be formulated by HSE Section and approved by Location Management as tabulated below:

#	Quarter	Date	Area	Team Lead	Member-I	Member-II
1	First	Jan	Operations			
2		Feb	Camp			
3		March	Remote			
4	Second	April	Operations			



5		May	Camp			
6		June	Remote			
7	Third	July	Operations			
8		Aug	Camp			
9		Sept	Remote			
10	Fourth	Oct	Operations			
11		Nov	Camp			
12		Dec	Remote			

- ☐ Location InCharge shall nominate members for each team; each team shall be constituted of cross-functional representatives and limited to maximum three (03) members.
- ☐ The teams would visit the specified area as per respective timeslot mentioned in the approved Hazard Hunt Plan to collect positive & negative observations.
- ☐ All of the positive and negative observations during the HHP are required to be formally captured on STOP Cards as well.
- ☐ Each Hazard Hunt Team shall discuss the observations of each particular area with the concerned Department/ Section.
- ☐ The concerned Department/ Section shall complete the required action(s) in order to address the observations.

**8.1.2.3 Review of STOP Cards**

- ☐ The observations shall be presented in HSE Management Review Committee (MRC) meetings or as deemed appropriate by Location Management where Hazard Hunt Team shall deliver a presentation containing the pictorial evidence of all positive and negative observations; intent of the system remains to be to improve the workplace conditions. (HHP should not be used as tool to abase any Department/ Section or individual.)
- ☐ Authentically filled STOP Cards are to be kept with all Sectional ICs.
- ☐ On monthly & annual basis, each Sectional IC shall review / analyze its own STOP Results whereas Location HSE IC along with Location IC shall review / analyze STOP Results of the entire Location by using the following pattern:

	Number Of Unsafe Actions / Behaviors					Number Of Unsafe Conditions				%age		
	Reaction of people (1)	Personal Protective Equipment (2)	Ergonomics (Positions of people) (3)	Tools and Equipment (4)	Procedures (5)	Tools & Equipment (6)	Structure and Work Area (7)	Environment (8)	Orderliness (9)	Total	Open	Closed
<b>December</b>												
<b>November</b>												
<b>October</b>												
<b>September</b>												
<b>August</b>												
<b>July</b>												
<b>June</b>												
<b>May</b>												
<b>April</b>												
<b>March</b>												
<b>February</b>												
<b>January</b>												
<b>Total</b>												
<b>%age</b>												

- ☐ Monthly STOP Results shall be shared with HSEQ Department H.O. for review.
- ☐ Based on the annual review of STOP Cards, in order to improve the PDCA cycle, if required, CPRs be initiated; HSE Impact (Risk) Assessment Register be updated; Safety Talks/ Toolbox meetings be improved; HSE Inspections and Audits be facilitated; HSE MRC meetings' agenda be extended; Trends regarding the type and/ or cause of unsafe conditions & acts be exhibited; Training Need Assessment (TNA) for updating Training Calendar be performed; PPE Need Assessment Matrix be reviewed/ updated; JVAs (JHAs) be revised, etc,



#### **8.1.2.4 Follow-up of STOP Cards**

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- ☐ HSEQ Department/ Section shall follow-up for the close out of the recorded hazards.
  - ☐ If any of reported hazard/ STOP Card remains open and action not taken, Location's Risk Register shall be updated for incorporation of the open hazard.
  - ☐ The close out status shall be presented by HSEQ Department/ Section in the HSE MRC meetings through pictorial presentation as before & after HHP.
-



# Performance Evaluation: OGDCL's Integrated HSE System Manual

Controlled Copy Do Not Duplicate For Internal Use Only

STOP HSE TOP HSE Report Observe Act

OGDCL

STOP HSE TOP HSE Report Observe Act

OGDCL

### OBSERVATION CHECKLIST

MARK IF ANY UNSAFE      MARK IF ANY SAFE

UNSAFE	ACTIONS	SAFE	مخبر	افعال	مخبر
<b>REACTIONS OF PEOPLE</b> All Safe					
<input type="checkbox"/>	Adjusting Personal Protective Equipment	<input type="checkbox"/>	<input type="checkbox"/>	حفاظت آلات ٹیک کرنا	<input type="checkbox"/>
<input type="checkbox"/>	Changing Position	<input type="checkbox"/>	<input type="checkbox"/>	جگہ تبدیل کرنا	<input type="checkbox"/>
<input type="checkbox"/>	Rearranging Job	<input type="checkbox"/>	<input type="checkbox"/>	کام کو ترتیب سے لانا	<input type="checkbox"/>
<input type="checkbox"/>	Stopping Job	<input type="checkbox"/>	<input type="checkbox"/>	کام کو روک دینا	<input type="checkbox"/>
<input type="checkbox"/>	Attaching Grounds	<input type="checkbox"/>	<input type="checkbox"/>	اتھارے کا سنبھالنا	<input type="checkbox"/>
<input type="checkbox"/>	Performing Lockouts	<input type="checkbox"/>	<input type="checkbox"/>	لاک آؤٹ کا سنبھالنا	<input type="checkbox"/>
<b>PERSONAL PROTECTIVE EQUIPMENT</b> All Safe					
<input type="checkbox"/>	Head	<input type="checkbox"/>	<input type="checkbox"/>	سر	<input type="checkbox"/>
<input type="checkbox"/>	Eyes and Face	<input type="checkbox"/>	<input type="checkbox"/>	آنکھیں اور چہرہ	<input type="checkbox"/>
<input type="checkbox"/>	Ears	<input type="checkbox"/>	<input type="checkbox"/>	کان	<input type="checkbox"/>
<input type="checkbox"/>	Respiratory System	<input type="checkbox"/>	<input type="checkbox"/>	سانس کا نظام	<input type="checkbox"/>
<input type="checkbox"/>	Arms and Hands	<input type="checkbox"/>	<input type="checkbox"/>	پہلو اور ہاتھ	<input type="checkbox"/>
<input type="checkbox"/>	Trunk	<input type="checkbox"/>	<input type="checkbox"/>	دھڑ	<input type="checkbox"/>
<input type="checkbox"/>	Legs and Feet	<input type="checkbox"/>	<input type="checkbox"/>	ٹانگیں اور پاؤں	<input type="checkbox"/>
<b>POSITIONS OF PEOPLE (Injury Causes)</b> All Safe					
<input type="checkbox"/>	Striking Against Objects	<input type="checkbox"/>	<input type="checkbox"/>	اشیاء سے ٹکرانا	<input type="checkbox"/>
<input type="checkbox"/>	Struck By Objects	<input type="checkbox"/>	<input type="checkbox"/>	اشیاء سے ٹکنا	<input type="checkbox"/>
<input type="checkbox"/>	Caught In, On, or Between Objects	<input type="checkbox"/>	<input type="checkbox"/>	اشیاء میں اوپر یا درمیان میں پھنس جانا	<input type="checkbox"/>
<input type="checkbox"/>	Falling	<input type="checkbox"/>	<input type="checkbox"/>	گر جانا	<input type="checkbox"/>
<input type="checkbox"/>	Contacting Temperature Extremes	<input type="checkbox"/>	<input type="checkbox"/>	زیادہ ہیٹ یا سردی سے ٹکنا	<input type="checkbox"/>
<input type="checkbox"/>	Contacting Electric Current	<input type="checkbox"/>	<input type="checkbox"/>	برقی دھار سے ٹکنا	<input type="checkbox"/>
<input type="checkbox"/>	Inhaling a Hazardous Substance	<input type="checkbox"/>	<input type="checkbox"/>	خطرناک دھواں سانس لینا	<input type="checkbox"/>
<input type="checkbox"/>	Absorbing a Hazardous Substance	<input type="checkbox"/>	<input type="checkbox"/>	خطرناک مادہ جذب کرنا	<input type="checkbox"/>
<input type="checkbox"/>	Swallowing a Hazardous Substance	<input type="checkbox"/>	<input type="checkbox"/>	خطرناک مادہ نگلی لینا	<input type="checkbox"/>
<input type="checkbox"/>	Overexertion	<input type="checkbox"/>	<input type="checkbox"/>	حد سے زیادہ کام کرنا	<input type="checkbox"/>
<input type="checkbox"/>	Repetitive Motions	<input type="checkbox"/>	<input type="checkbox"/>	لا جاہل	<input type="checkbox"/>
<input type="checkbox"/>	Awkward Position/Static Postures	<input type="checkbox"/>	<input type="checkbox"/>	غیر مناسب جگہ یا ساکن حالت	<input type="checkbox"/>
<b>TOOLS AND EQUIPMENT</b> All Safe					
<input type="checkbox"/>	Wrong for the Job	<input type="checkbox"/>	<input type="checkbox"/>	کام کے لیے غیر مناسب	<input type="checkbox"/>
<input type="checkbox"/>	Used Incorrectly	<input type="checkbox"/>	<input type="checkbox"/>	غلط طریقہ استعمال	<input type="checkbox"/>
<input type="checkbox"/>	In Unsafe Condition	<input type="checkbox"/>	<input type="checkbox"/>	غیر محفوظ کیفیت	<input type="checkbox"/>
<b>PROCEDURES AND ORDERLINESS</b> All Safe					
<input type="checkbox"/>	Procedures Inadequate	<input type="checkbox"/>	<input type="checkbox"/>	ناکافی طریقہ کار	<input type="checkbox"/>
<input type="checkbox"/>	Procedures Not Known/Understand	<input type="checkbox"/>	<input type="checkbox"/>	طریقہ کار یا معلوم نہ ہونا یا سمجھنا	<input type="checkbox"/>
<input type="checkbox"/>	Procedures Not Followed	<input type="checkbox"/>	<input type="checkbox"/>	طریقہ کار کی پیروی نہ کرنا	<input type="checkbox"/>
<input type="checkbox"/>	Orderliness Standards Inadequate	<input type="checkbox"/>	<input type="checkbox"/>	پائیدار ماحول یا طریقہ کار ناکافی ہونا	<input type="checkbox"/>
<input type="checkbox"/>	Orderliness Standards Not Known/Understand	<input type="checkbox"/>	<input type="checkbox"/>	پائیدار ماحول یا طریقہ کار سمجھنا یا جاننا نہ ہونا	<input type="checkbox"/>
<input type="checkbox"/>	Orderliness Standards Not Followed	<input type="checkbox"/>	<input type="checkbox"/>	پائیدار ماحول یا طریقہ کار کی پیروی نہ کرنا	<input type="checkbox"/>

### ELIMINATE UNSAFE CONDITIONS... PREVENT INJURIES

MARK IF ANY UNSAFE      MARK IF ANY SAFE

UNSAFE	CONDITIONS	SAFE	مخبر	کیفیت	مخبر
<b>Tools and Equipment</b> All Safe					
<input type="checkbox"/>	Are They Right for the Job	<input type="checkbox"/>	<input type="checkbox"/>	کیا	کام کیلئے ٹیک ہیں
<input type="checkbox"/>	In Safe Condition	<input type="checkbox"/>	<input type="checkbox"/>		تعمیرات میں ہیں
<b>Structures and Work Area</b> All Safe					
<input type="checkbox"/>	Are They Clean	<input type="checkbox"/>	<input type="checkbox"/>	کیا	ماف ہیں
<input type="checkbox"/>	Orderly	<input type="checkbox"/>	<input type="checkbox"/>		پائیدار ہیں
<input type="checkbox"/>	Right for the Job	<input type="checkbox"/>	<input type="checkbox"/>		کام کیلئے ٹیک ہیں
<input type="checkbox"/>	In Safe Condition	<input type="checkbox"/>	<input type="checkbox"/>		تعمیرات میں ہیں
<b>Environment</b> All Safe					
<input type="checkbox"/>	Is It Clean	<input type="checkbox"/>	<input type="checkbox"/>	کیا	ماف ہیں
<input type="checkbox"/>	Orderly	<input type="checkbox"/>	<input type="checkbox"/>		پائیدار ہیں
<input type="checkbox"/>	In Safe Condition	<input type="checkbox"/>	<input type="checkbox"/>		تعمیرات میں ہیں
<b>Orderliness</b> All Safe					
<input type="checkbox"/>	Standards Available	<input type="checkbox"/>	<input type="checkbox"/>		مستند
<input type="checkbox"/>	Adequate	<input type="checkbox"/>	<input type="checkbox"/>		کافی ہیں

● **SAFE ACTS / CONDITIONS OBSERVED**

● **ACTIONS TAKEN TO ENCOURAGE CONTINUED SAFE PERFORMANCE**

● **UNSAFE ACTS / CONDITIONS OBSERVED**

● **IMMEDIATE CORRECTIVE ACTION**

● **ACTION TO PREVENT RECURRENCE**

● **مدیر یا حفاظتی افعال کیفیت کا دیکھنا**

● **مستند حفاظتی کارکردگی کیلئے افعال کی حصول فروری**

● **غیر حفاظتی افعال کیفیت کا دیکھنا**

● **فوری ترمیمی اقدام کرنا**

● **دوبارہ عمل کو روکنے کے اقدام**

Observer's Signature: \_\_\_\_\_

Working Area: \_\_\_\_\_ Date: \_\_\_\_\_

## HSE TOP CARD FOR OGDCL HOUSE ISLAMABAD

(ONLY TO BE FILLED IN CASE OF REPORTING SAFE/UNSAFE ACTS AND/OR) CONDITIONS TO CHANGE SAFETY BEHAVIOR ONSPOT)

Check (✓) Mark The Upfront Activity (Job/ Operation/ Process/ Function)

<input type="checkbox"/> General Movement	<input type="checkbox"/> Visitor/ Guest/ Delegation's Movement	<input type="checkbox"/> Office: Ergonomics	<input type="checkbox"/> Meeting, Seminar, Workshop, Interview	<input type="checkbox"/> Filing, Material Stacking, Storage	<input type="checkbox"/> Manual Handling of Office Equipment
<input type="checkbox"/> Special Movement	<input type="checkbox"/> Compressor: O&M	<input type="checkbox"/> Office: Ambience*	<input type="checkbox"/> Fire Extinguishers/ Hydrants/ Hoses: O&M	<input type="checkbox"/> Food: Preparation, Serving & Washing	<input type="checkbox"/> Generators: O&M
<input type="checkbox"/> Manual Handling of Heavy Equipment	<input type="checkbox"/> Boiler: O&M	<input type="checkbox"/> Computers/ Laptops & Accessories: O&M	<input type="checkbox"/> Batteries/ Solar Cells: O&M	<input type="checkbox"/> Janitorial Services: O&M	<input type="checkbox"/> Electric Room: O&M
<input type="checkbox"/> HVAC System: O&M	<input type="checkbox"/> Elevators: O&M	<input type="checkbox"/> Electrical Appliances: O&M	<input type="checkbox"/> Plumbing Job	<input type="checkbox"/> Data Center: O&M	<input type="checkbox"/> Suspended Working Platform: O&M
<input type="checkbox"/> AHU System: O&M	<input type="checkbox"/> Lift Room: O&M	<input type="checkbox"/> Lights/ Fans/ Detectors: O&M	<input type="checkbox"/> Photocopying: O&M	<input type="checkbox"/> Data/ Maps Archival	<input type="checkbox"/> Paint Job
<input type="checkbox"/> Hot/ Work-At-Height/ Electrical Job	<input type="checkbox"/> Tool Room: Handling & Storage	<input type="checkbox"/> Communication Room/ Services: O&M	<input type="checkbox"/> Facsimile (Fax) Room: O&M	<input type="checkbox"/> IAQM/ Vehicular Emissions Monitoring	<input type="checkbox"/> Masonry Job
<input type="checkbox"/> Server Room: O&M	<input type="checkbox"/> SDP Centre: O&M	<input type="checkbox"/> Vaccination/ Blood Donations/ Trade Tests	<input type="checkbox"/> Disinfection	<input type="checkbox"/> Scanners/ Detectors: O&M	<input type="checkbox"/> Carpentry Job
<input type="checkbox"/> IT DR Room: O&M	<input type="checkbox"/> FM200 Fire Suppression	<input type="checkbox"/> Fuel: Transport, Handling & Use	<input type="checkbox"/> Lube Oil & Chemical: Handling & Use	<input type="checkbox"/> Weapons: Handling & Operations	<input type="checkbox"/> Reception
<input type="checkbox"/> Medical Services/ Drugs Supply	<input type="checkbox"/> Patients Sampling in Medical Laboratory	<input type="checkbox"/> Surveillance/ Walkthroughs	<input type="checkbox"/> Emergency Handling (Evacuation/ Rescue)	<input type="checkbox"/> Pray/ Leisure/ Rest Area or Room	<input type="checkbox"/> Waiting Room
<input type="checkbox"/> Power Cabling & Accessories: O&M	<input type="checkbox"/> Network Cabling & Accessories: O&M				<input type="checkbox"/> Security: Protection & Communication
<input type="checkbox"/> Wudu (Ablution) Areas/ Washrooms	<input type="checkbox"/> Device Calibration/ Testing/ Emergency Drill				<input type="checkbox"/> Muster Point
					<input type="checkbox"/> Vehicular Parking

\*Office ambience is a working environment or condition related to TEMPERATURE, HUMIDITY, NOISE, LIGHT, CO2, etc. affecting the efficiency of individuals either in a positive or negative way.

Check (✓) Mark The SAFE ACTS/CONDITIONS and (or) UNSAFE ACTS/CONDITIONS Observed

PPE		Posture		Hazard(s) Exposure		Tools & Equipment		Procedure		Housekeeping	
Safe	Unsafe	Safe	Unsafe	Safe	Unsafe	Safe	Unsafe	Safe	Unsafe	Safe	Unsafe
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**SAFE ACTS/CONDITIONS** observed and actions taken to encourage continued safe performance:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**UNSAFE ACTS/CONDITIONS** observed and immediate corrective actions taken to prevent recurrence:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

HSE TOP = On-Spot HSE Training Observation Program      IAQM = Indoor Air Quality Monitoring      O&M = Operations & Maintenance

Reporter's Signature: \_\_\_\_\_ Specify The Working Area/ Floor/ Tower: \_\_\_\_\_ Reporting Date and Time: \_\_\_\_\_

USE NEARBY DROP BOX FOR POSTING HSE TOP CARD – YOUR VERY OWN SAFETY-FIRST INITIATIVE. FOR FURTHER GUIDANCE, CONTACT HSEQ DEPARTMENT (EXT.: 3825, 3826, 3827)

IMPORTANT:- IT IS EVERYBODY'S RESPONSIBILITY TO ENSURE THAT THE OGDCL'S HSE MANAGEMENT SYSTEM IS IN PLACE.

## 8.2 HSE Monitoring, Measurement & Compliance Evaluation

OGM/P-HSE-8.2(08) Revision Number 8

Original Issue: June 25, 2007  
 This Issue: March 14, 2022

**Updated By:**

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**Approved By:**

**Syed Khalid Siraj Subhani**  
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### Change/ Revision Log

#	Description of Change
1	Amended: Sequence of monitoring areas changed and tabulated as emergency equipment, safety critical equipment (SCE), fuel/ explosives handling, storage & transportation, operational machinery/ equipment, material handling & storage and data storage
2	Added: Monitoring of buildings/ infrastructure/ porta cabin (caravans)/ offices/ camps

### Associated Documents Approval & Issue

Related Document/ Record	Initiated by	Reviewed by	Checked/ Verified / Approved by
OGF – HSE – 034 Health & Hygiene Monitoring Plan	Location Medical IC in consultation with Location HSE IC	Location HSE MRC	Location IC
OGF – HSE – 035 Safety Monitoring Plan	Concerned Section IC in consultation with Location HSE IC	Location HSE MRC	Location IC
OGF – HSE – 036 Environment Monitoring Plan	Location HSE IC in consultation with Location Lab. IC	Location HSE MRC	Location IC
OGF – HSE – 037 Occupational Health Assessment (Trade / Fitness Test) Plan	Location Medical IC in consultation with Location HSE IC	Location HSE IC	Location IC
HSE Monitoring/ Inspection Checklist (Preparation)	Concerned Section IC	Concerned Section IC	Concerned Section IC
HSE Monitoring/ Inspection Checklist (Filling Phase)	Concerned Section Rep.	Concerned Section IC	Concerned Section IC
Calibration Record	Concerned Section Rep.	Concerned Section IC	Concerned Section IC



### 8.2.1 General

- ☐ When determining what should be monitored and measured (in addition to progress on objectives / targets), the following should be considered:
  - ▣ Significant vulnerabilities, threats & opportunities,
  - ▣ Compliance obligations, and
  - ▣ Status (effectiveness/ reliability) of operational controls & equipment.
- ☐ HSE monitoring and measurement shall include both proactive and reactive monitoring. It shall include *Type of Measurement* like:
  - a) Monitoring of emissions to air
  - b) Monitoring of effluents to water and land
  - c) Monitoring of emergency equipment
  - d) Monitoring of mechanical integrity & fitness of safety critical equipment
  - e) Monitoring of electrical equipment / appliances & accessories
  - f) Monitoring of operation equipment/machinery
  - g) Monitoring of employee's health
  - h) Monitoring of noise & lighting levels
  - i) Monitoring of safety tags, signs, labels, color coding, etc.
  - j) Monitoring of energy and natural resources consumption
- ☐ For each parameter / characteristic to be monitored, the Location HSE Representative in consultation with concerned Sectional InCharge shall determine for each item/ element:
  - a) the measurement or test method (Reference Standard)
  - b) frequency of measurement
  - c) sample point for that parameter
  - d) acceptance criteria (Acceptable Limit for that parameter)
  - e) responsibility for measurement
  - f) measurement apparatus or equipment to be used to measure that parameter and the manner for recording results
- ☐ Based on these parameters, three separate OH, S, & E Monitoring Plans shall be prepared.
- ☐ The monitoring activities, frequencies and responsibilities for the OH, S, & E Monitoring Plans shall be set in the light of the table below (not exhaustive):

#	Item/ Element	Prioritized Monitoring Activity	Recommended Monitoring Frequency	Primary Responsibility
<b>Emergency Equipment</b>				
1.	Fire Extinguishers (AFFF, DCP, Foam, CO <sub>2</sub> and Water DCP/ CO <sub>2</sub> Trolley)	a. Functional Reliability b. Visual Inspection	a. Quarterly b. Weekly	HSE
		Hydrostatic (Water Jacket) Test of Cylinder	5 Yearly/ as per NFPA	HSE
2.	Mobile Foam Unit	Functional Reliability	Quarterly	HSE
3.	Fire Reservoir	General Inspection & Water Level	Daily	HSE/ Process
4.	Fire Blanket	Physical Inspection	Quarterly	HSE
5.	Fire Buckets	Physical Inspection	Monthly	HSE
6.	Emergency Exit & Light	Cleaning and Maintenance (Physical Inspection)	Monthly	HSE
7.	Emergency Signage & Layout Diagram	Physical Inspection / Availability	Monthly	HSE
8.	Wind Socks	Physical Condition	Monthly	HSE
9.	Spill Control System (Leak tape, absorbent, container, pump, etc.)	Physical Inspection	Monthly	HSE/ IC Commercial/ IC Store
10.	Life Jackets / Boats	Physical & Functional Reliability	Monthly	HSE
			Daily (On need basis)	Crew In- Charge
11.	Fall Arrest/ Safety Harness	Physical & Functional Reliability	Monthly	HSE/ IC Workshop/Mechanical
12.	Temperature-controlled Medicines' Storage	Physical condition, integrity & Reliability as per Manufacturer Guidelines	Monthly	Medical
		Calibration	Annually (3 <sup>rd</sup> Party)	
13.	Nebulizer, Suction Machines, Glucometer	Physical & Operational Reliability as per Manufacturer Guidelines	Monthly	Medical
		Calibration	Annually (3 <sup>rd</sup> Party)	
14.	First Aid Box	First Aid Box Items	Monthly	Area Owner/ Sectional IC
15.	Anti-Snake Venom / Emergency Vaccines / Life Saving Drugs	Physical Inspection / Availability/Required/ quantity / Expiry date	Monthly	Medical



Safety Critical Equipment (SCE)					
16.	Personnel Protective Equipment (PPE)		Physical Inspection / Availability	Daily Monthly	Every Section HSE
17.	Pressure Relief	Pressure Safety Valve (PSV)	Physical Inspection/ Calibration (Trevi or Bench Test)/ Leak Test/ Block & Bleed Test/ Isolation Test	Annually/ ATA as per CM/ PM Plan	Process/ Prod. Facilities/ Inst./ Telemetry/ Mechanical
		Pressure Vacuum Safety Valve (PVSV)			
		Rupture / Bursting Disc			
		Pressure switch / transmitters			
18.	Emergency Shutdown and Isolation		Emergency Shutdown valves (ESDV) and associated components (i.e. solenoid, actuator, switches, transducers, etc.)	Annually/ ATA as per CM/ PM Plan	Process/ Prod. Facilities/ Inst./ Telemetry/ Mechanical
19.	Emergency Blow-Down and Flaring		Emergency Blow-down valves (EBDVs) and associated components (i.e. solenoid, actuator, switches, transducers, etc.) Flare stacks and associated components (i.e. instrumentation, sensors, alarms, etc.)	Annually/ ATA as per CM/ PM Plan	Process/ Prod. Facilities/ Inst./ Telemetry/ Mechanical
20.	Emergency Shutdown and Evacuation		Fire / Flame / Smoke Detector	Quarterly (Internal) Annually (Third Party)	Process / Inst./ Telemetry
			Heat / Thermal Detector	Quarterly (Internal) Annually (Third Party)	
			Combustible Gas Detector	Quarterly (Internal) Annually (Third Party)	
			Toxic Gas Detector	Quarterly (Internal) Annually (Third Party)	
			ESD Push Buttons	Annually (Third Party)	
			Associated beacons, horns, and solenoids	Quarterly (Internal) Annually (Third Party)	
21.	Critical Process Systems		Fired Heaters and Boilers	Monthly (in-house) Annually (Third Party)	Process / Inst./ Telemetry
			Associated instrumentation (combustion safety controls, flame arrestors/ fire-check) and shutdowns	Quarterly (Internal) Annually (Third party)	
22.	Emergency Power Systems		Emergency Generators (including switchgear)	Monthly (Internal) Annually (Third Party)	Electrical & Inst
			Uninterruptible Power Supply (UPS) Systems (including transfer switches)	Monthly (Internal) Annually (Third Party)	
			Emergency light panels	Monthly (Internal) Annually (Third Party)	
			Batteries	Monthly (Internal) Annually (Third Party)	
23.	Building Ventilation		Exhaust fans	Quarterly	Process/ Electrical/ Admin/ Lab
			HVAC (A/C Units, Air handling units, building heaters, louvers, etc.)	Quarterly	
			Building HVAC	Quarterly	
			Acid and Fume scrubbers	Quarterly	
			Hood vents (e.g. sample boxes, laboratory)	Quarterly	
24.	Flexible Hoses and Expansion Joints		Flexible hose (including metal braided hoses, flex rubber hose, elastomer, Teflon, dresser couplings, etc.)	Quarterly	Mechanical/ PFS
			Expansion Joints	Quarterly	
25.	Tanks and Vessels (containing flammable or toxic commodities)		Level indication/ ATGS (i.e. level transmitters, level switches, etc.)	Quarterly (Internal) Annually (Third party)	Process/ Production/ Inst./ Telemetry
			Associated components (i.e. alarms, shutdowns, etc.)	Quarterly (Internal) Annually (Third party)	
26.	Fire Suppression Equipment & Emergency Medical Services		Fire Extinguishers	Monthly /Quarterly	HSE/ Process/ Inst.
			Hydrants	Monthly/Quarterly	
			Automatic Sprinklers	Monthly	
			Fire Pumps/ Water Supply	Monthly	
			Fire-water Control Valves	Monthly	
			SCBA/ SABA	Monthly	
			Fire Lorry / Responder Vehicle	Monthly	
			Ambulance	Monthly	
27.	Emergency Alarm System / Siren (Call & Muster Points)/ Public Announcement & General Alarm (PAGA) system		Physical Inspection	Monthly	E&I
			Function Test	Quarterly	E&I
28.	Means of Escape		Physical Inspection	Monthly	Process/ Admin./ HSE
29.	Chemical Safety Equipment		Safety showers	Monthly / Annually	HSE/ Lab / Process/ Production
			Eye wash	Monthly / Annually	
30.	Secondary Containment		Berms, bunds, dikes or walls	Quarterly / Annually	Production/ Process/ Store
			Drains, sumps, valves and piping for draw-off	Monthly	Process/ Production
			Associated components for safe handling (i.e. safety	Monthly	Process/ Production, Mech. / Prod.

		shields for flanges, pipe joints, expansion joints, acid walls/ Plexiglas, etc.)		Facilities
31.	Scully Grounding System/ Overfill Prevention System	Functional Reliability	Monthly	Electrical/ Commercial/ Store
32.	Earthing Continuity	Functional Reliability	Quarterly / Pre-Use	Electrical
33.	Earth Leakage Circuit Breakers (ELCB), Ground Fault Circuit Interceptors (GFCI)	Calibration Physical Condition	Annually	Rig Maint./ Electrical
34.	Blow Out Preventer (BOP) System	Physical & Functional Reliability	On Installation, Situational (Need basis)	Drilling / Rig Maint.
35.	BOP Controls	Functions & Labeling	Monthly, Situational (Need basis)	Rig Maint.
36.	Passive H2S dosimeter and badges	Calibration / Functional Reliability	Situational (Need basis)	Process / Inst./ HSE/ Mech/ Elec.
37.	Electric General Inspection	Safety Reliability	Quarterly	Electrical
38.	Test Equipment i.e. Vibrometer, Dead Weight Tester, Earth Tester, Master Calibrator, Temperature Gun, Master Gauges, Flue Gas Analyzer, Sound Level Meter, Multi Gas Detectors etc.	Physical inspection & Calibration to ensure operational reliability and integrity	Quarterly / Annually (3 <sup>rd</sup> party)	Instrument/ Electrical/ Telemetry/ Mechanical/HSE/ Lab
<b>Fuel/ Explosives Handling, Storage &amp; Transportation</b>				
39.	Crude/ Condensate Storage Tank & Associated Equipment	Physical Condition (Dyke; Lightening Arrestor; Breather; Blanketing Gas; Flame Arrestors; Ladders); Foam-Water Deluge System	5 Yearly (3 <sup>rd</sup> Party) Quarterly (Internal)	Production / Process, Prod. Facilities
40.	LPG Storage Vessels (Bullets) & Associated Equipment	Calibration / Inspection /NDT; Sprinkler System (Pneumatic Control Valves & Relevant Systems)	As per OEM recommendation/ applicable code	Process/ Inst./Mechanical
41.	Oil/ LPG Filling Gantry	Foam-Water Deluge System, Calibration of Flow Measurement Equipment (Coriolis meters, weighing bridge, TLAS system)	Monthly (Internal) Quarterly (3 <sup>rd</sup> Party)	Prod./ Process/ Commercial/Inst/T elemetry
42.	Condensate Oil/ Crude Oil/ LPG Bowzer	Physical & Operational Reliability	Daily (if applicable)	Process/ Prod/ Commercial/ Security/ HSE
43.	Odorizing Unit/ Odorization of raw gas with Methyl Mercaptan	Physical Inspection / Availability	Monthly	Process/ Prod.
44.	Well-site Pipeline/ Flow line/ Headers	Integrity Assessment (Hardness & Thickness)	Annually (3 <sup>rd</sup> Party)	Production Facilities/ Corrosion
		Pipeline Foundation, Nipple, Socket, Weldolet, Threadlet	Quarterly (Internal)	Prod. Facilities/ Mechanical
		Corrosion Monitoring	Monthly/ Fortnightly	Corrosion
45.	Explosives Magazine Camp	Earthing, Safe distance, Fencing, Security	Fortnightly	Shooter/ Security
			Daily (Surprise)	HSE
46.	Explosive Transportation	Explosive Vehicle Check	Daily (Mandatory)	Shooter
			Daily (Surprise)	HSE
47.	Explosive Handling	Explosive Vehicles / Field Check	Daily (Mandatory)	Shooter
48.	Explosives Magazine Camp	Earthing, Safe distance, Fencing, Security	Fortnightly	Shooter/ Security
			Daily (Surprise)	HSE
49.	Explosive Transportation	Explosive Vehicle Check	Daily (Mandatory)	Shooter
			Daily (Surprise)	HSE
50.	Explosive Handling	Explosive Vehicles / Field Check	Daily (Mandatory)	Shooter
			Monthly (Internal)	
51.	X-Mass tree & Well Head Assembly	Well Monitoring & Flow Condition	Monthly	Well Services/ Production
		Down Hole Flow Parameters & Pressure Survey	Annually	Well Services/ Production
52.	Down Hole Tubing, Flowline & Plant Piping	Corrosion Assessment	Monthly	Production / Prod. Facilities / Corrosion
53.	Plant Pipeline & Flow line	Integrity Assessment (Hardness & Thickness)	Annually (3 <sup>rd</sup> Party)	Process/ Mechanical
		Pipeline Foundation, Nipple, Sockolet, Weldolet, Threadolet	Quarterly (Internal) as per CM/ PM Plan	Process/ Mechanical
		Corrosion Monitoring	Monthly / Fortnightly	Corrosion
54.	SSVs/ SSSVs	Calibration/ Functional Reliability	At the time of work-over	Production/ Telemetry
55.	ESD Panel/ WHCP	Calibration / Inspection (Hydraulic Oil Level, etc.)	Quarterly	Inst. / Telemetry
56.	Well site	Environment, Safety & integrity inspection	Quarterly	Production
<b>Operational Machinery/Equipment</b>				
57.	Electrical Heaters/ Geysers	Physical & Functional Reliability	Bi-Annually	Electrical/ Admin.
58.	Tools	Hand and portable power tools and equipment including pneumatic power tools	Monthly/ Pre Use	Concerned Department
59.	Gas Cutting / Welding	Pressure Gauges of cylinders; Cutting torch Tip, Clamps; NRV (Flash back arrester)	Monthly/ Pre Use	Mechanical/ Prod. Facilities
60.	Arc Welding Plant	Functional Reliability; Oil Leakage, Earth Leakage Circuit Breaker (ELCB), Cable,	Monthly/ Pre Use	Mechanical/ Electrical/ Prod. Facilities

		Wiring, Welding Rod Holder		
61.	Control Room/ SCADA Telemetry System/ DCS	Functional Reliability of Transducer, PLC (time/ pressure/ temperature/ volume), Securities, etc.); FM-200 Suppression System	Quarterly (Internal) Annual (3 <sup>rd</sup> Party)	Telemetry/ Inst.
62.	Lights	Luminance	Bi-Annually	Electrical
63.	Power Transformer (e.g. 750 KVA)	Vibration; Cooling system; Relays, Alarms & Control Switches; Insulation resistance; Resistive value	Annually	Electrical/ Mechanical
64.	Chiller, Cooling Tower, Stabilizing Column, Flare Stack, etc.	Mechanical Integrity	As per OEM recommendation / applicable code & CM / PM Plan	Mechanical
65.	Heat Exchanger, Hot Oil Heater, Boiler, etc.	Calibration / Inspection/ NDT	As per OEM recommendation / applicable code & CM / PM Plan	Mechanical
66.	Vessel, K.O drum, Flash Tank, Separator, etc.	Mechanical Integrity	As per OEM recommendation / applicable code & CM / PM Plan	Mechanical
67.	Control Panel	Functional Reliability	Annually	Inst.
68.	Motor Control Centre (MCC)/ Power House	FM-200 Suppression System, Air Circuit Breaker, Bus Bar, Electrical Cable, etc.	Annually (3 <sup>rd</sup> Party) Quarterly (Internal)	Process/ Electrical & Inst.
69.	Heat Tracing Cable & Insulation System	Physical & Functional Reliability	Annually	Electrical
70.	Level Indicator / Transmitter / Switch Controller, Temperature Gauges, Pressure Gauges	Functional Reliability	Monthly	Inst./Telemetry
71.	Chemical Injection Pump	Functional Reliability	Bi-Monthly	Corrosion/ Prod. Facilities
72.	Chemical Injection Package	Functional Reliability	Monthly	Corrosion/ Prod. Facilities
73.	Extraction / Reinjection Well	Operational Reliability	Bi-Annually	Prod./ Prod. Facilities
74.	Wheel Mounted & Portable Drilling Rigs	Physical & Operational Reliability	Annually (SDU, OGDCL) Monthly (Internal)	Mechanical/ Drilling
75.	Pressurized Hoses of equipment	Physical condition/ Functional Reliability	Pre-use Quarterly	Process/ Mechanical/Prod./ Prod. Facilities/ Drilling
76.	Compressed Gas Cylinders (Operations)	Handling and Storage Proof Pressure Test	Quarterly 5 Yearly (3 <sup>rd</sup> Party)	Mechanical/ Lab./ HSE/ Prod. Facilities/ Inst./ Telemetry
77.	Compressed Gas Cylinders (Residential)	Handling and Storage Proof Pressure Test	Quarterly 5 Yearly (3 <sup>rd</sup> Party)	Admin.
78.	Rotary Equipment (Turbine, Pump, Compressor, Power Generator, Turbocharger, etc.)	Vibration Analysis/ Oil Analysis CO <sub>2</sub> Suppression/ Flooding System (Pressure Test & Solenoid Valve Logic Function & Relevant Components)	Monthly (Internal) Annual (3 <sup>rd</sup> Party) as per CM/ PM Plan Quarterly (Internal) Annual (3 <sup>rd</sup> Party) as per CM/ PM Plan	Mechanical Inst./ Mechanical/ Process
<b>Material Handling &amp; Storage</b>				
79.	Lube Oil/ Diesel Storage	Fencing; Safe Distance; Leakage; Secondary Containment, Scully Grounding System, overfill protection device	On every consignment	Store / Security
80.	HSD Filling	Safe Distance, Calibration of HSD Dispensing Unit	Monthly (internal) Quarterly (3 <sup>rd</sup> Party)	Store
81.	Chemical Storage	Designated Yard/ Stacked in an order; Labeling; Material Safety Data Sheet; Chemical Warning Signs; Ventilation; Secondary Containment; Expiry	On every consignment	Store/ User Department
82.	Company Maintained & Hired Vehicles	Vehicle Fitness Vehicle Inspection	Annually Daily (Pre-Trip)	Admin. / TPT/ Concerned Section
83.	Overhead Crane/ Mobile, Truck Mounted Crane/ Hoist/ Chain Block/ Lifting Gears	Load Test Visual Inspection Physical & Operational Reliability	Annually (3 <sup>rd</sup> Party) Pre Use Monthly (Internal)	Mechanical/ TPT/ Prod. Facilities
84.	Fork lifter	Physical & Operational Reliability	Annually (3 <sup>rd</sup> Party) Monthly (Internal) Pre Use	TPT/ Mechanical/ Store
85.	Ladders, Stair cases, Scaffolding	Physical	Ladder (Bi-Annually) Scaffold (Periodically)	Process, Mechanical & HSE
86.	Mechanical Equipment, Parts/ Pipes Storage	Designated Yards/ Racks; Housekeeping; Obstacle-Free; Convenient handling	On every consignment/ Emergent Purchase	Store/Mechanical
87.	Electrical Equipment, Parts/ Panels Storage	Packaging condition; safe handling; proper stacking	On every consignment	Store
88.	General Items' Storage	Segregation; Proper Shelves/ Racks (Safe Working Load); Housekeeping; Access	On every consignment	Store
89.	Hazardous Waste Storage Yard	Fencing; Proper stacking:	Annually	Store

		Leakage; Secondary Containment, etc.		
<b>Data Storage</b>				
90.	Seismic Data Processing (SDP) Facility	FM-200 Suppression System;	Annually (3 <sup>rd</sup> Party)	HSE
91.	Seismic Data Interpretation (SDI) Facility	Fire Extinguishers; Heat, Smoke & Fire Detectors; Alarms	Quarterly (Internal)	
		Functional Reliability & Condition of Storage Media; Ambience (Humidity, Temperature, Light Intensity)	Annually	Exploration
92.	Technical Data Library (TDL)			
<b>Buildings / Infrastructure / Porta Cabin (Caravans)/ Offices / Camps</b>				
93.	Elevator/ Lift	Physical & Operational Reliability	As per OEM recommendation	Admin./ Maintenance
94.	Metal Detector/ Walkthrough Gate	Physical & Functional Reliability	As per OEM recommendation	Security
95.	X-ray Baggage Scanner	Physical & Functional Reliability	As per OEM recommendation	Security
96.	HVAC System	Boiler; AHU; ADS; Cooling Towers	Quarterly (Internal) Annual (3 <sup>rd</sup> Party)	Admin./ Maintenance
97.	Suspended Work Platform	Integrity/ Load Test / Wire rope condition	Quarterly (Internal) Annual (3 <sup>rd</sup> Party)	Admin./ Maintenance
		Physical Inspection	Monthly/ On need basis	HSE
98.	Control Room	Structure Integrity; FM-200 Suppression System	Quarterly (Internal) Annual (3 <sup>rd</sup> Party)	Process/ Inst./ C&ESS
99.	Electric Geysers, Heaters, AC units, Electrical Fixtures (cords, extension wires, switches, Earthing Configuration of Porta Cabins/ Metallic Structures etc.)/ Appliances General Inspection	Safety Reliability	Quarterly	Admin./ Electrical
100.	Utility (Fuel/ Water) Pipes Lines	Leak Detection; Physical Condition (paint; pin holes; rust; anchoring, pressure gauges, pressure regulators, valves condition.)	Quarterly (Internal) Annual (3 <sup>rd</sup> Party)	Admin./ Maintenance/ Camp Maintenance/workshop
101.	Weapons	Physical & Operational Reliability	As per OEM recommendation	Security
102.	Communication Antenna / Dishes	Physical & Functional Reliability	Bi-Annually	Comm.
103.	Guy Wires of Communication Towers, Flare stacks etc.	Physical Condition Monitoring	Annual	Comm./ Maintenance
104.	Drain Channels & Discharge Points	Free from sludge, oil contaminated effluents	Quarterly	Process/ Production
105.	Roofs and Sheds (over equipment)	Physical condition (paint; pin holes; rust; anchoring)	Quarterly	PFS/ Mechanical/ Electrical & Inst.
<b>Environment Monitoring</b>				
106.	Ponds/ Pits (Evaporation/ Mud/CPI/API/TPI) (produced water), Sewerage Pits	Fugitive Emission & Soil Erosion, Effluent Monitoring	Monthly / Quarterly	Lab.
		Fencing, Leakage/ Leaching/ Seepage	Monthly	Process/ Drilling/ Well Services/ HSE/ Admin/ C&ESS
		QC Checks regarding waste pits treatment & restoration	Before Rig Demobilization	Drilling/ Production / C&ESS/ HSE
107.	DG, GG, Stacks & Fire Fighting Engine, Vehicles	Emissions	Monthly	Lab.
108.	Flare/ Vent	Ambient Air Quality	Annually (3 <sup>rd</sup> Party)	Lab.
109.	Storage/ Loading of Condensate/ Crude Oil	Exposure Levels BTX Volatile Organic Compounds	Bi-Annually	Lab.
110.	Hazardous Material and Waste Bins	Segregation, Labeling, Storage Condition	Monthly	HSE
111.	Heavy or Rotating/Vibrating Machinery/Vehicles	Noise Survey	Plant (Monthly) Vehicles (Bi-Annually)	HSE TPT.
112.	Sludge from Pipeline and Crude/ Condensate Oil Storage Tanks	Naturally Occurring Radioactive Material (NORM)	As per PNRA requirements	Prod./ Process/ Well Services
<b>Health &amp; Hygiene Monitoring</b>				
113.	Drinking Water	Chemical, Physical and Biological parameters	Biannually	Lab.
114.	Workforce's Health*	OH Assessment / Fitness Tests (Trade-wise)	Annually	Medical
		Personal Hygiene Inspection	Monthly	
115.	Food culture analysis	Microbiological analysis	Annually	HSEQ / Admin/ Medical
116.	Workforce's Hygiene	Personal Hygiene Inspection	Monthly	Medical
117.	Mess/ Food-handling	Cleanliness, hygiene, and quality	Monthly	Admin/ Medical/ HSE
118.	Hygiene Inspection of Camp	Cleanliness, hygiene, fumigation, insecticide spray, etc.	Quarterly	Admin/ Medical / HSE/ Camp Maintenance
119.	Water Tanks/ Soak Pits	Cleanliness, hygiene	Annually	Admin./ Camp Maintenance

\*Note:- It shall be the sole responsibility of Contractor to ensure examinations of their employees under contractual obligation; however OGDCL may crosscheck by carrying out some of these tests on their own where deemed appropriate or on random basis in the larger interest of the health & safety of their workforce members.

- ☐ OH, S, & E Monitoring Plans shall be developed by the concerned Sectional InCharges for the areas, activities, operations and processes under their jurisdiction.
- ☐ OH, S, & E Plans shall be revised based on amendments in applicable standards, guidelines and results of conditional monitoring.
- ☐ Inspection Plans / Checklists/ Forms shall be developed by the Responsible / Concerned Sectional ICs to observe & document the status observed during the monitoring.
- ☐ The equipment used for monitoring and measurements of key parameters (related to significant HSE vulnerabilities & impacts and HSE regulations) shall be calibrated as per schedule and record of calibration shall be maintained.
- ☐ Calibration record shall be specifically documented for each equipment as follow:

#	Parameters to be calibrated	Required value/set point	Read values	Final values after calibration	Calibration carried on (date)	Next calibration due date

- ☐ When HSE performance shall fall below desirable level, or when there shall be a possibility of a noncompliance against laws or regulations, the concerned Section InCharge shall initiate corrective or preventive actions (CPR), and may also recommend establishment of appropriate objectives/ targets and management programs to improve HSE performance.
- ☐ The status of CPRs shall be shared in HSE MRC meetings so that rigorous follow-up remains in place.



OGF/XXX – HSE – 034(01)



OIL AND GAS DEVELOPMENT COMPANY LIMITED

## HEALTH & HYGIENE MONITORING PLAN

Location (EFP/FGCP/Seismic Party/Drilling Rig/Field/Plant/Other): \_\_\_\_\_

Sr. No	Type of Measurement	Parameters to be measured	Reference Standard	Acceptable limit	Monitoring Place	Measurement Frequency	Measurement Equipment	Responsible	Related Record

**Note:**

THIS OCCUPATIONAL HEALTH MONITORING PLAN HAS BEEN PREPARED UNDER THE SECTION 8.0 "PERFORMANCE EVALUATION" OF OGDCL INTEGRATED HSE SYSTEM MANUAL DULY APPROVED BY MD&CEO OGDCL.

PREPARED BY	REVIEWED BY	APPROVED BY

Ref. Section 08 (Performance Evaluation) of OGDCL's Integrated HSE System Manual

OGF/XXX – HSE – 035(01)



OIL AND GAS DEVELOPMENT COMPANY LIMITED  
**SAFETY MONITORING PLAN**

Location (EFP/FGCP/Seismic Party/Drilling Rig/Field/Plant/Other): \_\_\_\_\_  
 Section \_\_\_\_\_

Sr. No	Type of Measurement	Parameters to be measured	Reference Standard	Acceptable limit	Monitoring Place	Measurement Frequency	Measurement Equipment	Responsible	Related Record

**Note:**  
 THIS SAFETY MONITORING PLAN HAS BEEN PREPARED UNDER THE SECTION 8.0 "PERFORMANCE EVALUATION" OF OGDCL INTEGRATED HSE SYSTEM MANUAL DULY APPROVED BY MD&CEO OGDCL.

PREPARED BY	REVIEWED BY	APPROVED BY

Ref. Section 08 (Performance Evaluation) of OGDCL's Integrated HSE System Manual

OGF/XXX – HSE – 036(01)



**OIL AND GAS DEVELOPMENT COMPANY LIMITED**  
**ENVIRONMENT MONITORING PLAN**

**Location (EFP/FGCP/Seismic Party/Drilling Rig/Field/Plant/Other):** \_\_\_\_\_

Sr. No	Type of Measurement	Parameters to be measured	Reference Standard	Acceptable limit	Monitoring Area	Measurement Frequency	Measurement Equipment	Responsible	Related Record

**Note:**  
 THIS ENVIRONMENT MONITORING PLAN HAS BEEN PREPARED UNDER THE SECTION 8.0 "PERFORMANCE EVALUATION" OF OGDCL INTEGRATED HSE SYSTEM MANUAL DULY APPROVED BY MD&CEO OGDCL.

PREPARED BY	REVIEWED BY	APPROVED BY
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Ref. Section 08 (Performance Evaluation) of OGDCL's Integrated HSE System Manual

OGF/XXX - HSE - 037/001



**OIL & GAS DEVELOPMENT COMPANY LIMITED**  
 Location (EFP/FGCP/Seismic Party/Drilling Rig/Field/Plant/Other): \_\_\_\_\_  
**OCCUPATIONAL HEALTH ASSESSMENT PLAN FY \_\_\_\_\_**

Name of Section/ Department	Type of Examination (Trade-wise)	Schedule											
		Jan	Feb	March	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec

**Note:**

- 1) ASSESSMENTS TO BE CONDUCTED IN THE LAST WEEK OF EVERY MONTH.
- 2) THIS PLAN HAS BEEN PREPARED UNDER THE SECTION 8.0 "PERFORMANCE EVALUATION" OF OGDCL INTEGRATED HSE SYSTEM MANUAL DULY APPROVED BY MD&CEO OGDCL.
- 3) THE CONTRACTORS OF 3<sup>RD</sup> PARTY EMPLOYEES ARE LIABLE TO CARRY OUT HEALTH EXAMINATION OF THEIR RESPECTIVE EMPLOYEES ONCE IN THE YEAR.
- 4) EXACT TYPE OF EXAMINATION WILL BE DETERMINED BY LOCATION IN CHARGE MEDICAL BASED ON THE HAZARDS AN EMPLOYEE RECENTLY EXPOSED.

<b>Prepared By</b>	<b>Consulted By</b>	<b>Reviewed By</b>	<b>Approved By</b>

Signature Location In-Charge HSE	Signature Location Medical In-Charge	Signature Members - Location HSE MRC	Signature Location In-Charge
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Ref. Section 08 (Performance Evaluation) of OGDCL's Integrated HSE System Manual

## 8.3 Analysis of Data

OGM/P-HSE-8.3(08A) Revision Number 8A

Original Issue: June 25, 2007  
 This Issue: August 01, 2022

**Updated By:**

**Muhammad Sameem Hussain Qaiser**  
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**Reviewed By:**

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**Checked By:**

**Mahmood-ul-Hassan Khan**  
 General Manager HSEQ, OGDCL

**Approved By:**

**Syed Khalid Siraj Subhani**  
 Managing Director, OGDCL

### Change/ Revision Log

#	Description of Change
1.	Modified: Monthly HSEQ Report template.
2.	Added: HSE Lagging Indicator → Total Reportable Occupational Illness Frequency (TROIF)

### Associated Documents Approval & Issue

Related Document/ Record	Initiated by	Reviewed by	Checked/ Verified / Approved by
OGF – HSE – 038 Monthly HSE Report	Location HSE Section	Location HSE IC	Location IC
OGF – HSE – 038A Monthly HSE Report (Static Locations)	Location HSE Section	Location HSE IC	Location IC
HSE KPI Analysis / HSE Performance	HSE Department H.O.	GM HSE → EDs	CEO / MD



### 8.3.1 Leading & Lagging Indicators

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- ☐ HSE performance shall be analyzed on regular basis and reported to top management and stakeholders through Key Performance Indicators (KPIs): KPIs mentioned below may be monitored on regular basis:

#### 8.3.1.1 Leading Indicators ( Pre-Loss/ Prevention → Loss Control )

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- a) Related to Safe Man Hours
- b) Vulnerabilities (hazards), Impacts (risks) as High, Medium, Low
- c) Related to UBUCs / STOP Cards
- d) Related to Process Safety (e.g. discovery of failed safety systems upon testing)
  - # of relief devices fail bench tests at set points
  - # of interlock test failures
  - # of uninterruptible power supply system malfunctions
  - # of times fire, gas, & toxic gas detectors found to be defective during routine inspection
  - # of times the emergency vent line header found completely blocked
  - # of times emergency shutdown valves found stuck or jammed
  - # of times blockages found in the process vent
- e) Related to Work Permits (Hot & Cold)
  - Corrective Jobs
  - Breakdown Jobs
  - Prevent. Maintenance
- f) Laboratory Analysis of Products (oil; gas; LPG, etc.)
- g) Related to Energy Consumption & Conservation (for primary usage, makeup or loss)
  - Power
  - Fuel
  - Lubricating Oil/ Grease
  - Water
  - Light
  - Chemicals
    - pH Stabilizing Additives
    - Scale Inhibitors
    - Oxygen Scavengers
    - Corrosion Inhibitors
    - Scale Dispersants
    - Anti-Bacterial agents
    - Anti-Microbial Agents
    - Sweetening Agents
    - Dehydration/Drying Agents
    - Anti-Gel Additives
    - Desalting Agents
    - Surfactants
    - Chelating Agents
    - Anti-Emulsion Agents
    - Reducing Agents
- h) Related to Trainings and Awareness Sessions
- i) Related to HSE Observations, Surveillance Activities and Audits
- j) Related to Employees Fitness
- k) Related to HSE Management Review Committee (MRC) Meetings

#### 8.3.1.2 Lagging Indicators ( Post-Loss/ Reaction → Loss Containment )

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- a) Related to Lost Man Hours
- b) Related to Near Hits/ Misses
- c) Related to Accidents
  - Non-Fatal Accidents
  - Fatal Accidents
  - First Aid Cases
  - Workers Compensation Costs
  - Property Damage Costs
- d) Related to Recordable Injury Cases
  - Restricted Workday Injuries
  - Lost Workday Injuries
  - Medical Treatment Cases
- e) Related to Occupational Health Illnesses
  - Occupational Illnesses
  - Drinking Water
- f) Related to Waste Management
  - Non-Hazardous Waste

- Metallic Scrap
    - Vehicle Scrap
    - Miscellaneous
  - Hazardous Waste
    - Process
    - Mechanical
    - Clinical
    - Electrical
- g) Related to Pollution
  - Air Emissions
    - from vehicles
    - from generators
    - from turbines
    - from boilers
    - from incinerators
    - others
  - Fugitive Emissions
    - Leaks from pressurized equipment
      - through valves
      - through pipe connections
      - through mechanical seals
      - others
    - Emissions from
      - CPI/TPI/API
      - Waste Water Ponds
      - Crude/ Condensate Storage Tanks
      - Tankers' filling and decanting
      - others
  - Ambient Air Quality
    - due to Flare
    - due to Vent
  - Liquid Effluents
    - Produced Water
    - Process (drain) Water
    - Sewerage
  - Noise

### 8.3.2 HSE Performance Assessment

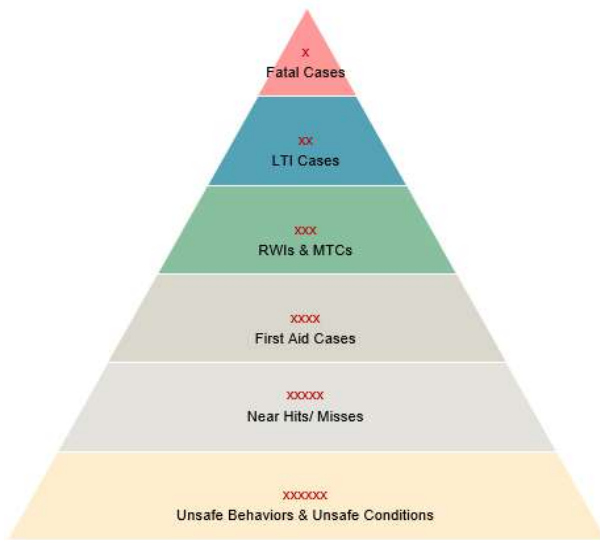
- ☰ All locations shall submit (preferably through email) the basics HSE facts and figures to HSEQ Department H.O. on daily basis. These shall include summary of incidents and near hits (UBUC). HSEQ Department shall further apprise top management of any untoward event(s) or symptom(s).
- ☰ All locations shall submit the consolidated HSE performance of their working entity on monthly basis to HSEQ Department H.O. on the **Monthly HSEQ Report**.
- ☰ HSE Scorecard (Leading and Lagging Indicators) based on following three aspects shall be discussed in Location HSE MRC meetings and used to keep an eye on how involvement of each Location or within Location (Section / Department) is working in bringing improvement in HSE System:
  - ▣ Results (Injury & Environmental Stats)
  - ▣ Program (Training, inspections, audits, etc.)
  - ▣ Culture (UBUC, rewards & recognition, etc.)
- ☰ All pertinent data (statistics) shall be compiled in an HSE database.
- ☰ Subsequently, **HSE Performance** shall be exhibited in the pattern given below which shall be reported on monthly, quarterly, yearly and 5-yearly basis (for corporate level and for an individual location/ field level):

**HSE Lagging Performance Indicators** For Year: \_\_\_\_\_

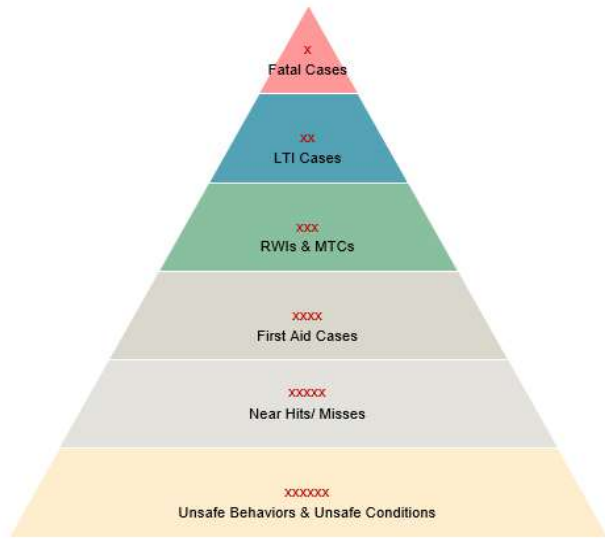
HSE KPI	Formula	Benchmark	Score	Deviation
<b>Fatality Index</b> (Corporate)	(Number of Fatalities due to work related injuries) / (Total hours worked) × 1,000,000*			
<b>Reportable Injury Cases</b>	LTI + RWIs + MTCs			
<b>LTIF</b> (Corporate)	(Number of Fatalities + LTIs) / (Total hours worked) × 1,000,000*			
<b>TRICF</b> (Corporate)	(Total Reportable Injury Cases) / (Total hours worked) × 1,000,000*			
<b>TROIF</b> (Corporate)	(Total Occupational Illnesses) / (Total hours worked) × 1000,000*			
<b>TVIR</b> (Corporate)	(Total Vehicular Incidents / Business Use Driven KM) × 1,000,000*			

Note: For location or field-wise calculation of KPIs, 200,000 to be used instead of 1,000,000.

Category	Number of Incidents	Description
Fire/ Explosion		
Oil/ Chemical Spill		
Vehicular		
Browsers		
Fall/ Work-at-Height		
Confined Space		
Excavation		
Others _____		



OGDCL's Performance



Contractors' Performance

## HSE Leading Performance Indicators

For Year \_\_\_\_\_

**Occupational Health Assessments:**   
 Fitness for work assessments aim those employees who are exposed to hazards directly and may require due attention & care.

**Safety Critical Equipment Inspections:**   
 SCE inspections are the proactive and reactive monitoring of the devices, equipment or system, whose failure can result in serious injuries, significant property damage or environmental impacts.

**LDAR Surveys:**   
 Leak Detection And Repair Surveys help address fugitive emissions and leakages.

**UBUCs/ STOP Cards:**   
 OGDCL STOP card system involves observing unsafe behaviors & conditions and intervening on-spot to prevent injuries and occupational illnesses in the workplace.

**HSE Meetings:**   
 HSE Meetings are the salient feature of OGDCL as performance on PDCA cycle of each Unit is discussed for availing improvement opportunities.

**Risk Assessments:**   
 Hazards identification and risk assessment helps in making workplaces safe through proactive decision making

**Emergency Drills:**   
 Drills remain a vibrant part of our preparedness towards emergencies to ensure timely response.

**Rewards & Recognitions:**   
 OGDCL encourages positive behaviors & attitudes amongst employees and long term contractors who have sustained focus towards HSE aspects.

**Safety/Toolbox Talks:**   
 Pre-job discussions regarding job and site based hazards and control measures.

**HSE Awareness Sessions:**   
 OGDCL is focused on capacity building through in-house training resources.

**Permits to Work:**   
 Permits related to cold work, hot work, electrical work, confined space/vessel entry, radiography, excavation & civil work, working at height, and vehicle entry permit show number of vulnerabilities and exposures for which safety protocols are followed.



**Personnel Participated:**   
 Competence enhancement is key element for OGDCL's HSE Management System.

**Hazard Hunt Programs:**   
 HHPs are for workforce members to identify potential hazards and to highlight the potential harm along with suggestions to manage the situation.

**Hazardous Waste Disposal:**   
 OBM drill cuttings, wastewater and process waste is hazardous due to substantial / potential threats to health and environment and hence is safely disposed off.

**Management Walk Around:**   
 MWA are for Top/ Line Management/ HODs to identify potential hazards and to highlight the potential harm along with suggestions to manage the situation.

**EIA/ IEE Studies:**   
 Environment studies are regulatory requirements to monitor baseline data to minimize and avoid adverse impacts of project on environment.

**Ambient Air Quality Monitoring:**   
 Systematic, long-term assessment of pollutant levels by measuring the concentration and types of certain pollutants in the surrounding indoor/ outdoor air.

## MONTHLY HSEQ REPORT

OGF-HSE - 038(15)

Name of Unit: \_\_\_\_\_; Location / Site: \_\_\_\_\_

For The Month Of \_\_\_\_\_ Year \_\_\_\_\_

Item	Jan		Feb		March		Apr		May		June		Jul		Aug		Sept		Oct		Nov		Dec		Yearly			
O=OGDCL C=Contractor	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C
Manpower																												
Hours Worked																												
Vehicles																												
Mileage																												

### ENVIRONMENT STATISTICS

Item	Unit	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Yearly
Energy Demand (Consumption)	MW-HR													
Oil used for Power Generation	Ltrs.													
Gas used for Power Generation	mmscf													
Gas Flared due to unit malfunction	mmscf													
Fuel (Diesel) consumed by Vehicles	Ltrs.													
CH <sub>4</sub>	Flare	Tons												
	Vent	Tons												
	Generators	Tons												
	Total	Tons												
CO <sub>2</sub>	Flare	Tons												
	Vent	Tons												
	Generators	Tons												
	Total	Tons												
Other HCs	Flare	Tons												
	Vent	Tons												
	Generators	Tons												
	Total	Tons												
Sulphur (H <sub>2</sub> S/ SO <sub>x</sub> )	Flare	Tons												
	Vent	Tons												
	Generators	Tons												
	Total	Tons												
Nitrogen (NO <sub>x</sub> )	Flare	Tons												
	Vent	Tons												
	Generators	Tons												
	Total	Tons												
COD	Sewage	mg/ltr.												
BOD	Sewage	mg/ltr.												
TDS	Produced Water	mg/ltr.												
TSS	Produced Water	mg/ltr.												
Chlorides	Produced Water	mg/ltr.												
Oil & Grease	Produced Water	mg/ltr.												
Chemicals Consumed	Drilling/ Process	Ltrs.												
	Well Site/ Header	Ltrs.												
Water Consumption	Process	Ltrs.												
	Utilities	Ltrs.												
	Drinking	Ltrs.												
	Total	Ltrs.												
Disposal of Effluents	Produced Water	Ltrs.												
Hazardous Waste (Disposal)	Process	Kg.												
	Biological	Kg.												
Non-Hazardous Waste (Disposal)		Kg.												
Spills	Produced Water	Ltrs.												
	Crude Oil	Ltrs.												
	Chemical	Ltrs.												
Leak Detection And Repair	Leak Points	Nos.												
	Gross Savings	scf												
Waste Pits: Restored (Rehabilitated)	Hazardous	Nos.												
	Non-Hazardous	Nos.												
Tree Plantation	This Season	Nos.												
	Previous Status	Nos.												
	Total	Nos.												





**SAFETY STATISTICS**

Item	Jan	Feb	March	Apr	May	June	Jul	Aug	Sept	Oct	Nov	Dec	Yearly	
O=OGDCL	O	C	O	C	O	C	O	C	O	C	O	C	O	C
C=Contractor														
Lost Work Days														
Safe Man Hours														
Risks Update														
High														
Medium														
Low														
MOC Cases														
<b>LAGGING INDICATORS</b>														
<i>Human Injury Cases</i>														
Fatal														
Permanent Partial Disability														
Permanent Total Disability														
Lost Workday														
Restricted Workday														
Medical Treatment														
First Aid Cases														
<i>Asset Damage Cases</i>														
Process Equipment														
Earth Moving Machinery														
Vehicles														
Buildings														
<i>Environmental Concern Cases</i>														
Fire														
Spill														
Leakage														
<i>Process Safety Cases (Failures/ Faults/ Malfunctions/ Blockages/ Jamming)</i>														
Interlocks														
F&G Detectors														
Uninterruptible Power Supply														
Relief Devices/ Vents														
ESD														
Loss (in US \$) due to incidents including shutdown														
Revenue (Production)														
Asset (Repair/ Replacement)														
Environment (Degradation/ Rehabilitation)														
<b>LEADING INDICATORS</b>														
Near Hits														
STOP Cards														
Unsafe Conditions														
Unsafe Behaviors														
Hazard Hunt Program														
# of Tours														
UC Reported														
UC Closed														
Fire Drills														
Other Emergency Drills														
Awareness Sessions														
Participants														
Officers														
Staff														
Visitors														
Safety/ Toolbox Talks														
Audit														
Pending														
Total														
Permits: Corrective Jobs														
Permits: Breakdown Jobs														
Permits: PM Jobs														
Rewards														

Lagging indicators are typically "output" oriented, easy to measure but hard to improve or influence e.g. incidents related statistics, pollution load, etc.  
 Leading indicators are typically "input" oriented, hard to measure and easy to influence e.g. risk assessment reports, audit results, trainings outcome, etc.  
 O=OGDCL this column must include data of all OGDCL employees i.e. Regular + OGDCL Contracts + Trainees+ Work-Charge/Casuals; whereas,  
 C=Contractors this column to include data of service companies + petty contractor workforce+ labor hired on daily wages for civil works etc.



**OCCUPATIONAL HEALTH STATISTICS**

Item	Unit	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Yearly
Total Patients visited Dispensary	OGDCL	No.												
	Community	No.												
Occupational Health Patients visited Dispensary (Med. Rep.)	No.													
Epidemic/ Pandemic Patients visited Dispensary (Med. Rep.)	No.													
Employees Undergone OH Assessment (Fitness Tests)	Officers	No.												
	Staff	No.												
Kitchen Staff Undergone OH Assessment	No.													
Employees Hospitalized	No.													
Employees Quarantined	No.													
Employees Job Related Due To OH Problems	No.													

**Monthly Log of Incidents**

#	Date & Time	Incident Type	Short Description	Reason (Cause)	Action Taken To Avoid Recurrence

**Monthly Log of HSE Awareness/ Training Sessions**

#	Date & Time	Title	Facilitator/ Instructor	Venue/ Institute	Number of Participants
<b>External or Outsource Trainings/ Sessions</b>					
<b>Onsite/ Internal Trainings/ Sessions</b>					

**Monthly Log of HSE Reward and Recognition**

#	Name & OG/S #	Design.	Type of Award	Amount	Month	Description of Contribution towards HSE System Improvement

**Note:-** Duty Filled HSEQ Report must be emailed to [HSEReports@ogdcl.com](mailto:HSEReports@ogdcl.com) by the 5<sup>th</sup> of every month.

Stamp of Field HSE In-charge and *Signature*  
Date: \_\_\_\_\_

Stamp of In-charge Location and *Signature*  
Date: \_\_\_\_\_



## 8.4 Reward, Recognition & Penalties

OGM/P-HSE-8.4(08) Revision Number 8

Original Issue: June 25, 2007  
This Issue: March 14, 2022

**Updated By:**

**Muhammad Sameem Hussain Qaiser**  
Senior HSEQ Officer, OGDCL

**Reviewed By:**

**Muhammad Mubashir Abbas**  
Manager HSEQ, OGDCL

**Checked By:**

**Mahmood-ul-Hassan Khan**  
General Manager HSEQ, OGDCL

**Approved By:**

**Syed Khalid Siraj Subhani**  
Managing Director, OGDCL

### Change/ Revision Log

#	Description of Change
1.	<i>Added: HSE awards shall be conferred to the eligible workforce members at field /sectional-levels from the already/ existing financial head of Imprest of respective locations.</i>

### Associated Documents Approval & Issue

Related Document/ Record	Initiated by	Reviewed by	Checked/ Verified / Approved by

### 8.4.1 Reward and Recognition Process

☐ All OGDCL Facilities shall institute a reward and recognition plan as per guidelines provided below. These Special recognition awards are designed to recognize consistent team based and individual's achievements. These are linked with our efforts to strive for zero harm with the following objectives:

- ▣ Engagement of team for achievement of injury free operations
- ▣ Encouragement of positive behaviours and attitudes amongst employees and long term contractors to have sustained focus towards HSE aspects.

Award Title	Frequency	Estimate Reward Value	Award Committee
<b>On Spot Recognition Award</b>	<u>Maximum of Three Per Month</u>	PKR 500	Location IC & Location HSE IC
<b>HSE Champion of the Month Award</b>	<u>Monthly</u>	PKR 3,000	Location IC & Location HSE IC
<b>Quarterly HSE Recognition Award for the Department/ Section</b>	<u>Quarterly</u>	PKR 5,000	Location HSE MRC
<b>Annual Best HSE Location of the Directorate Award</b>	<u>Annual</u>	Certificate, Shield(s) & Souvenirs	MD / CEO & GM HSE

Note: HSE awards shall be conferred to the eligible workforce members at field /sectional-levels from the already/ existing financial head of Imprest of respective locations.

#### 8.4.1.1 Eligibility & Selection Criteria

##### 8.4.1.1.1 On Spot Recognition

- ☐ On the spot recognition is aimed at positive, immediate and certain recognition of a significant contribution- including an aspect related to any one out of followings:
- ⊕ HSE system/ practice improvement, recommendation or implementation.
  - ⊕ Positive behavior (such as good housekeeping/ proper maintenance of PPE).
  - ⊕ Process safety assurance and improvement.
  - ⊕ Effective reporting of critical unsafe behavior/ condition.
  - ⊕ Effective engagement with employees, contractors, sub-contractors or service company
  - ⊕ Fearless suspension of an unsafe work etc.
- ☐ In order to have a competitive environment, maximum one award per month per 100 workers is recommended for each location / facility.
- ☐ All workforce members are eligible and encouraged to nominate any person for On Spot Recognition as per the above mentioned criteria.

##### 8.4.1.1.2 HSE Champion of the Month Award

- ☐ This award is aimed at encouraging reporting of UBU (hazards) and Near hits. For this reason the award shall only be given whereby an EXCEPTIONAL HAZARD / NEAR HIT HAS BEEN PROPERLY DOCUMENTED AND REPORTED on Preliminary Incident Reporting Form, CPR or STOP Card.
- ☐ All OGDCL and contractor / service company's employees are eligible for this award, who have reported UBU (hazard) or Near hit which assisted to save life, protect environment from damage, prevent asset loss, improve HSE performance at site, ensure compliance of safe work practices, improve existing HSE Management System and/ or raise risk awareness.

##### 8.4.1.1.3 Quarterly HSE Recognition Award for the Department

- ☐ Location HSE MRC shall evaluate HSE performance of departments (sections) for this award.
- ☐ The award shall be given to one department (section) for each quarter based on the following eligibility criteria:

	Benchmark	Examples of Departments (Sections)							
		Production	Process	Mechanical	Electrical	Instrumentation	QC / Lab.	Medical	Stores/ MMD
Near hits & UBUC reported									
Inspections Performed									
Awareness Sessions Attended									
Toolbox Talks Conducted									
HSE MRC meetings Attended									
%Personnel Undergone OH / Fitness Assessment									
Emergency Drills Attended									
<b>HSE Score</b>									

#### 8.4.1.4 Annual Best HSE Location of the Directorate Award

- ▣ This award is designed to annually recognize facilities which have demonstrated preferred behavior in handling HSE issues in their Directorate (Exploration / Petroserv / Production).
- ▣ Each Location IC shall submit an Annual HSE Score Card based on achievements in terms of incidents and pollution prevention where following three aspects shall be used to assess how involvement of each Location has worked in imparting improvements in the HSE System of the location:

	Benchmark	Locations							
		Location A	Location B	Location C	Location D	Location E	Location F	Location G	Location H
<b>Results</b>									
Fatalities									
LTIs (LWIs)									
Leakages & Spills									
<b>Program</b>									
Trainings									
Inspections									
Audits									
<b>Culture</b>									
Near Hits									
UBUC									
Safety Talks									
<b>HSE Score</b>									

#### 8.4.2 Dealing with Violations

- ▣ It is imperative for any organization to balance the need for a non-punitive learning environment with the need to hold individuals accountable for their actions.
- ▣ The purpose to describe how to "deal with Violations" is to provide guidance on the application of a fair and consistent assessment process which balances the need for a non-punitive learning environment with the need to hold individuals accountable for their actions. Henceforth, this process shall be referred to as 'Fair Treatment' Process.
- ▣ The purpose of Fair Treatment Assessment process shall be to determine the exact nature of an individual's involvement in an event where OGDCL HSE policies, standards, protocols and procedures may have been compromised and take necessary corrective, preventive and punitive action.

- ☐ In case of any incident / near hit where willful violation of OGDCL HSE policies, standards, protocols and procedures is considered to have taken place, a Fair Treatment Assessment process shall be activated upon the request of relevant Location IC and / or Location IC HSE.

- ☐ MD / CEO in consultation with HOD HSE and HOD Discipline shall constitute, where deem necessary, a Fair Treatment Assessment Committee for taking up necessary corrective, preventive and punitive actions.
- ☐ Fair Treatment Assessment Committee shall come up with and submit its suggestions / recommendations within a fortnight to MD / CEO.



## 8.5 Internal HSE Audit

OGM/P-HSE-8.5(08) Revision Number 8

Original Issue: June 25, 2007  
 This Issue: March 14, 2022

**Updated By:**

**Muhammad Sameem Hussain Qaiser**  
 Senior HSEQ Officer, OGDCL

**Reviewed By:**

**Muhammad Mubashir Abbas**  
 Manager HSEQ, OGDCL

**Checked By:**

**Mahmood-ul-Hassan Khan**  
 General Manager HSEQ, OGDCL

**Approved By:**

**Syed Khalid Siraj Subhani**  
 Managing Director, OGDCL

### Change/ Revision Log

#	Description of Change
1.	Amended: For High Risk Exposed Sites, one full audit + 01 follow-up of audit recommended.

### Associated Documents Approval & Issue

Related Document/ Record	Initiated by	Reviewed by	Checked/ Verified / Approved by
OGF – HSE – 039 List of Approved Internal HSE Auditors	HSE Department H.O. Rep.	Manager HSE	GM HSE
OGF – HSE – 040 Annual HSE Audit Planner (Schedule)	HSE Department H.O. Rep.	Manager HSE	GM HSE
OGF – HSE – 041 HSE Audit Plan	Internal HSE Team Member/ Auditor	HSE Lead Auditor	Manager HSE
OGF – HSE – 042 Standardized HSE Audit Checklist	HSE Department H.O. Rep.	Manager HSE	GM HSE
OGF – HSE – 043 HSE Audit Report	HSE Lead Auditor	Manager HSE	GM HSE

### 8.5.1 Purpose

- ☐ Internal HSE Audits shall be planned and carried out in order to:-
  - ⊛ determine whether HSE management system conforms to the planned arrangements for controlling and minimizing the significant HSE risks;
  - ⊛ oversee whether HSE management system has been implemented, maintained and meeting HSE policy & objectives in an effective manner; &
  - ⊛ provide feedback to management of the results of such audits.

### 8.5.2 Audit Team

- ☐ Internal HSE Auditors shall be selected from different organizational functions based on their experience and professional skills.
- ☐ Internal HSE Auditors shall be at least university graduates (professional engineers, environmentalists, or domain specialists).
- ☐ Internal HSE Auditors shall have to undergo and qualify Certificate Level Training on HSE Auditing Methodologies, Skills & Ethics.
- ☐ HSE Department shall maintain the training, evaluation and certification renewal record of the qualified HSE Auditors for their continual professional development.

### 8.5.3 Audit Modalities

#### 8.5.3.1 Definitions

<b>Auditee</b>	Location (field/ site) to be or being audited.
<b>Auditor</b>	Competent person who conducts an HSE audit.
<b>Audit Conclusion</b>	Outcome of an audit, after consideration of the audit objectives and all audit findings.
<b>Audit Criteria</b>	Set of policies, procedures or requirements used as a reference against which audit evidence is compared.
<b>Audit Evidence</b>	Records, statements of fact, or other documented information (qualitative or quantitative) which are relevant to the audit criteria and verifiable.
<b>Audit Findings</b>	Results of the evaluation of the collected audit evidence against audit criteria. The findings include good practices, nonconformities, observations or opportunities for improvement.
<b>Audit Grade</b>	Audit Grade for a specific location (attributed as Excellent, Good or Poor) is based upon percentage compliance level determined by Audit Team against the Standardized HSE Audit Checklist.
<b>Audit Plan</b>	Arrangements for an audit planned (as per audit planner/ schedule) for a specific time frame and directed towards a specific purpose.
<b>Audit Planner (Schedule)</b>	Audit program arrangements for a set of audits scheduled for a specific time period and directed towards specific purpose.
<b>Audit Scope</b>	Extent and boundaries of an audit; It generally includes a description of the physical locations, organizational units, activities and processes, as well as the time period covered.
<b>Audit Team</b>	One or more HSE Auditors conducting an audit, and supported by technical or subject matter experts, if needed.
<b>Documented Information</b>	Documented information, refers to any information required to be controlled & maintained. (It can be in any format/ media, and from any source.)
<b>Lead Auditor</b>	An experienced HSE Auditor of the Audit Team who is appointed as Team Leader for a specific audit.
<b>Objective Evidence</b>	Records, statements of fact, or other documented information (qualitative or quantitative) supporting the existence or verity of something obtained through observation, measurement, test, or other means.

#### 8.5.3.2 Categories of Audit Findings

Audit findings shall be categorized as follows:

- ⊛ **Non-conformity (Category 1):** As defined in the standardized audit checklist it is either a) a **SYSTEMATIC FAILURE, SIGNIFICANT DEFICIENCY** in part of the HSE system, or the **LACK OF IMPLEMENTATION** of such a part, governed by applicable standards or b) an **ISOLATED or SPORADIC LAPSE** in the content or implementation of procedures or records which could reasonably "lead to" a systematic failure or significant deficiency if not corrected.

- ⊕ **Observation (Category 2):** As defined in the standardized audit checklist it is an AREA OF CONCERN, a process, document or activity that is CURRENTLY CONFORMING or a WEAK PRACTICE which, if not improved, RESULTS IN A NONCONFORMING system, product or service.
- ⊕ **Opportunity For Improvement – OFI (Category 3):** OFI is a RECOMMEND BEST INDUSTRIAL PRACTICE which results in improvement of HSE management system.

### 8.5.3.3 Scoring Criterion for Audit Findings

Following *Audit Scoring Criteria* shall be used for audit findings:

Compliance Level (Against Each Requirement)	Score
<b>Documentation and implementation is totally absent</b>	<b>0</b>
<b>Documentation is partially available but not completely implemented</b>	<b>2.5</b>
<b>Documentation is completely available but partially implemented Or Implementation is there but documents partially in place</b>	<b>5.0</b>
<b>Documentation &amp; implementation is in place to a larger extent</b>	<b>7.5</b>
<b>Documentation and implementation is fully in place</b>	<b>10</b>

### 8.5.3.4 Audit Grade & Star Rating

Audit outcome shall be assigned a Grade and Star Rating as follows:

Audit Grade	Star Rating	Percentage Compliance
<b>A</b> <b>Excellent</b> Compliance Level	☆☆☆	<b>More than 76 Percent</b>
<b>B</b> <b>Good</b> Compliance Level	☆☆	<b>51 – 75 Percent</b>
<b>C</b> <b>Poor</b> Compliance Level	☆	<b>Less than 50 Percent</b>

### 8.5.4 Audit Planning

- ☞ HSE Department shall prepare an *Annual HSE Audit Planner (Schedule)* before the 31<sup>st</sup> of July each year based on the following *Matrix of Frequency-Risk Classification*;

<u>Risk Exposure</u>	<u>Risk Classification</u>	<u>Preferred Sites</u>	<u>Audit Frequency</u>
<b>High</b>	Where multiple regulated hazards are present in a significant proportion of the workplace operations, e.g. project activities, high pressure & temperature, un-stabilized oil, H2S, steam, flammable material, working at heights, chemical exposure, confined spaces, rotary equipment, and process hazardous waste.	⊕ Production Fields/ Gas Processing Plants ⊕ Drilling Rigs	Biannual (one full audit + 01 follow-up of audit)
<b>Medium</b>	Where multiple regulated hazards are present but on intermittent basis w.r.t. the workplace operations and/ or conditions.	⊕ Seismic Parties ⊕ Engineering Field Parties ⊕ Field Gathering Construction Party	Annual Only annual inspection is recommended
<b>Low</b>	Where regulated hazards are generally not present in the workplace operations. This includes office-based administrative operations, regional offices, medical units, material storage, workshops, or teaching/ research areas.	⊕ OGDCL House ⊕ Medical Centers ⊕ OGTI ⊕ G&R Labs. ⊕ Workshops ⊕ Base Stores	Only annual inspection is recommended ; but in case of Certification, audit is recommended

- ☐ HSEQ Department shall develop/ update *Standardized HSE Audit Checklist* (attached) based on the requirements of HSE management system and hand it over to Lead Auditor.
- ☐ Lead Auditor shall prepare *Audit Plan* of a specific location based on audit criteria and scope using risk-based approach to ensure focus on matters that are significant in terms of risks & opportunities and the results of previous audits.
- ☐ The scope of audit shall be based on the size, functions and complexities of processes, operations and activities of the site.
- ☐ The *Audit Plan* along with the copy of *Standardized HSE Audit Checklist* shall be disseminated to Location InCharge.
- ☐ The *Audit Plan* shall enlist all the activities corresponding to the HSE management system, identify areas where these activities are taking

place, and time of audit for each activity.

- ☐ Location InCharge shall arrange logistics and relevant Personal Protective Equipment (PPE) for the auditors.

### **8.5.5 Audit Execution**

- ☐ Before starting an audit, internal HSE auditors shall ensure the possession of:
  - a) Audit Plan
  - b) Standardized HSE Audit Checklist
  - c) HSE System Manual
  - d) HSE Risk Register
  - e) HSE Regulatory Requirements Matrix

#### **8.5.5.1 Opening Meeting**

- The audit shall begin with an introduction of audit team members & location's management, briefing on the objective, methodology, scope and criteria of the HSE audit and any occupational health, safety, environmental and administrative arrangements required.
- *Audit Plan* shall be discussed for ensuring smooth audit process.
- Location InCharge shall ensure the availability of all Sectional InCharges, auditee personnel and a suitable guide/ Rep. to escort the audit team.

#### **8.5.5.2 Conducting the Audit**

- ☐ While conducting audit, the auditors shall seek to verify whether procedures and instructions are being implemented. For this, following shall be considered:

- ⊕ Examination of the data & record (documented information),
- ⊕ Talking to personnel actually performing various tasks,
- ⊕ Observing tasks/ operations being carried out, and
- ⊕ Validating safety critical equipment to see whether these are fit to address emergencies.

- Internal HSE Auditors shall ensure to focus and spend more time on significant areas and activities with high risks keeping in view time management as one of the crucial factors of HSE audit.
- ☐ HSE Auditors shall ensure proper handling and reporting of sensitive information applying due diligence.
- ☐ HSE Auditors shall remain impartial, free from bias & conflict of interest, and maintain integrity and objectivity throughout the audit process to ensure that audit findings and conclusions are based on audit evidence.
- ☐ During the proceedings of audit, Lead Auditor shall convene short meetings with the audit team members to exchange notes and discuss audit progress.

#### **8.5.5.3 Closing Meeting**

- On completion of audit, a closing meeting shall be arranged with the management of the site to share findings and conclusion of the audit.
- None of the audit information shall be used inappropriately for personal gains by the auditors, or in a manner detrimental to the legitimate interests of the auditee.

### **8.5.6 Audit Report**

- ☐ After the completion of audit, audit team members shall formally submit findings to Lead Auditor who compiles, categorizes & assign scores to audit findings; calculate sub-score for each element of HSE-MS (Plan-Do-Check-Act cycle) and determine *HSE Audit Score* & percentage compliance as follows:

Plan		
<b>Leadership</b>	HSE & RM Policy Statements OGM/P-HSE-4.1	
	Fatality Control Policy Guidelines OGM/P-HSE-4.2	
	Roles, Responsibilities, Accountabilities, and Authorities OGM/P-HSE-4.3	
	Crisis Management OGM/P-HSE-4.4	
<b>Planning</b>	Risk Management OGM/P-HSE-5.1	
	Job Vulnerability /Hazard Analysis OGM/P-HSE-5.2	
	Legal & Other Requirements OGM/P-HSE-5.3	
	Objectives & Management Program OGM/P-HSE-5.4	
<b>Support</b>	Competence & Awareness OGM/P-HSE-6.1	
	Communication & Consultation OGM/P-HSE-6.2	
	Documented Information OGM/P-HSE-6.3	
	Control of Records OGM/P-HSE-6.4	
Sub Score (A)		
Do		
<b>Operation</b>	Operational Planning and Control OGM/P-HSE-7.1	
	Permit to Work System OGM/P-HSE-7.2	
	Handling, Segregation and Disposal of Waste OGM/P-HSE-7.3	
	Journey Management OGM/P-HSE-7.4	
	Framework For Hydrogen Sulfide Management OGM/P-HSE-7.5	
	Management of Project Contractors & Service Companies OGM/P-HSE-7.6	
	Use of Personal Protective Equipment OGM/P-HSE-7.7	
	Framework For Site Restoration OGM/P-HSE-7.8	
Sub Score (B)		
Check		
<b>Performance Evaluation</b>	UBUC (Hazards) Identification & Reporting OGM/P-HSE-8.1	
	Monitoring, Measurement & Compliance Evaluation OGM/P-HSE-8.2	
	Analysis of Data OGM/P-HSE-8.3	
	Reward, Recognition & Penalties OGM/P-HSE-8.4	
	HSE Audit OGM/P-HSE-8.5	
	Management Reviews OGM/P-HSE-8.6	
Sub Score (C)		
Act		
<b>Improvement</b>	Opportunities For Continual Improvement OGM/P-HSE-9.1	
	Management of Change OGM/P-HSE-9.2	
	Incident Investigation OGM/P-HSE-9.3	
Sub Score (D)		
<b>Audit Score</b> (Sub Score A+B+C+D)		
<b>Percentage Compliance</b>		

- ☐ Subsequently, Lead Auditor shall prepare the draft of *Audit Report*, containing following information:
  - ⊕ Composition of the audit team, roles and audit man-hours.
  - ⊕ Introduction; audit's objective, criteria & scope.
  - ⊕ Audit modalities.
  - ⊕ Audit score, percentage compliance and grade (secured).
  - ⊕ Good practices observed.
  - ⊕ Actual audit findings (non-conformities, observations and opportunities for improvement)
  - ⊕ Areas missed out.
  - ⊕ Names of auditee-team.
  - ⊕ Instructions regarding HSE Audit Corrective Action Plan.
  - ⊕ Pictorial/ documented evidence.
- ☞ The draft *Audit Report* shall be submitted to HSEQ Department within a week (after conducting the audit) for review.
- ☞ Based upon the *HSE Audit Score* & percentage compliance, HSEQ Department shall assign a Grade and Star Rating to the *Audit Report*.
- ☞ The final *Audit Report* shall be distributed to the concerned auditee through their respective HOD/ GM/ ED with a copy to MD/ CEO.



### 8.5.7 Post-Audit Action Plan and Follow up

- ☐ The audit findings shall be discussed in the Corporate and Location's HSE MRC Meetings and be addressed as tabulated below:

Audit Grade & Star Rating		Action Required
<b>A</b>	<b>Excellent</b> Compliance Level ☆☆☆	<ul style="list-style-type: none"> <li>⊕ Location securing Excellent (Grade) shall be recommended for Annual Best HSE Location of the Directorate Award.</li> <li>⊕ Respective GM shall nominate a suitable operational representative to develop an Action Plan to address the audit findings and closeout within 06 months.</li> </ul>
<b>B</b>	<b>Good</b> <b>Compliance Level</b> ☆☆	⊕ Respective GM shall nominate a suitable operational representative (not below the rank of Chief) to develop an Action Plan to address the audit findings and closeout within 04 to 06 months.
<b>C</b>	<b>Poor</b> Compliance Level ☆	⊕ Respective ED shall nominate an Officer (not below the rank of Manager) to develop an Action Plan to address the audit findings and closeout within 03 to 06 months.

- ☐ Auditee (Area/ Location InCharge) shall submit *HSE Audit Corrective Action Plan* to HSEQ Department within a week (after receiving of the audit report) in the following format:

#	Audit Finding (Ref. Audit Report)	Probable Cause(s) (In perspective of PDCA Cycle)	Action(s) Recommended	Responsibility	Target Deadline

- ☐ Where required, Lead Auditor/ HSE Rep. shall follow-up the audit to determine if corrective actions have been implemented effectively and submit *Audit Follow-up Status Report* in the following format:

#	Audit Finding (Ref. Audit Report)	Action Recommended (Ref. Audit Report)	Action(s) Actually Taken	Audit Finding's Closure Status	Further Follow-up Required (Yes/ No)

- ☐ When there is sufficient objective evidence that the corrective action(s) are effective, audit shall be closed out.
- ☐ If more work is needed to fully implement the corrective actions, a new follow-up date shall be agreed upon and audit shall be closed out accordingly.







Oil & Gas Development Company Limited  
 Location: \_\_\_\_\_

OGF - HSE - 041(01)

**INTERNAL HSE (RISK BASED) AUDIT PLAN**

Based on ISO 19011:2018 Guidelines For Auditing Management Systems

<b>Audit #:</b>	<b>Audit Dates/ Man-Hours:</b>
<b>Audit Scope:</b> <input type="checkbox"/> Well Site Operations <input type="checkbox"/> Production Engineering <input type="checkbox"/> Separation, Dehydration <input type="checkbox"/> Sulfur Recovery <input type="checkbox"/> LPG Recovery <input type="checkbox"/> Crude Oil Storage & Dispatch/ Marketing <input type="checkbox"/> Maintenance (Mechanical, Electrical, Instrument) <input type="checkbox"/> HSE & Medical Services <input type="checkbox"/> Quality Control/ Metering <input type="checkbox"/> Raw Material, Spare Parts, etc.,	<b>Audit Criteria:</b> <input type="checkbox"/> ISO 14001:2015 <input type="checkbox"/> ISO 45001:2018 <input type="checkbox"/> OGDCL's Integrated HSE System Manual
<b>Lead Auditor:</b>	<b>Audit Team Members:</b>

Time	Dept./Section to be audited	Risk Based Activity/ Operation	Auditors	HSE MS PDCA Cycle Elements to be audited	
<b>DAY &amp; DATE:</b>					
				Leadership	
				Planning	
				Support	
				Operation	
				Performance Evaluation	
				Improvement	
				Leadership	
				Planning	
				Support	
				Operation	
				Performance Evaluation	
				Improvement	
<b>BREAK</b>					
				Leadership	

Ref. Section 08 (Performance Evaluation) of OGDCL's Integrated HSE System Manual



				Planning	
				Support	
				Operation	
				Performance Evaluation	
				Improvement	
				Leadership	
				Planning	
				Support	
				Operation	
				Performance Evaluation	
				Improvement	
END OF DAY-1					
<b>DAY &amp; DATE :</b>					
				Leadership	
				Planning	
				Support	
				Operation	
				Performance Evaluation	
				Improvement	
				Leadership	
				Planning	
				Support	
				Operation	
				Performance Evaluation	
				Improvement	
<b>BREAK</b>					
				Leadership	
				Planning	
				Support	
				Operation	

Ref. Section 08 (Performance Evaluation) of OGDCL's Integrated HSE System Manual





## Performance Evaluation: OGDCL's Integrated HSE System Manual

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				Performance Evaluation	
				Improvement	
				Leadership	
				Planning	
				Support	
				Operation	
				Performance Evaluation	
				Improvement	
..... END OF DAY-2 .....					

<b>Prepared by:</b>	<b>Reviewed by:</b>	<b>Approved by:</b>
(Internal HSE Auditor)	(Lead Auditor)	Manager (HSEQ)
<b>Date:</b>	<b>Date:</b>	<b>Date:</b>

Ref. Section 08 (Performance Evaluation) of OGDCL's Integrated HSE System Manual



# Performance Evaluation: OGDCL's Integrated HSE System Manual

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Standardized HSE Audit Checklist



## Standardized HSE Audit Checklist

PLAN (40 Questions)							
#	HSE HSE Element	Rating					Findings and Comments (Use separate sheets where required)
		Not Applicable	Documentation and implementation is totally absent	Documentation is partially available but not completely implemented	Documentation is completely available but partially implemented Or Implementation is there but documents partially implemented	Documentation & implementation is in place to a larger extent	
Rating		0	2.5	5	7.5	10	
<b>HSE &amp; RM Policy Statements OGM/P-HSE-4.1</b>							
1.	Are HSE/ Risk Management Policies available and understood/ communicated for compliance?						
<b>Lifesaving Golden Rules/ Fatality Control Policy Guidelines OGM/P-HSE-4.2</b>							
2.	Are Lifesaving Golden Rules/ Fatality Guidelines communicated at sub-unit levels and transformed into objectives & targets for conformity?						
<b>Roles, Responsibilities, Accountabilities, and Authorities OGM/P-HSE-4.3</b>							
3.	Is line management and workforce aware of their HSE roles, responsibilities, accountabilities and authorities?						
4.	Are Location Emergency Management Teams formulated and aware of their HSE roles?						
<b>Crisis Management OGM/P-HSE-4.4</b>							
5.	Is site based Emergency Response Plan developed and implemented?						
6.	Are Emergency LMT Teams and Duty Roster(s) prepared and disseminated to all concerned?						
7.	Is mock-up drill plan prepared, approved and exercised? Is updated record of Emergency Drill Reports available?						
8.	Is an authentic Head Count System established for rescue operations during emergency situations?						
9.	Are First Aid Boxes available & maintained at all pertinent places?						
10.	Are validation tests of emergency detection & response systems/ equipment performed at a prescribed frequency?						
11.	After an Emergency/ Drill, Is Location Emergency						

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Standardized HSE Audit Checklist



## Standardized HSE Audit Checklist

12.	Preparedness & Response Plan (ERP) discussed in the HSE NRC Meetings and revised based on Lessons Learned?						
13.	Is Emergency Response Control Centre LMT Room / Alternate LMT Room available with tested resources? Is list of required resources for ERPs identified, available, and maintained?						
<b>Enterprise Risk Management OGM/P-HSE-5.1</b>							
14.	Is Hazards Identification & Risk Assessment (HARA) Team formulated and conducted HARA?						
15.	Is Location based Risk Register developed/ updated by HARA Team, reviewed by HSE NRC and approved by Location Change?						
16.	Are Risk Ratings communicated to all concerned stakeholders?						
<b>Job Vulnerability Hazards Analysis OGM/P-HSE-5.2</b>							
17.	Is JVA/ JHA conducted for all tasks performed under a Permit to Work (PTW)?						
18.	Is JVA/ JHA discussed with workforce prior to commencement of work?						
<b>Legal &amp; Other Requirements OGM/P-HSE-5.3</b>							
19.	Are all applicable legal and other requirements identified & timely updated in the Regulatory Requirement Matrix and their compliance obligation status evaluated on periodic basis?						
<b>Objectives &amp; Management Program OGM/P-HSE-5.4</b>							
20.	Is Annual HSE Plan developed and readily available? Is Progress against HSE Plan followed up?						
21.	Are HSE Objective & Targets Management Programs formulated to reduce, manage or mitigate the impact of high rated risks?						
22.	Are Annual HSE Plan, HSE Objective & Targets discussed, reviewed and followed up in HSE NRC?						
<b>Competence &amp; Awareness OGM/P-HSE-6.1</b>							
23.	Based on TNA, is Annual HSE Training and Awareness Plan developed considering all essential HSE topics, and disseminated to all concerned?						
24.	Do the selection of Training Facilitators/ instructors consider some eligibility criterion?						
25.	Are HSE Trainings/ Awareness Sessions conducted at the identified frequencies?						
26.	Is record of HSE Trainings/ Awareness Sessions maintained and are the sessions being attended by adequate number of personnel?						

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Standardized HSE Audit Checklist



## Standardized HSE Audit Checklist

27.	Is effectiveness of HSE Trainings/ Awareness Sessions evaluated to ensure their intended purpose/ utilization?							
28.	Are site visitors, guests, etc. provided formal HSE induction and record kept?							
<b>Communication &amp; Consultation OGM/P-HSE-5.2</b>								
29.	Are Tool Box Talks conducted by each Section?							
30.	Is Effectiveness of Tool Box Talks evaluated on periodic basis on prescribed template?							
31.	Are adequate number of safety signboards available at site and are these maintained to a good standard?							
32.	Are Product Safety Data Sheets developed, reviewed and distributed to Purchasers?							
33.	Are updated copies of applicable MSDS distributed to Store, Medical, HSE and User's Sections and contents therein properly communicated?							
34.	Are Pipeline and Vessels color coded and labeled?							
35.	Are Rring gears color coded and labeled?							
36.	Are secured grounding color codes, lock out tag out devices color coding being carried out?							
37.	Is External Environmental Complaint Register maintained to log the complaints?							
38.	In case it is decided in the HSE NRC Meeting to communicate the significant HSE vulnerabilities and related impacts/ risks to the interested parties, are suitable arrangements made for external communication?							
<b>Documented Information OGM/P-HSE-6.3</b>								
39.	Is Documented Information controlled (i.e. prepared, reviewed, updated, approved, and distributed)?							
<b>Control of Records OGM/P-HSE-6.4</b>								
40.	Are documents reference numbering, approval & issuance, record keeping, retention and disposition being carried out?							
		<b>SUB SCORE</b>						

**IMPORTANT:- IT IS EVERYBODY'S RESPONSIBILITY TO ENSURE THAT THE OGDCL'S HSE MANAGEMENT SYSTEM IS IN PLACE.**



# Performance Evaluation: OGDCL's Integrated HSE System Manual

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Standardized HSE Audit Checklist



## Standardized HSE Audit Checklist

DO (20 Questions)							
Sl. No.	HSE HSE Element	Rating					Findings and Comments (Use separate sheets where required)
		Not Applicable	Documentation and implementation is totally absent	Documentation is partially available but not completely implemented	Documentation is completely available but partially implemented Or Implementation is there but documents partially implemented	Documentation & implementation is in place to a larger extent	
Rating		0	2.5	5	7.5	10	
<b>Operational Planning and Control OGM/P-HSE-7.1</b>							
41.	Are Standard Operating Procedures (SOPs) and Work Instructions (WIs) prepared by relevant Sections for all activities which may pose an HSE Risk?						
42.	Are Preventive Maintenance Plans developed and implemented?						
43.	Are Calibration Plans developed and implemented? Does real-time testing validate the calibration results?						
<b>Permit to Work System OGM/P-HSE-7.2</b>							
44.	Are Work Permits easily accessible during normal conditions, emergencies, SIMOPS, ATOs, etc.?						
45.	Is a system of Authorized Person for permit issuance and receiving documented and implemented?						
46.	Have Issuing and Receiving Authorities received PTW trainings and testing of these trainings available?						
47.	Are adequate gas detectors available to conduct gas test?						
48.	Is energy isolation/ Lockout - Tagout (LOTO) system developed and implemented?						
49.	Are applicable Permits timely issued, compiled upon, closed out and record maintained?						
50.	Are PTW audits conducted and outcome of these audits actioned?						
<b>Handling, Segregation and Disposal of Waste OGM/P-HSE-7.3</b>							
51.	Is On-Site Waste Management Plan developed and implemented?						
52.	Is waste segregation, handling, temporary storage and disposal carried out?						

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Standardized HSE Audit Checklist



## Standardized HSE Audit Checklist

53.	Is record of waste collection, handling over and disposal maintained? (Disposal sites crosschecked/ verified)?						
<b>Journey Management OGM/P-HSE-7.4</b>							
54.	Is Journey Management Plan developed, made available in vehicles and record maintained?						
55.	Are all applicable operational controls checked and made available/ ensured before Journeys? Are controls for the high security journeys in place?						
56.	Are driver(s) competence and fitness ensured through trainings and monitoring?						
<b>Framework for Hydrogen Sulfide (H<sub>2</sub>S) Management: 7.5</b>							
57.	Is location categorized w.r.t Framework for Hydrogen Sulfide (H <sub>2</sub> S) Management?						
58.	Are H <sub>2</sub> S detection system and protective/ emergency controls available and in healthy condition?						
<b>Management of Project Contractors &amp; Service Companies OGM/P-HSE-7.6</b>							
59.	Do Contracts bound Contractors & Service Companies for HSE requirements as an obligation?						
60.	Are Contractors & Service Companies managed through overseeing their compliance toward HSE protocols?						
61.	Are Contractors & Service Companies recognized through HSE awards and named for violations?						
<b>Use of Personal Protective Equipment OGM/P-HSE-7.7</b>							
62.	Do all Sections prepare and update PPE need Assessment Matrix and maintain record?						
63.	Do PPE i.e. Safety Spectacle/Glasses, Face Protection, Respiratory Protection, Hearing Protection, Clothing, Head Protection, Hand Protection, Fall Protection, Protective Footwear meets technical requirements?						
64.	Is a quantitative noise survey completed around all machinery and equipment and signs posted where noise levels greater than 80 dB(A)?						
65.	Does PPE issuance, cleaning & maintenance, disposal meet requirements?						
66.	Is adequate PPE stock available to cater for employees, contractors and visitors?						
67.	Is color coding for hard helmets and coveralls followed?						
<b>Framework For Site Restoration OGM/P-HSE-7.8</b>							
68.	Are treatment and restoration cases for hazardous/ non-hazardous sites/ pits initiated and processed?						
69.	Is well site handover taking over carried out and record maintained?						
70.	Is QC for treatment & restoration performed and record maintained?						

OGP - HSE - 042(00)  
Standardized HSE Audit Checklist



## Standardized HSE Audit Checklist

SUB SCORE							
CHECK (20 Questions)							
Sl. No.	HSE HSE Element	Rating					Findings and Comments (Use separate sheets where required)
		Not Applicable	Documentation and implementation is totally absent	Documentation is partially available but not completely implemented	Documentation is completely available but partially implemented Or Implementation is there but documents partially implemented	Documentation & implementation is in place to a larger extent	
Rating		0	2.5	5	7.5	10	
<b>UBUC (Hazard) Identification &amp; Reporting OGM/P-HSE-8.1</b>							
71.	Are STOP Cards available at prominent areas along with the Drop Boxes?						
72.	Is STOP Cards/ UBUC Hazard Hunt Tours schedule/ frequency followed?						
73.	Are STOP Cards analyzed, results shared and record maintained?						
<b>Monitoring, Measurement &amp; Compliance Evaluation OGM/P-HSE-8.2</b>							
74.	Are Section wise Occupational Health, Safety & Environmental Monitoring Plans developed/ updated and distributed?						
75.	Are monitoring Checklists developed/ updated and made available in each section?						
76.	Are HSE monitoring activities performed in accordance with HSE Monitoring Plans?						
77.	Are CDIs initiated for the deviations and corrective actions followed up?						
78.	Are objective KPI targets set for the deviations and progress followed up?						
<b>Analysis of Data OGM/P-HSE-8.3</b>							
79.	Is Location Management aware of its location's HSE Performance/ KPI/ benchmarking criteria?						
80.	Is location's HSE performance shared with all concerned via HSE Monthly Reports?						
81.	Is HSE Scorecard (Leading and Lagging Indicators) discussed in Location HSE HRC meetings and used to						



## Standardized HSE Audit Checklist

	Keep an eye on how involvement of each Section is going in bringing improvement!						
<b>Reward, Recognition &amp; Penalties OGM/P-HSE-8.4</b>							
82.	Is the reward and recognition system known and followed in letter & spirit?						
<b>Internal HSE Audits OGM/P-HSE-8.5</b>							
83.	Are Internal HSE Audits planned and conducted?						
84.	Are Internal HSE Audit Teams trained/ certified and the list of location's qualified Internal HSE Auditors maintained?						
85.	Are Internal HSE Audits findings referred to all concerned for developing Action Plan?						
86.	Are Internal HSE Audits findings effectively closed out?						
<b>Management Reviews OGM/P-HSE-8.6</b>							
87.	Are quarterly HSE Management Reviews conducted?						
88.	Are Agenda and Minutes of HSE NRC Meetings timely circulated to all concerned for necessary actions?						
89.	Does each Section reflect its own HSE Performance (through presenting section's NRCA copies) in HSE NRC Meetings?						
90.	Are HSE NRC meeting decisions followed up?						
<i>SUB SCORE</i>							



## Standardized HSE Audit Checklist

ACT (10 Questions)							
#	HSE MS Element	Rating					Findings and Comments (Use separate sheets where required)
		Not Applicable	Documentation and implementation is totally absent	Documentation is partially available but not completely implemented	Documentation is completely available but partially implemented Or implementation is there but documents partially implemented	Documentation & implementation is in place to a larger extent	
<i>Rating</i>			0	2.5	5	7.5	10
<b>Opportunities For Continual Improvement OGM/P-HSE-9.1</b>							
91.	Are Corrective Preventive Actions (CPAs) initiated and processed?						
92.	Is CPRI Log maintained and updated?						
<b>Management of Change OGM/P-HSE-9.2</b>							
93.	Are Engineering Change Request (ECR) made for modification jobs? Are records of these changes available and maintained?						
94.	Is an ECR Committee formulated in the field?						
95.	Does the ECR Committee conduct Monthly ECR Reviews and report findings?						
96.	During level incident scenarios, are Emergency ECR meetings convened?						
<b>Incident Investigation OGM/P-HSE-9.3</b>							
97.	Are Preliminary Incident Reports timely submitted to head office?						
98.	Are investigation conducted as per criterion?						
99.	Are investigation reports developed using the standard template?						
100.	Are lessons learned shared with all concerned?						
<i>SUB SCORE</i>							



OGF - HSE - 043(01)

**INTERNAL HSE AUDIT REPORT**  
**<Location's Name>**



Ref. Audit Plan- OGF-HSE-041 (01)

<b>Audit Date:</b>	
<b>Audit Session:</b>	
<b>Audit Conducted By:</b>	
<b>Report Prepared By:</b>	
<b>Report Reviewed by:</b>	
<b>Report Endorsed by:</b>	
<b>Forwarded For C&amp;P Actions:</b>	
<b>Copy to:</b>	
<b>Date:</b>	

<b>Audit Outcome</b>				
	<i>Nonconformity</i>	<i>Observation</i>	<i>OFI</i>	<i>Total</i>
<b>Plan</b>				
<b>Do</b>				
<b>Check</b>				
<b>Act</b>				
<b>Total</b>				
<b>Score:</b>				
<b>Percentage Compliance:</b>				
<b>Grade:</b>				
<b>Star Rating:</b>				



**1. Objective**

*This was the first/ second Internal HSE Audit of \_\_\_\_\_ FYxx-yy in compliance with the Annual Internal HSE Audit Schedule FY 20xx-yy. The audit was conducted as per already furnished Audit Plan in order to determine whether activities and related results comply with the planned arrangements as per the requirements of OGDCL's Integrated HSE Management System and whether these arrangements are implemented effectively. The Internal HSE Audits are to be conducted at least once in 06 months for each field/plant on mandatory basis to fulfill the requirements of OGDCL's Integrated HSE System Manual Rev-6.0 (duly approved by MD/CEO). The internal HSE Auditors were selected from different organizational functions based on their experience and professional skills. The Internal HSE Auditors were trained on auditing skills by conducting internal training sessions. HSEQ Department maintains the audit-training records of these qualified auditors.*

**2. Scope**

Section Audited	Functions	Standards' Requirements
		<b>Leadership</b> 1. HSE & RM Policy Statements OGM/P-HSE-4.1 2. Fatality Control Policy Guidelines OGM/P-HSE-4.2 3. Roles, Responsibilities, Accountabilities, and Authorities OGM/P-HSE-4.3 4. Crisis Management OGM/P-HSE-4.4 5. Structure OGM/P-HSE-4.5 <b>Planning</b> 6. Enterprise Risk Management OGM/P-HSE-5.1 7. Job Vulnerability /Hazard Analysis OGM/P-HSE-5.2 8. Legal & Other Requirements OGM/P-HSE-5.3 9. Objectives & Management Program OGM/P-HSE-5.4 <b>Support</b> 10. Competence & Awareness OGM/P-HSE-6.1 11. Communication & Consultation OGM/P-HSE-6.2 12. Documented Information OGM/P-HSE-6.3 13. Control of Records OGM/P-HSE-6.4 <b>Operation</b> 14. Operational Planning and Control OGM/P-HSE-7.1 15. Permit to Work System OGM/P-HSE-7.2 16. Handling, Segregation and Disposal of Waste OGM/P-HSE- 7.3 17. Journey Management OGM/P-HSE-7.4 18. Management of Project Contractors & Service Companies OGM/P-HSE-7.6 19. Use of Personal Protective Equipment OGM/P-HSE-7.7 20. Framework for Site Restoration <b>Performance Evaluation</b> 21. UBUC (Hazards) Identification & Reporting OGM/P-HSE-8.1 22. Monitoring, Measurement & Compliance Evaluation OGM/P-HSE-8.2 23. Analysis of Data OGM/P-HSE-8.3 24. Reward, Recognition & Penalties OGM/P-HSE-8.4 25. Internal Audits OGM/P-HSE-8.5 26. Management Reviews OGM/P-HSE-8.6 <b>Improvement</b> 27. Opportunities for Continual Improvement OGM/P-HSE-9.1 28. Management of Change OGM/P-HSE-9.2 29. Incident Investigation OGM/P-HSE-9.3

### 3. Audit Modalities

#### Categories of Audit Findings

- ✦ **Non-conformity (Category 1):** As defined in the standardized audit checklist it is either a) a **SYSTEMATIC FAILURE, SIGNIFICANT DEFICIENCY** in part of the HSE system, or the **LACK OF IMPLEMENTATION** of such a part, governed by applicable standards or b) an **ISOLATED** or **SPORADIC LAPSE** in the content or implementation of procedures or records which could reasonably "lead to" a systematic failure or significant deficiency if not corrected.
- ✦ **Observation (Category 2):** As defined in the standardized audit checklist it is an **AREA OF CONCERN**, a process, document or activity that is **CURRENTLY CONFORMING** or a **WEAK PRACTICE** which, if not improved, **RESULTS IN A NONCONFORMING** system, product or service.
- ✦ **Opportunity For Improvement – OFI (Category 3):** OFI is a **RECOMMEND BEST INDUSTRIAL PRACTICE** which results in improvement of HSE management system.

#### Scoring Criterion for Audit Findings

Compliance Level (Against Each Requirement)	Score
Documentation and implementation is totally absent	0
Documentation is partially available but not completely implemented	2.5
Documentation is completely available but partially implemented Or Implementation is there but documents partially in place	5.0
Documentation & implementation is in place to a larger extent	7.5
Documentation and implementation is fully in place	10

#### Audit Grade & Star Rating

	Audit Grade	Star Rating	Percentage Compliance
A	Excellent Compliance Level	☆☆☆☆	More than 76 Percent
B	Good Compliance Level	☆☆☆	51 – 75 Percent
C	Poor Compliance Level	☆☆	Less than 50 Percent

### 4. Audit Score Sheet

Plan		
Leadership	HSE & RM Policy Statements OGM/P-HSE-4.1	
	Fatality Control Policy Guidelines OGM/P-HSE-4.2	
	Roles, Responsibilities, Accountabilities, and Authorities OGM/P-HSE-4.3	
	Crisis Management OGM/P-HSE-4.4	
Planning	Risk Management OGM/P-HSE-5.1	
	Job Vulnerability /Hazard Analysis OGM/P-HSE-5.2	
	Legal & Other Requirements OGM/P-HSE-5.3	
	Objectives & Management Program OGM/P-HSE-5.4	
Support	Competence & Awareness OGM/P-HSE-6.1	
	Communication & Consultation OGM/P-HSE-6.2	
	Documented Information OGM/P-HSE-6.3	
	Control of Records OGM/P-HSE-6.4	
<i>Sub Score (A)</i>		
Do		
Operation	Operational Planning and Control OGM/P-HSE-7.1	
	Permit to Work System OGM/P-HSE-7.2	
	Handling, Segregation and Disposal of Waste OGM/P-HSE- 7.3	
	Journey Management OGM/P-HSE-7.4	
	Framework For Hydrogen Sulfide Management OGM/P-HSE-7.5	
	Management of Project Contractors & Service Companies OGM/P-HSE-7.6	

Ref. Section 08 (Performance Evaluation) of OGDCL's Integrated HSE System Manual  
Page 3 of 5



## Performance Evaluation: OGDCL's Integrated HSE System Manual

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	Use of Personal Protective Equipment OGM/P-HSE-7.7		
	Framework For Site Restoration OGM/P-HSE-7.8		
	<i>Sub Score (B)</i>		
<b>Check</b>			
<i>Performance Evaluation</i>	UBUC (Hazards) Identification & Reporting OGM/P-HSE-8.1		
	Monitoring, Measurement & Compliance Evaluation OGM/P-HSE-8.2		
	Analysis of Data OGM/P-HSE-8.3		
	Reward, Recognition & Penalties OGM/P-HSE-8.4		
	HSE Audit OGM/P-HSE-8.5		
	Management Reviews OGM/P-HSE-8.6		
	<i>Sub Score (C)</i>		
<b>Act</b>			
<i>Improvement</i>	Opportunities For Continual Improvement OGM/P-HSE-9.1		
	Management of Change OGM/P-HSE-9.2		
	Incident Investigation OGM/P-HSE-9.3		
	<i>Sub Score (D)</i>		
		<i>Audit Score (Sub Score A+B+C+D)</i>	
		<i>Percentage Compliance</i>	

**5. Good Practices Observed**

—  
—  
—

**6. Audit Findings**

6.1 PLAN (CONTEXT, LEADERSHIP, PLANNING & SUPPORT)				
#	FINDING	REF. CLAUSE/ SEVERITY	RECOMMENDATION	RESPONSIBILITY
6.2 DO (OPERATION)				
#	FINDING	REF. CLAUSE/ SEVERITY	RECOMMENDATION	RESPONSIBILITY
6.3 CHECK (PERFORMANCE EVALUATION)				
#	FINDING	REF. CLAUSE/ SEVERITY	RECOMMENDATION	RESPONSIBILITY
6.4 ACT (IMPROVEMENT)				
#	FINDING	REF. CLAUSE/ SEVERITY	RECOMMENDATION	RESPONSIBILITY

**7. Key Personnel Interviewed**

S/No.	Name	Designation	Department/Section

**8. Problems Faced/Areas Missed**

—  
—  
—

**9. Instruction For HSE Audit Corrective Action Plan and Follow-up**

Auditee (Area/ Location InCharge) MUST SUBMIT HSE AUDIT CORRECTIVE ACTION PLAN to HSEQ Department within a week (after receiving of the audit report) in the following format:

#	Audit Finding	Probable Cause(s) (in perspective of PDCA Cycle)	Action(s) Recommended	Responsibility	Target Deadline

Lead Auditor/ HSE Rep. shall follow-up the audit to determine if corrective actions have been implemented effectively and submit Audit Follow-up Status Report in the following format:

#	Audit Finding (Ref. Audit Report)	Action Recommended (Ref. Audit Report)	Action(s) Actually Taken	Audit Finding's Closure Status	Further Follow- up Required (Yes/ No)

When there is sufficient objective evidence that the corrective action(s) are effective, audit shall be closed out. If more work is needed to fully implement the corrective actions, a new follow-up date shall be agreed upon and audit shall be closed out accordingly.

**10. Pictorial/ documented evidence.**

## 8.6 Management Review

OGM/P-HSE-8.6(08) Revision Number 8

Original Issue: June 25, 2007  
 This Issue: March 14, 2022

**Updated By:**

**Muhammad Sameem Hussain Qaiser**  
 Senior HSEQ Officer, OGDCL

**Reviewed By:**

**Muhammad Mubashir Abbas**  
 Manager HSEQ, OGDCL

**Checked By:**

**Mahmood-ul-Hassan Khan**  
 General Manager HSEQ, OGDCL

**Approved By:**

**Syed Khalid Siraj Subhani**  
 Managing Director, OGDCL

### Change/ Revision Log

#	Description of Change
	<i>Reviewed, no change suggested.</i>

### Associated Documents Approval & Issue

Related Document/ Record	Initiated by	Reviewed by	Checked/ Verified / Approved by
OGF – HSE – 044 Agenda of Management Review Committee (MRC) Meetings	Location HSE Section	Location HSE IC	Location IC
OGF – HSE – 045 Minutes of Management Review Committee (MRC) Meetings	Location HSE Section	Location HSE IC	Location IC



### 8.6.1 General

Functional Heads/ Area Managers shall be responsible to establish Location HSE Management Review Committee (HSE MRC) to coordinate and control the activities of the HSE System being carried out by different functions and to periodically review and evaluate the performance of HSE system.

However MD/ CEO shall be responsible to call an Annual Corporate HSE Management Review (Meeting) during the end of each Year to be attended by all Functional Heads (EDs and HODs) as a minimum; otherwise he may conduct HSE Performance Reviews by any other suitable means.

In addition, daily HSE meetings shall be conducted at the start / end of each business day in each location. This meeting can either be conducted separately or as part of daily 'operations' meeting however it shall, at the minimum, be attended by Location IC, Location HSE Representative and Section ICs. The minutes of meeting shall be recorded and agenda of meeting shall comprise of the following:

- ▣ Review of outstanding action items from previous meeting
- ▣ Review of hazards/ incidents reported since last meeting
- ▣ Review of HSE issues pertaining to any operational jobs
- ▣ New HSE initiatives
- ▣ HSE incident/ video/ learning of the day

### 8.6.2 Frequency of HSE MRC Reviews

The Location HSE MRC Meeting shall be held at on quarterly basis.

- ▣ Q1- Around End March
- ▣ Q2- Around End June
- ▣ Q3- Around End September
- ▣ Q4- Around End December

However, the meeting may be called at any time, when it is considered necessary, on the discretion Location Management.

In case where delay is inevitable, the management may delay the Location HSE MRC Meeting for a maximum of 30 days; However in case of emergencies, the Location HSE MRC Meeting may not take place over a period of time and can be part of regularly scheduled management activities such as operational meetings.

### 8.6.3 Composition of HSE MRC

Location HSE MRC shall review the HSE issues on fields with following constitution:

Location IC	<b>Chairman</b>
Location IC HSE	<b>Secretary</b>
All Sectional ICs	<b>Members</b>
HSE Department H.O. Rep.	<b>Observer(optional)</b>
Area Manager	<b>Observer(optional)</b>

### 8.6.4 HSE Inputs to HSE MRC Reviews

The agenda of the Location HSE MRC shall be prepared by the HSE Section a week before the meeting and distributed to all the members mentioned above.

The inputs to Location HSE MRC Meeting shall include quarterly performance on PDCA cycle of each Section to be presented by relevant Sectional ICs:

#### Plan

- Communication/understanding level of OGDCL HSE policy (to be presented by HSE IC)
- Status of threats and opportunities identified during risk assessment
- HSE objectives & management program (to be presented by HSE IC)
- Evaluation of compliance with legal requirements and other requirements
- Training need analysis (to be presented by HSE IC)
- Effectiveness of toolbox/ safety talks (to be presented by HSE IC)

### **Do**

- Participation levels in scenario-based mockup emergency drills
- Status of and issues related to permit to work system
- Status of safe disposal of hazardous waste, measures to reduce waste quantum and waste streams

### **Check**

- Analysis of STOP Cards (to be presented by HSE IC)
- Lagging & leading indicators, performance and compliance
- Calibration status of measuring equipment/ gadgets
- Compliance of Safety/ Environment/ OH Monitoring Plan
- Results of internal and external HSE audits (to be presented by HSE IC)
- Follow up of previous MRC MoMs (to be presented by HSE IC)

### **Act**

- Complaints, accidents, incidents, comments and views of interested parties and feed back (to be presented by HSE IC)
- Status of preventive and corrective actions (to be presented by HSE IC)
- Issues related to modification jobs and compliance of MoC
- Any recommendations/ suggestion for improvement in process or system

## **8.6.5 Outputs to HSE MRC Reviews**

---

- ☐ The minutes of Location HSE MRC meeting shall be prepared by the Secretary after the meeting and then distributed to the members.
- ☐ The minutes shall include decisions related to:
  - a) Improvement in Pollution Prevention System;
  - b) Improvement in Accident Prevention System;
  - c) Execution of Annual Vulnerabilities Identification and Impact (Risk) Plan
  - d) Execution of Annual Internal HSE Awareness Plan;
  - e) Execution of Annual Emergency Drill Plan;
  - f) Execution of Annual OH Assessment Plan;
  - g) Execution of Annual Toolbox Talk Plan;
  - h) Specific corrective actions for individual/ subcommittees with target dates of completion.
  - i) Revisions to HSE Objectives and Management Programs;
  - j) Resource/ training needs.
- ☐ The minutes shall include the name of persons who attended the meeting, matters reviewed, decisions taken on required actions, the names of persons responsible for implementing such actions and the dates by which they are to be completed.

## **8.6.6 Follow up of the HSE MRC Meeting**

---

- ☐ HSE Department/ Section shall be responsible for the follow up of the decisions taken in the meeting to ensure that the decisions are implemented in the time frame specified.



Oil & Gas Development Corporation Limited

OGF/XXX - HSEQ - 044(00)

Location: \_\_\_\_\_

**AGENDA**  
**HSE MANAGEMENT REVIEW COMMITTEE (MRC) MEETING**

MEETING TYPE	MEETING DATE	MEETING TIME	MEETING LOCATION

MEETING CALLED BY	
DEPARTMENT / SECTION	

**AGENDA TOPICS**

1. Previous items (follow-up)
2. Improvement
  - a) Summary of incidents and actions taken/ follow-ups
  - b) External complaints received and follow-ups
  - c) No. of CPRs issued, pending, closed & their effectiveness
3. Leadership
  - A) Status of objectives/ targets and goals
  - B) Surprise visits/ Walkthroughs by location management
4. Planning
  - A. Vulnerabilities identification and impact (risk) assessment
  - B. Any regulatory requirement/ compliance issue
5. Support
  - A) Training need analysis, gaps, and effectiveness
  - B) Toolbox Talks effectiveness + Analysis of Stop Cards
  - C) Status of labels, signs, etc.
6. Operation
  - A) Pollution prevention measures (summary of waste collected from each Section and safe disposal & measures to minimize waste generation at source)
  - b) Accidents prevention measures (summary of modification/ maintenance jobs and risk management & permit system)
  - C) Status of Personal Protective Equipment (PPE)
  - D) Emergency (mock-up) drills and effectiveness
7. Performance evaluation
  - a) Status of Occupational Health Monitoring (planned vs actual)
  - B) Status of Environment Monitoring (planned vs actual)
  - C) Status of Safety Monitoring (planned vs actual)
  - d) Outcome of internal HSE audits & follow-up
8. Other



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NAME	DESIGNATION	NAME	DESIGNATION

PREPARED BY	
REVIEWED BY	
APPROVED BY	



Oil & Gas Development Company Limited

OGF/XXX - HSE - 045(00)

Location: \_\_\_\_\_

### MINUTES OF HSE MRC MEETING

QUARTER	DATE	TIME	LOCATION
1 <sup>ST</sup> /2 <sup>ND</sup> /3 <sup>RD</sup> /4 <sup>TH</sup>			

MEETING CALLED BY	
DEPARTMENT / SECTION	
CHAIRMAN	
SECRETARY HSE MRC	
COORDINATOR	
ATTENDEES	

**AGENDA TOPICS**


AGENDA TOPIC	TIME ALLOCATED	PRESENTER
--------------	----------------	-----------

DISCUSSION		
CONCLUSIONS		
ACTION ITEMS	PERSON RESPONSIBLE	DEADLINE

Ref. Section 08 (Performance Evaluation) of OGDCL's Integrated HSE System Manual





# Performance Evaluation: OGDCL's Integrated HSE System Manual

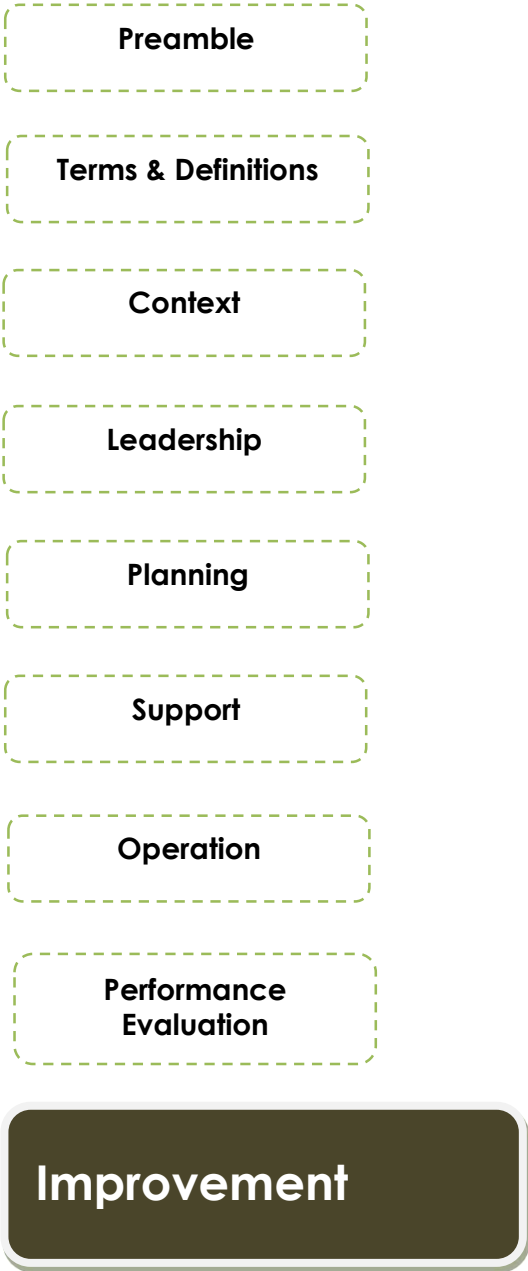
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AGENDA TOPIC	TIME ALLOCATED	PRESENTER
<b>DISCUSSION</b>		
<b>CONCLUSIONS</b>		
ACTION ITEMS	PERSON RESPONSIBLE	DEADLINE

<b>OBSERVERS</b>	
<b>SPECIAL NOTES</b>	

<b>PREPARED BY</b>	
<b>REVIEWED BY</b>	
<b>APPROVED BY</b>	

DISTRIBUTION			
NAME	DESIGNATION	NAME	DESIGNATION



**Reference Standards**

ISO14001:2015 & ISO45001:2016

Clause 10.1: Opportunities For Continual Improvement; Nonconformity and Corrective Action.  
 Clause 10.2: Continual Improvement.  
 Clause 8.2: Management of Change.

PSM (22 Elements) Model

**Incident Investigation and Communication:** The purpose of this element is to document the process for investigating incidents that occur onsite or off-site in a way that promotes thorough and efficient investigation in a timely manner; uniform, accurate, clear, and concise documentation and reporting; identifies and implements recommendations to prevent incident recurrence; involves the right people to get the information; ensures a clear understanding of key factors and key learnings; participating personnel obtain a positive learning experience.

**Management of Change - Facility and Technology:** Processing plants are designed according to standard engineering practices. The changes to the documented process safety information (e.g. hazard of materials, equipment design basis and process design basis), even if subtle or temporary, can lead to catastrophic events. Therefore, these changes must be managed in such a manner that safety, the integrity of the plant and the environment are not compromised. All changes must receive appropriate review and authorization before being implemented.

**Management of Change - Personnel:** Safe operations of facilities require an effective personnel change management system as people are the essential ingredient in "Process Safety Management" and play the most important role in its implementation and day to day compliance. It is essential that personnel changes at all levels are controlled according to a pre-established criteria so that minimum levels of experience and knowledge are maintained at the site.

**Pre Startup Safety Review (PSSR):** PSSR provides a final checkpoint for new and modified equipment and facilities to confirm that all appropriate elements of Process Safety Management have been addressed satisfactorily and the equipment / facility is safe to start-up. It is mainly intended to make sure that alterations / additions to the process or system do not create hazards to personnel at the site, surrounding facilities, community and environment by inadequate, incomplete, or unauthorized design or installation.

**This Section's Objectives**

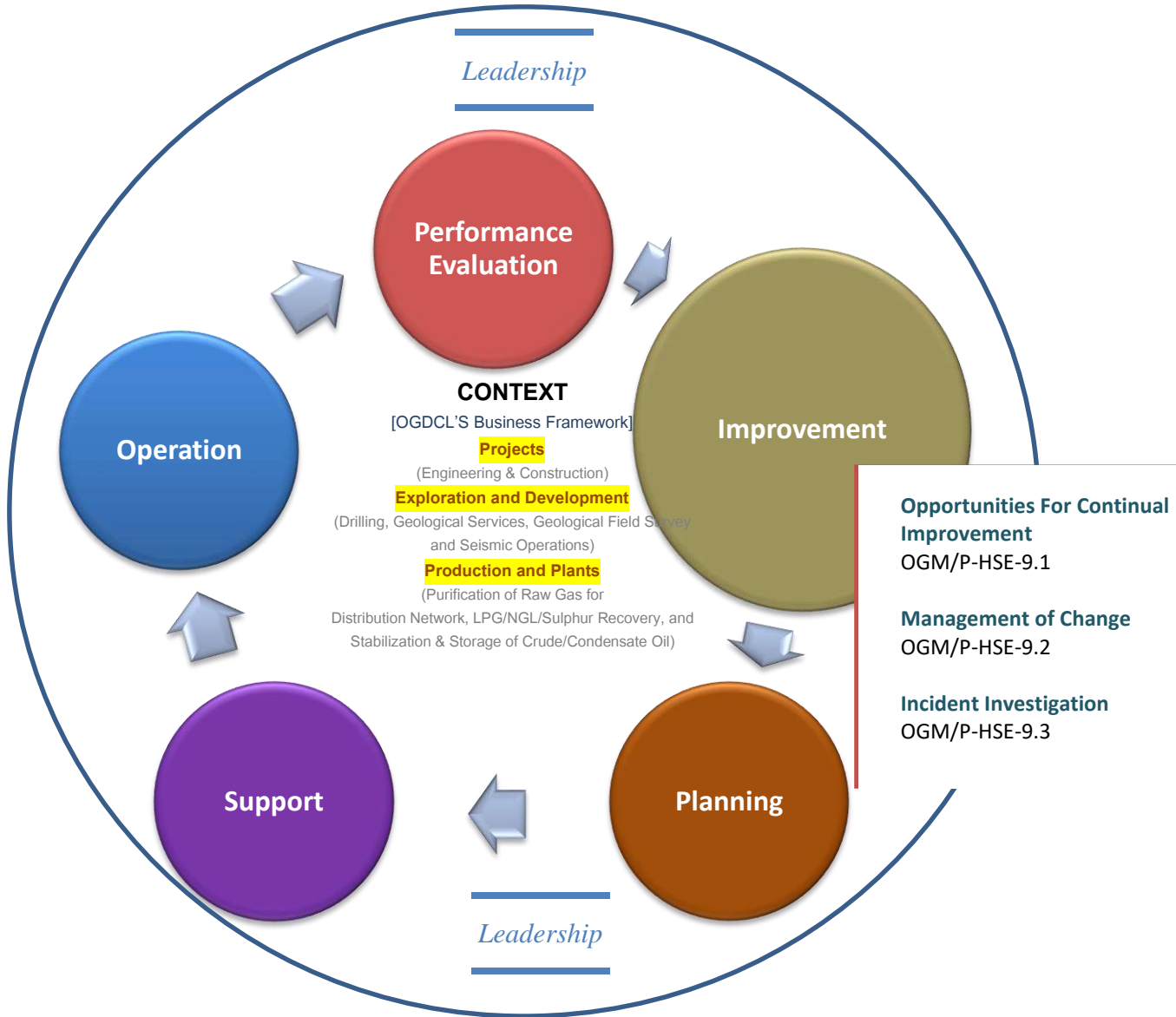
- Take action to improve HSE System and achieve intended outcomes.
- Investigate an incident for its root cause determination to avoid recurrence.
- Control nonconformities and take appropriate corrective & preventive actions.
- Enhance the suitability, adequacy, and effectiveness of HSE System.

**Associated Documents**

- Preliminary Incident Report
- CPR Form
- CPR Log / Register
- Register of Occupational Illnesses and Injuries
- Employee's Workplace Exposure & Health (WEH) Record
- Engineering Change Request (ECR)

**Applicable Documents**

- Specimen Pre-Startup Safety Review (PSSR) Checklist





## 9.1 Opportunities For Continual Improvement

OGM/P-HSE-9.1(08) Revision Number 8

Original Issue: June 25, 2007  
This Issue: March 14, 2022

**Updated By:**

**Muhammad Sameem Hussain Qaiser**  
Senior HSEQ Officer, OGDCL

**Reviewed By:**

**Muhammad Mubashir Abbas**  
Manager HSEQ, OGDCL

**Checked By:**

**Mahmood-ul-Hassan Khan**  
General Manager HSEQ, OGDCL

**Approved By:**

**Syed Khalid Siraj Subhani**  
Managing Director, OGDCL

### Change/ Revision Log

#	Description of Change
	<i>Reviewed, no change suggested.</i>

### Associated Documents Approval & Issue

Related Document/ Record	Initiated by	Reviewed by	Checked/ Verified / Approved by
OGF – HSE – 047 CPR	Any Employee	Location HSE Rep.	Location IC
OGF – HSE – 048 CPR Log	Location HSE Rep.	Location HSE IC	Location IC/ Location HSE IC

### 9.1.1 Mechanism for Identifying Opportunities For Continual Improvement

---

- ☐ Workforce members at all levels shall be encouraged to identify opportunities for continual improvements to improve the reliability of operations, processes, services with respect to HSE management system.
- ☐ Following activities shall provide mechanism for identifying opportunities for continual improvement, but not limited to:
  - a) Observation visits / walkthroughs / STOP Card Logs  
(unsafe conditions and unsafe behaviors)
  - b) Performance trends against the objectives and targets
  - c) Identification of a system deviation or failure that may result in non-fulfillment of HSE related contractual, legal or regulatory requirement
  - d) HSE audit findings
  - e) HSE performance reports (KPIs analysis)
  - f) Inspection and test records  
(esp. when performance of personal protective, safety critical and emergency equipment falls below desirable level)
  - g) Repetitive operational failures or near hits of similar nature that have tendency to cause incident
  - h) HSE related complaints / feedback from customers
  - i) HSE MRC meetings

### 9.1.2 Corrective and Preventive Actions

---

- ☐ Corrective and preventive actions shall be taken to eliminate the causes of non-conformities to prevent their recurrence and to eliminate any potential causes of non-conformity using CPR template as follows:
  - ▣ Location HSE IC shall review and classify the reported-issue, sort out Primary Surface Cause and discusses the nature of problem and corrective & preventive action with the concerned Sectional IC
  - ▣ HSE Section shall enter CPR description into CPR Log
  - ▣ Concerned Sectional IC shall determine the Contributing Surface Cause(s) and Design Root Cause after thorough investigation in consultation with all the stakeholders
  - ▣ HSEQ Section in consultation with the relevant ICs shall formulate the Problem Solving Team and get endorsement by Location IC
  - ▣ HSEQ Section shall forward copies of CPR to Problem Solving Team due to whom the issue has fundamentally arisen or who are responsible to rectify
  - ▣ Problem Solving Team shall:
    - ⊕ Propose actions in the presence of HSEQ Rep.
    - ⊕ Agree on the decision regarding the final action(s) to be taken, fully endorsed by Location IC
    - ⊕ Allocate Completion-Time to correct / prevent the issue (to be concurred in the presence of Location IC),
    - ⊕ Take appropriate action(s), and
    - ⊕ Timely intimate HSE Section of the actions taken.

*Note: Concerned IC could also be the part of Problem Solving Team.*
  - ▣ When a corrective and preventive action is decided upon, it may be implemented on trial basis and the results shall be closely monitored. Further measures or changes shall be made where required during the trial period until satisfactory results are attained.
  - ▣ The corrective and preventive measures where deem fit shall be made by incorporating changes in the HSE system in the relevant documents such as drawings, specifications, operating procedures, work instructions and / or templates.
  - ▣ Where the corrective and preventive action identifies new or changed hazards or need for new or changed controls, the proposed actions shall be implemented ensuring that the risk(s) reassessed accordingly.
  - ▣ On, or immediately after, the due date of implementation of a corrective and preventive action, HSE Rep. shall follow up to determine if the





corrective and preventive action has been implemented and whether it is effective.

- When there is objective evidence that the corrective and preventive action is effective, CPR shall be closed out. If more work is needed to fully implement the action, a new follow up date shall be agreed upon.
  - HSE Section shall enter the final status of the CPR into the CPR Log and maintain the original CPR form as record.
-



# Improvement: OGDCL's Integrated HSE System Manual

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## Oil & Gas Development Company Limited Corrective and Preventive Action Request (CPR)

OGF - HSE - 047(3)

CPR Number: \_\_\_\_\_

Initiator →  HSEQ →  Concerned Section →  HSEQ →  Problem Solving Team Leader →  HSEQ

**PART I: General**

		Issue	Reference
Date:	_____	<input type="checkbox"/> Procedure	_____
Time:	_____	<input type="checkbox"/> Process	_____
Activity:	_____	<input type="checkbox"/> Product	_____
Area:	_____		
Auditee / Concerned I/C:	_____		
Reported / Requested By:	_____		

**PART II: Nonconformance / Deviation / Opportunity For Improvement:**

Description: \_\_\_\_\_

Signature: \_\_\_\_\_  
Reported / Requested By

(Impact-Value in relevant Units)	Asset Damage	Environment Damage	Human Damage		Production Loss	Reputation Damage
			Injury(ies)	Fatality(ies)		
<input type="checkbox"/> Actual/Incurring:						
<input type="checkbox"/> Could have resulted in:						

*To be specified/verified by I/C HSEQ.*

**PART III: \*Root Cause: ( Attach Analysis / Investigation Report, if necessary )**

Contributing Surface Cause(s):

Unsafe Condition	Unsafe Act/Behavior
<input type="checkbox"/> Improper HSE Equipment	<input type="checkbox"/> Operating without Authority
<input type="checkbox"/> Improper HSE Documentation	<input type="checkbox"/> Horseplay
<input type="checkbox"/> Improper / Incomplete Resources	<input type="checkbox"/> Overriding Safety Devices
<input type="checkbox"/> Unsafe Design or Construction	<input type="checkbox"/> Disobeying Instructions / Not Following SOP
<input type="checkbox"/> Poor / Inadequate Operating Conditions	<input type="checkbox"/> Wrong Orders of Supervisor
<input type="checkbox"/> Inadequate Warning System	<input type="checkbox"/> Lack of Skill / Knowledge of Worker(s)
<input type="checkbox"/> Too Much Occupied/Over-worked/Fatigue	<input type="checkbox"/> Unsafe Act of Outsider(s)
<input type="checkbox"/> Poor Housekeeping	<input type="checkbox"/> Unsafe Act of Fellow-Worker(s)
<input type="checkbox"/> Bad Environmental Conditions	<input type="checkbox"/> Working in Bad Environmental Conditions
<input type="checkbox"/> Any Other(s) _____	<input type="checkbox"/> Any Other(s)

Design Root Cause(s):

Unsafe Condition [Operations]	Unsafe Act/Behavior [Management]
<input type="checkbox"/> NO Hazards Identification & Risk Assessment [HIRA]	<input type="checkbox"/> Hazards NOT Communicated / NO HazCom System
<input type="checkbox"/> INADEQUATE Hazards Identification & Risk Assessment [HIRA]	<input type="checkbox"/> Provided INAPPROPRIATE Tool(s)/Equipment(s)
<input type="checkbox"/> NO SOP/Work Instruction(s)	<input type="checkbox"/> Provided INAPPROPRIATE Chemical(s)/Material(s)
<input type="checkbox"/> FLAWED SOP/Work Instruction(s)	<input type="checkbox"/> Provided INAPPROPRIATE Control(s)/Warning System
<input type="checkbox"/> INADEQUATE SOP/Work Instruction(s)	<input type="checkbox"/> Provided INADEQUATE Job Description(s)/JARD(s)
<input type="checkbox"/> INCONSISTENT compliance of Operational Controls	<input type="checkbox"/> INADEQUATE Supervision or Monitoring
<input type="checkbox"/> NO Inspection/ Maintenance/Calibration Plan(s)	<input type="checkbox"/> INADEQUATE Internal Audits & Follow-ups
<input type="checkbox"/> FLAWED Inspection/ Maintenance/Calibration Plan(s)	<input type="checkbox"/> INADEQUATE Management Review Meetings
<input type="checkbox"/> INADEQUATE Inspection / Maintenance/Calibration Plan(s)	<input type="checkbox"/> SOP/Work Instruction(s) NOT Enforced
<input type="checkbox"/> UNTRAINED or UNSKILLED Worker/Operator	<input type="checkbox"/> Inspection/ Maintenance/Calibration Plan(s) NOT Enforced
<input type="checkbox"/> NO Objective and Management Program	<input type="checkbox"/> INADEQUATE Training Program
<input type="checkbox"/> INADEQUATE Objective and Management Program	<input type="checkbox"/> Training Effectiveness NOT Measured
<input type="checkbox"/> Other _____	<input type="checkbox"/> INCONSISTENT Trainings / Refresher Courses
	<input type="checkbox"/> Objective and Management Program NOT Enforced
	<input type="checkbox"/> Other _____

**RECEIPT**  
Auditor/ MR / I/C HSEQ

Classification		
Major	Minor	Obsr.

Incident	Hazard	Near Hit

**Primary Surface Cause**

Unsafe Condition	Unsafe Behavior	Both

Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
Time: \_\_\_\_\_

**RECEIPT**  
Auditee/ Concerned I/C

Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
Time: \_\_\_\_\_

**RECEIPT**  
Auditor/ MR / I/C HSEQ

† Problem Solving Team

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
Time: \_\_\_\_\_

† ENDORSEMENT  
Location In-Charge

Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
Time: \_\_\_\_\_





## Oil & Gas Development Company Limited Corrective and Preventive Action Request (CPR)

OGF - HSE - 047(3)

CPR Number: \_\_\_\_\_

**PART VI: Follow up Audit / Close Out details:** *(Implementation and effectiveness of action taken )*

#	Follow-ups Date / Time	Status	Description	I/C HSEQ Signature

**Actual Time Taken on rectification:** \_\_\_\_\_

\* Root-cause describing 'why not-agree' with the reported issue is also required to be mentioned.

**Instructions**

1. Requesting / reporting person shall report the issue through CPR to HSEQ.
2. HSEQ shall classify the issue, assign primary surface cause, determine the impact-value in relevant units and forward the reported issue to the **Concerned I/C** (in whose area issue apparently took place).
3. **Concerned I/C** shall:
  - Find the Contributing Surface Cause(s) and Design Root Cause after doing thorough investigation in consultation with all the stakeholders, and
  - Inform HSEQ.
4. HSEQ shall formulate the Problem Solving Team in consultation with the relevant In-Charges and get endorsement by Location management.
5. HSEQ shall forward copies of CPR to **Problem Solving Team** due to whom the issue has fundamentally arisen or who are responsible to rectify.
6. **Problem Solving Team** shall:
  - Propose actions in the presence of HSEQ
  - Agree on the decision regarding the final action(s) to be taken (endorsed by Location management)
  - Allot Completion-Time to correct / prevent the issue (to be concurred in the presence of Location In-Charge),
  - Take appropriate action(s), and
  - Timely intimate HSEQ of the actions taken.
6. HSEQ on the promised date shall verify the corrective / preventive action and set follow-up date and time.
7. HSEQ shall follow-up, close CPR and note down actual / total time taken on rectification.

Note: **Concerned I/C** could also be the part of **Problem Solving Team**.





## 9.2 Management of Change (MoC)

OGM/P-HSE-9.2(08) Revision Number 8

Original Issue: June 25, 2007  
 This Issue: March 14, 2022

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### Change/ Revision Log

#	Description of Change
1	Added: <i>General</i>
2	Added: <i>Scope of Management of Change (MoC) – Personnel</i>
3	Modified: <i>Examples of Modifications</i>
4	Added: <i>Closing Engineering Change Request: Pre-Startup Safety Review (PSSR) + Specimen PSSR Checklist (Appendix A)</i>

### Associated Documents Approval & Issue

Related Document/ Record	Initiated by	Reviewed by	Checked/ Verified / Approved by
OGF – HSE – 051 Engineering Control Request	Any Employee	Location IC, Sectional IC, Location HSE Rep.	Respective HOD, Area Manager, Location IC

## 9.2.1 General

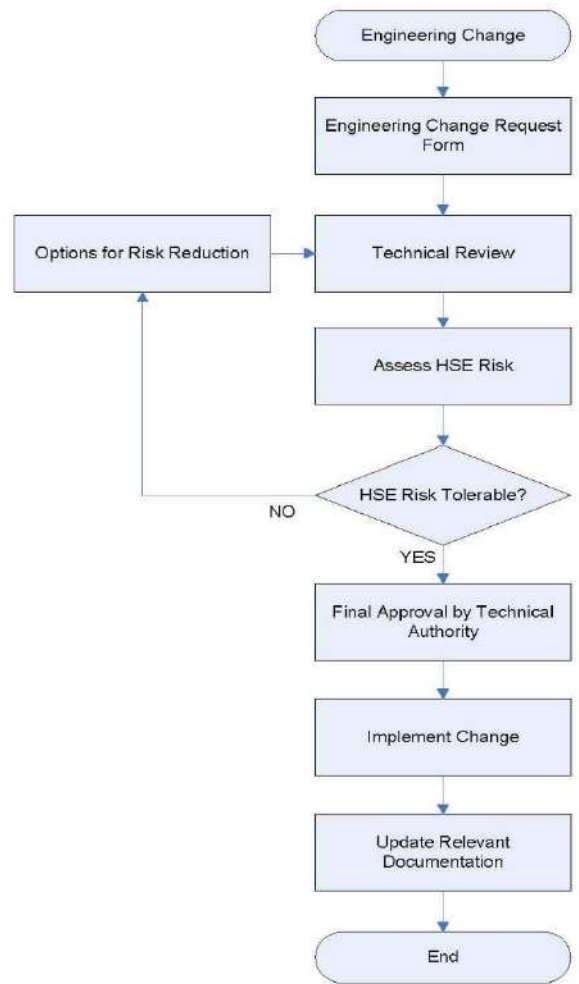
- ☐ Management of Change, or MoC, is a practice used to ensure that safety, health and environmental risks are controlled when a company makes changes in their facilities and operations; When decisions and changes are made rapidly, safety and health risks can increase resulting in disasters such as deflagrations and/or explosions.
- ☐ There are mainly two types of MoCs at OGDCL:
  - ▣ Management of Change (MoC) – Facility and Technology
  - ▣ Management of Change (MoC) – Personnel

### 9.2.1.1 Management of Change (MoC) – Facility and Technology

- ☐ A MoC shall be used to ensure that all changes to operating processes are properly reviewed and any hazards introduced by the change are identified, analyzed, and controlled before start-up and/or before resuming the production process.
- ☐ Engineering Change are any modifications that differ from the current facilities design basis.
- ☐ It applies to facilities in operation and in the development phase. This procedure mandates that OGDCL management shall control the change regarding any modification whether temporary or permanent, to plant and equipment, process materials, operating procedure, operating conditions which is outside the normal methods of operation and maintenance.
- ☐ **Few examples of modifications are as follows:**
  - ▣ Any change in the approved method of operation (as defined in the SOP).
  - ▣ A repair to or replacement of an existing item of equipment or component which represents a departure from the existing engineering specification.
  - ▣ A change in the means of support of plant items, pipe-work or fittings or a change to a structure, which could affect its load bearing capabilities.
  - ▣ A change, irrespective of its magnitude, that affects the engineering line diagram.
  - ▣ A change in the material of construction, size or shape of any component which is in contact with process fluid or utility stream or which could affect the flow rate, temperature, pressure or composition of a process fluid or utility stream.
  - ▣ A change to the setting of an alarm or trip irrespective of any maintenance job requirement.
  - ▣ A change to the setting or capacity of a relief stream or device.
  - ▣ A change to a control system including the overriding of control action in the field by forcing actuated valves to a particular position.
  - ▣ A change to any hardware or software trip or interlock system, including controllers/ indicators, etc. This includes any override or defeat of a trip or interlock system unless the override/defeat is an integral part of the system design e.g. a key override or purpose-designed faceplate for software overrides/defeats.
  - ▣ Introduction of any new substance into any part of the process or plant equipment including any change in formulation, change in ratio of ingredients or change in source of supply.
  - ▣ An alteration to the flow-rate, temperature, pressure or composition of a process fluid or utility stream outside the defined operating parameters.
  - ▣ Any change or alteration in layout of an operating field building or building services.
  - ▣ Any change in the approved project/ design specification during field implementation
  - ▣ Any change in Operating, maintenance, inspection and testing procedures
  - ▣ Change in duty or operation from original design intent even though physical changes are not required, e.g. load increase
  - ▣ Introduction of new methods, materials and/ or chemicals

Whereas the following type of activities shall “not” constitute modification:

- ❑ Replacement of similar kind of piping, mechanical parts, instruments or electrical components that are identical to the existing ones.
- ❑ Change in operating parameters within safe operating limits as specified in the design conditions or the operating manuals.
- ❑ Routine repairs and services carried out by maintenance or other groups.
- ❑ Modifications that are adequately covered by existing control procedures or do not affect the integrity of the facilities are EXCLUDED from the scope of this standard. Typically, these would be as follows: -
  - Changes to domestic and office equipment, and consumables
  - Temporary isolations for servicing, examination and testing of equipment within the planned maintenance program
  - Routine servicing for lube oil, filters, etc.
  - Like-for-like replacements, e.g. gas detector, floor grating, loose lifting gear
  - Temporary changes covered by permit to work or standing order procedures.



**9.2.1.1.1 Engineering Change Request Lifecycle**

All Engineering Change Request shall be raised via **Engineering Change Request Form**. Engineering Change Request can be raised by any OGDCL employee when any change as per above section is required.

An ECR Committee shall be formulated at each location comprising minimum of Location IC, Sectional ICs and Location HSE Representative. The committee shall conduct **Monthly ECR Review** to review change proposals and minutes of meetings shall be documented. The meeting shall:

- ❑ Review all Engineering Change Requests (ECR) and give a priority status.
- ❑ Assign technical authority (role) for each ECR for further assessment. Technical authority (role) shall be an employee (Location or Head office) who is deemed competent to analyze and conduct Hazard / Risk Analysis of Engineering Change Request.
- ❑ Review ECR priorities where questions exist.
- ❑ Review all other ECR priorities in view of the current status and backlog.
- ❑ Review overall ECR progress and agree measures to address any resultant issues.
- ❑ Recommend ECR's for cancellation shall be identified in the meeting minutes and the originator shall be advised. The reason for cancellation will be documented.

**Note:- In special circumstances, an ECR may need to be progressed very rapidly. In this instance, Location IC shall convene **Emergency ECR meeting**.**

- ❑ The assigned person(s) shall technically review the ECR and shall:
  - ❑ Comment upon the requirement for the change
  - ❑ Evaluate hazards associated with the change (e.g. increased noise levels)
  - ❑ Assess risks (safety, environmental, business)
  - ❑ Assess maintenance and operational requirements
  - ❑ Consider whether a better solution should be implemented
  - ❑ Estimate the pre-implementation costs i.e. design costs
  - ❑ Estimate the total ECR costs i.e. Design, Materials, Installation (±25%)
  - ❑ Conduct and document Risk Assessment for the planned change and provide any steps /action necessary before proceeding with the Job.
- ❑ Approval of Modification Job (change) shall be taken from the concerned competent authority(ies) based on various scenarios as given below:

MoC Scenarios	Executive Director	General Manager	Area Manager	Location IC	Sectional IC
<b>Change to be affecting operations</b>	Complete shutdown of operations, affecting production	Partial shutdown of operations, affecting production	Complete shutdown of sub-unit, not affecting production	Partial shutdown of sub-unit, not affecting production	No shutdown
<b>Change which would require regulatory/ 3<sup>rd</sup> party approvals or intimation</b>	approved project/ design is affected	new sub-unit is required	safety critical equipment is affected	permissible / allowance operating limits are violated	N/A
<b>Costing</b>	As per delegation of financial powers				
<b>Change to be made after an emergency</b>	Catastrophic (5)	Critical (4)	Major (3)	Marginal (2)	Negligible (1)
<b>Change to be affecting risk rating (afterwards)</b>	Low/ Medium to High/ Intolerable		Low to Medium	No effect	

☐ The ECR shall be considered as complete/ closed based on following:

- ☐ All work detailed in ECR is completed

☐ *Pre-Startup Safety Review (PSSR) to protect personnel and processes by conducting a thorough review before operating the new, repaired or updated/ modified units. The pre-startup safety review shall confirm that prior to the introduction of hazards to a process, construction and equipment is in accordance with design specifications and safety, operating, maintenance, and emergency procedures are in place and are adequate. (Specimen PSSR Checklist is attached at Appendix A)*

- ☐ Satisfactory commissioning and testing has been conducted
- ☐ Process safety information has been updated and personnel have been trained
- ☐ Completion of all as-built, revision and updating of all affected drawings, manuals and procedures
- ☐ Issue to field of all affected drawings, manuals and procedures
- ☐ Development and approval of any new procedures required as a consequence of the engineering change
- ☐ Confirmation of receipt from site that all affected drawings, manuals and procedures have been received and filed (copies of transmittals showing field acknowledgement to be placed in ECR file); Filing into ECR file copies of all affected drawings, manuals and procedures
- ☐ Purchase of spare parts
- ☐ Close out of all statutory requirements
- ☐ ECR form is completed and signed off.

☐ Engineering changes may lead to revision and formal approval of few other documents. These include but are not limited to:

- ☐ Risk register
- ☐ Operating, maintenance, inspection, test procedures and work instructions
- ☐ Emergency response procedures/notices
- ☐ Layouts, process flow diagrams, P&IDs, isometrics and utility line diagrams
- ☐ Instrument loop diagrams, cause and effect diagrams, piping isometrics
- ☐ Safety and lifesaving appliance location diagrams
- ☐ QA / QC plans

### 9.2.1.2 Management of Change (MoC) – Personnel

☐ There may be other organizational changes, such as changes resulting from mergers, acquisitions, reorganizations, personnel changes (including changes in staffing levels, workforce experience, contracting out), and / or policy changes such as budget cutting.

☐ Due to these contemplated changes which may have impacts on the safety & health of workforce members & assets as existing operating procedures/ protocols may not be complied upon in toto and the timeliness or frequency of budgetary approvals, trainings, tests, inspections, repairs, or replacements of equipment could not be properly followed.

- ☐ In such scenario, a special MOC/ risk assessment shall be carried out by concerned Department to ensure that anticipated changes are managed and implemented in a manner that assures the safety & health of workforce members, continued safe operations and integrity of the processes under normal production & emergency upset conditions by modifying the existing operating procedures/ protocols and controls.
- ☐ Record of such these special MOC/ risk assessment shall be maintained by concerned Department with a copy to HSEQ Department.

### 9.2.1.3 Mandatory Requirement For MoC

- ☐ Persons involved in Technical review should be experienced in the area that is being assessed.
  - ☐ The cost of change will not necessarily be proportional to the risk impact. In all cases an HSE risk screen shall be used to determine the resources required to fully evaluate the impact of the change. Ranking of changes using financial criteria shall not be done.
  - ☐ The cumulative effects of change shall be considered. For example a small change, when looked at in isolation, may be rated a relatively low and insignificant risk. However, when combined with other changes the overall risk profile may be intolerable.
  - ☐ HSE Department/ Section shall be consulted to ensure adequate assessment of the HSE risks.
  - ☐ Resources shall be made available to ensure the change is implemented as planned.
  - ☐ Where new skills, technology or greater responsibilities are required, then training and development programs shall be included for persons who may be impacted by the change.
  - ☐ Communication of change during all phases of the change from inception through to completion is obligatory. Special emphasis shall be placed on using feedback during the communication process in order that the persons impacted by the change have the opportunity to suggest improved methods of implementing the change. This will have the benefit of encouraging ownership of the change, overcome inherent resistance to change, and increasing the probability that the change will be successfully implemented.
  - ☐ Close out of completed changes shall always include a full update of the relevant documentation in hard copy and electronic format, as appropriate.
-





**Oil & Gas Development Company Limited**

OGF - HSE - 051(02)

Location/ Site: \_\_\_\_\_

**ENGINEERING CHANGE REQUEST**

1. Initiate Change (To Be Filled By Initiator)					
Serial Number/ Revision		Title			
MoC initiated by:		Name/ Department		Date	
1.1 Description of the Change					
Current situation/ condition:					
Target change (situation/ condition, motivation):					
Reasons for change:					
Expected savings:					
System/ location/ organization which is affected (benefitted) by the change:					
1.2 Is it a temporary change?		<input checked="" type="radio"/> No <input type="radio"/> Yes		Temporary change valid until:	
				Date	
1.3 Impact of the Change					
Would the change impact:	process equipment?	<input type="radio"/> Yes <input checked="" type="radio"/> No	organization?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
	process systems?	<input type="radio"/> Yes <input checked="" type="radio"/> No	operability?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
	systems interfaces?	<input type="radio"/> Yes <input checked="" type="radio"/> No	operations environment?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
	other?				
Description of the Impact of the Change:					
1.4 Will the change modify the risks with respect to:		Human	Environment		
↑: increase, ↓: decrease		<input type="radio"/> ↑ <input checked="" type="radio"/> ↔ <input type="radio"/> ↓	<input type="radio"/> ↑ <input checked="" type="radio"/> ↔ <input type="radio"/> ↓		
		Reputation	Finance (asset & production)		
		<input type="radio"/> ↑ <input checked="" type="radio"/> ↔ <input type="radio"/> ↓	<input type="radio"/> ↑ <input checked="" type="radio"/> ↔ <input type="radio"/> ↓		

2. Change Review (To be Filled by Change Review Committee)											
2.1 Assign Technical Authority											
Role	Function	Name/ Department				Signature	Date				
<b>Team Lead</b>											
<b>Team Members</b>											
<b>QC Team:</b>											
<b>Other Consulted:</b>											
<b>Other Consulted:</b>											
<b>Other Consulted:</b>											
3. HSE Hazard / Risk Analysis (To be Filled by Technical Authority)											
3.1 Risk Assessment prior to start-up/ go-live											
Description of Jobs and Activities	Range of Vulnerabilities (Hazards/Threats)				Risk (Damage Expected)			Risk Calculation			Controls Solicited
	Physical	Chemical	Biological	Social	Human	Environment	Assets	Probability	Consequence	Risk Rating	
3.2 Costing prior to start-up/ go-live											
Estimated Cost			Material Requirement			Labor Strength			Other Resources		
<i>Estimated Time For Execution:</i>											
3.3 Actions to be implemented prior to start-up/ go-live											
No.	Description	Responsible(s)			Date	Results					
1.											
2.											
3.											
4.											
5.											
6.											
7.											

4. Approval of MoC (For Modification Job and Fund)					
Concerned Competent Authority	Approval		Domain/ Department/ Section	Signature	Date
	Job	Fund			
Executive Director	<input type="checkbox"/>	<input type="checkbox"/>			
General Manager	<input type="checkbox"/>	<input type="checkbox"/>			
Area Manager	<input type="checkbox"/>	<input type="checkbox"/>			
Location IC	<input type="checkbox"/>	<input type="checkbox"/>			
Sectional IC	<input type="checkbox"/>	<input type="checkbox"/>			
5. Data Entry					
Approval Entered in Record					
Drawings Marked As Approved For Construction					
<i>Document Controller</i>	Signature (Name/ Department)		Date		
6. Quality Checks					
Pre-Commissioning Checks Complete					
Commissioning Checks Complete					
<i>Team Leader</i>	Signature (Name/ Department)		Date		
7. Close & Archive MoC					
<i>MoC Initiator</i>	Signature (Name/ Department)		Date		
<i>QC</i>	Signature (Name/ Department)		Date		
<i>Location IC</i>	Signature (Name/ Department)		Date		
Notes for closing:					

## Appendix A

### Specimen Pre-Startup Safety Review (PSSR) Checklist

Following checks are to be ensured:

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#### TEMPERATURE/REACTION CONSIDERATIONS

- (T01) Have personnel been adequately protected from contact with hot surfaces?
- (T02) Has potential for instrument failure (including computer shutdown) been adequately addressed?
- (T03) Has potential for leaks into or out of the process been adequately addressed?
- (T04) Has potential for improper valve setup or operating error been adequately addressed?
- (T05) Has potential for loss of utilities been adequately addressed?

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#### VALVE, PIPING, AND VESSEL CONSIDERATIONS

- (V01) Have cross-tied lines (pump headers, utility lines, etc.) been avoided where contamination, pressure, or temperature problems are likely?
- (V02) Has a line-by-line review been conducted to ensure that the piping is installed as specified?
- (V03) Is piping laid out such that it is self-draining for cleanup and maintenance?
- (V04) Have unused piping branches been eliminated?
- (V05) Has piping been laid out in a straightforward manner such that potential for confusion is minimized?
- (V06) Are vents and drains located such that they do not create personnel hazards?
- (V07) Are sample points properly configured for safe sampling?
- (V08) Has safe access to valve operation been provided?
- (V09) Has pipe been located such that it cannot slip or fall due to line expansion during cleanup, startup, or shutdown?
- (V10) Are hoses and fittings of the approved type according to the plant hose policy?
- (V11) Have the hoses been fitted with current inspection tags?
- (V12) Have bleedoffs been provided at hose connection points?
- (V13) Are open-ended valves of the approved type (i.e., locking handle, gate valve)?
- (V14) Has a means been provided such that all valves can be locked?
- (V15) Has adequate backflow prevention been provided?
- (V16) Have nipple lengths been minimized and cantilevered branch connections avoided?
- (V17) Have electrical continuity and grounding been provided and checked?
- (V18) Has appropriate color-coding been provided where needed?
- (V19) Have lines been clearly labeled, including flow arrows?
- (V20) Has appropriate testing been completed and documented to ensure the integrity of new or revised piping systems?
- (V21) Have drawings been revised to show "as installed" condition?
- (V22) Has material of construction been verified to ensure that the correct material was received and installed according to the valve and piping specifications?
- (V23) Have the correct gaskets been installed according to the valve and piping specifications?
- (V24) Have all test blanks and blinds been removed?
- (V25) Has the testing fluid been properly flushed from the piping or vessel?
- (V26) Is the piping system adequately supported or braced?
- (V27) Have check valves been reviewed to ensure that they are installed in the proper direction?
- (V28) Is piping sloped where necessary?
- (V29) Are bolts properly torqued?

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#### ROTATING AND MECHANICAL EQUIPMENT CONSIDERATIONS

- (R01) Have special precautions for safe operation been adequately specified?
- (R02) If new lubricants or buffer fluids have been introduced, have MSDSs been provided?
- (R03) Has tubing on complex seal flush arrangements been color-coded or otherwise marked to ensure correct hookup after maintenance?
- (R04) Have adequate equipment guards been installed?
- (R05) Do adequate provisions exist for cleanup, isolation, and lockout of equipment to perform maintenance?
- (R06) Have inspection, test, and preventive maintenance provisions been made?
- (R07) Are capacities of lifting equipment, floors, and hoists clearly displayed and visible to the operator?
- (R08) Has the proper rotation of equipment been assured?
- (R09) Is the drive unit grounded?
- (R10) Have the lubricants and seal fluids been properly charged?

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#### CONTROL SYSTEM CONSIDERATIONS

- (C01) Has the fail-safe function of valves been properly installed?
- (C02) Has potential for interaction with existing controls been reviewed and addressed?
- (C03) Are alarms provided where necessary?
- (C04) Are unnecessary alarms avoided?
- (C05) Are guards provided to prevent accidental tripping of switches?
- (C06) Can automatic valves be properly isolated and cleaned for servicing or removal?
- (C07) Have new instruments and alarms been identified and designated as such in the inspection, test, and preventive maintenance program?
- (C08) Has the operation of interlocks and alarms been verified?
- (C09) Have the actuator air supplies been valved in?
- (C10) Has the operation of all control loops been verified?

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#### ELECTRICAL SYSTEM CONSIDERATIONS

- (E01) Have start/stop switches and electrical switchgear been properly labeled?
- (E02) Can electrical equipment be isolated safely for repair work?
- (E03) Do lockout provisions exist both at the switchgear and at the start/stop switch?
- (E04) Have conduit fittings been properly sealed?
- (E05) Have electrical protective relays and safety devices been calibrated?
- (E06) Is electrical equipment properly grounded?
- (E07) Has the electrical equipment been properly protected from corrosion?
- (E08) Have electrical interlocks been tested for proper operation?
- (E09) Has the proper rotation of motors been assured?

**IMPORTANT:- IT IS EVERYBODY'S RESPONSIBILITY TO ENSURE THAT THE OGDCL'S HSE MANAGEMENT SYSTEM IS IN PLACE.**



# Improvement: OGDCL's Integrated HSE System Manual

Controlled Copy Do Not Duplicate For Internal Use Only

- \_\_\_ (E10) Have electrical drawings been completed to reflect "as installed" condition?
- \_\_\_ (E11) Have electrical equipment manuals been appropriately filed?
- \_\_\_ (E12) Have electrical guards been installed?
- \_\_\_ (E13) Are indicator lights operating properly?
- \_\_\_ (E14) Have electrical test results been reviewed and approved?
- \_\_\_ (E15) Has electrical heat tracing been properly labeled?
- \_\_\_ (E16) Is all electrical equipment consistent with electrical classification documentation?

## PERSONNEL SAFETY/HEALTH AND FIRE PROTECTION CONSIDERATIONS

- \_\_\_ (S01) Has adequate safety equipment (e.g., fire extinguishers, eye baths, safety showers, Scott Air Paks, alarm boxes) been provided and located where needed?
- \_\_\_ (S02) Is unobstructed access to safety and fire protection equipment provided?
- \_\_\_ (S03) Has potential for exposure to high noise levels been adequately addressed?
- \_\_\_ (S04) Is lighting adequate?
- \_\_\_ (S05) Do walkways and ladders provide safe access at all levels?
- \_\_\_ (S06) Do all ladders have gates or chains across opening?
- \_\_\_ (S07) Are walking and working surfaces level, properly secured, and providing adequate traction?
- \_\_\_ (S08) Have elevated work requirements been met?
- \_\_\_ (S09) Is the work area adequately ventilated?
- \_\_\_ (S10) Are process sight glasses, flow indicators, gauges, etc., properly armored?
- \_\_\_ (S11) Do signs adequately identify work area hazards and provide appropriate instruction?
- \_\_\_ (S12) Are exits and egress routes clearly identified?
- \_\_\_ (S13) Is the physical layout acceptable in regard to:
  - Height of equipment, accessibility, and lifting?
  - All "hot" surfaces being covered?
  - Tank legs being fire-proofed?
- \_\_\_ (S14) Are MSDSs available at the locations where the chemicals will be handled?
- \_\_\_ (S15) Has the HAZCOM program been updated to reflect changes in chemicals handled?
- \_\_\_ (S16) Have vessels been properly labeled?
- \_\_\_ (S17) Have proper handling and storage facilities been provided for all new chemicals?
- \_\_\_ (S18) Has the job site been properly cleaned up?
- \_\_\_ (S19) Have provisions been made to minimize potential for personnel exposure during cleanup, preparation for maintenance, and maintenance work (field and shop)?

## WASTE STREAM AND ENVIRONMENTAL IMPACT CONSIDERATIONS

- \_\_\_ (W01) Are diking, draining, and curbing adequate?
- \_\_\_ (W02) Have adequate provisions been made for disposal of all wastes (i.e., drums, bags, filter elements, liquid residues)?
- \_\_\_ (W03) Will runoff rainwater be adequately contained if it can become chemically contaminated?
- \_\_\_ (W04) Are adequate provisions made for drum or other portable container handling?
- \_\_\_ (W05) Are sewers in the area properly identified as "clean" or "process" sewers?
- \_\_\_ (W06) Are sewer maps up to date?
- \_\_\_ (W07) Have diking isolation valves been closed?

## DOCUMENTATION AND TRAINING CONSIDERATIONS

- \_\_\_ (D01) Has a new or revised procedure been provided and approved if required?
- \_\_\_ (D02) Have special procedures such as sampling methods, equipment lubrication, etc., been provided?
- \_\_\_ (D03) Have procedures and operator training been checked to ensure that they contain adequate provisions for health exposure control; unit startup, recycle, or hold modes; unit shutdown; and component failure and emergency response activities?
- \_\_\_ (D04) Have production, maintenance, hourly, and supervisory personnel been properly trained in the revisions?
- \_\_\_ (D05) Have training and certification materials been updated for production and maintenance?
- \_\_\_ (D06) Have emergency procedures been reviewed and revised as appropriate? Have required approvals been obtained?
- \_\_\_ (D07) Have unit safety equipment checklists been updated to reflect required checks of new or revised equipment?
- \_\_\_ (D08) Has the unit alarm listing been updated to reflect additions or deletions of alarms?
- \_\_\_ (D09) Has the unit safety relief device checklist been updated to reflect additions or deletions?
- \_\_\_ (D10) Have special procedures for commissioning or first-time startup been provided and reviewed, if required?
- \_\_\_ (D11) Has this change been adequately communicated to adjacent units or other affected groups?
- \_\_\_ (D12) Has the plant plot plan been updated?
- \_\_\_ (D13) Have process flow diagrams (PFDs) and P&IDs been updated?
- \_\_\_ (D14) Have the training equipment needs been considered and purchased for this project?
- \_\_\_ (D15) Have the production and maintenance training materials been forwarded to unit personnel and properly filed?
- \_\_\_ (D16) Have appropriate manuals or programs been updated?
- \_\_\_ (D17) Has vendor literature on equipment been filed properly in maintenance and production areas?
- \_\_\_ (D18) Has the training been completed, documented, and input into the training records system?

## OTHER CONSIDERATIONS

- \_\_\_ (O01) Does equipment layout provide safe access for production and maintenance?
- \_\_\_ (O02) Are vessels, piping, instruments, and other components adequately supported?
- \_\_\_ (O03) Are appropriate materials of construction used for compatibility/corrosion?
- \_\_\_ (O04) Has the potential impact of the change on unchanged facilities been adequately addressed?
- \_\_\_ (O05) Have adequate provisions been made for technical or supervisory support during initial operation?
- \_\_\_ (O06) Have critical spare parts been obtained?



## 9.3 Incident Investigation

OGM/P-HSE-9.3(01) Revision Number 1

Original Issue: October 14, 2019  
This Issue: March 14, 2022

**Updated By:**

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**Approved By:**

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Managing Director, OGDCL

### Change/ Revision Log

#	Description of Change
1.	Amended: <i>Activity-based Event Classification.</i>
2.	Amended: <i>Formation, constitution and eligibility criteria.</i>
3.	Added: <i>Swiss-Cheese/ Bowtie Diagram may be drawn for accident causation to illustrate layers of defense between hazards and accidents.</i>
4.	Added: <i>HSEQ Department shall develop a Checklist against the recommendations scribed in the IIR and review the compliance status on quarterly basis.</i>
5.	Added: <i>The lessons learned from the incident and the description of associated dangers shall be communicated through Safety Alert.</i>

### Associated Documents Approval & Issue

Related Document/ Record	Initiated by	Reviewed by	Checked/ Verified / Approved by
OGF – HSE – 046 Preliminary Incident Report (PIR)	Any Employee	Location IC Location HSE Rep.	Location IC
OGF – HSE – 046A Incident Investigation Report (IIR)	Investigation Committee	Investigation Committee	Investigation Committee
OGF – HSE – 049 Register of Occupational Illnesses and Injuries	Location Medical Rep.	Location Medical Rep.	Location Medical Rep.
OGF – HSE – 050 Employee's Workplace Exposure & Health (WEH) Record	Location Medical Rep.	Location Medical Rep.	Location Medical Rep.

## 9.3.1 Incident Reporting

- ☐ First-hand information of an incident shall be transmitted by Location IC to all concerned at Head Office within 01 hour of the incident through available communication channels like telephonically, cellular messaging, email, etc.
- ☐ Location IC shall submit **Preliminary Incident Report (PIR)** on the prescribed format to HSEQ Department and concerned HOD at Head Office on immediate basis but not later than 12 hours.
- ☐ Location IC shall give severity to the incident in the **Preliminary Incident Report (PIR)** from the table provided in the overleaf of PIR template.

### 9.3.1.1 Classifying and Registering Injuries

- ☐ When an incident occurs, specific details about what happened and how it happened shall be logged in the Register of Occupational Illnesses and Injuries as follows:
  - Identify the employee involved.
  - Identify when and where the case occurred.
  - Describe the case.
  - Classify the seriousness of the case by recording the most serious outcome associated with the case, Death being the most serious and Other recordable cases being the least serious
  - Identify whether the case is an injury or illness. If the case is an injury, check the injury category. If the case is an illness, check the appropriate illness category.
- ☐ An injury or illness shall be considered work-related if an event or exposure in the work environment caused or contributed to the condition or significantly aggravated a preexisting condition. Those work-related injuries and illnesses shall be logged that result in death, loss of consciousness, days away from work, restricted work activity or job transfer, or medical treatment beyond first aid.
- ☐ Location Medical Rep. shall use Register of Occupational Illnesses and Injuries to classify work-related injuries and illnesses (*in case there is some confusion, Field HSE Rep may be consulted*) and note the extent and severity of each case as follows:

**First Aid Case:** Work related injuries or illnesses that involve a single treatment of minor bruises, cuts, burns, scratches etc. and not requiring medical care of the level to take the patient to the Hospital. This includes injuries / illnesses that require minor treatment, e.g. any one-time treatment, cleansing, application of bandages / band-aids, treatment of minor scratches, cuts, burns, splinters, etc.

**Medical Treatment Case (MTC):** An injury severe enough to require treatment by a medical practitioner (a physician or nurse), but does not cause the worker to miss any work.

**Restricted Workday Case (RWC):** A RWC is a work related injury or illness which results in the OGDCL's or contractor's workforce member being unable; (1) to perform one or more routine duties, or (2) to work the full day on, or the next calendar day after the day of injury/illness. A RWC occurs when the injured person is temporarily assigned to do other, less strenuous work (than the normal job) e.g. an injured maintenance technician doing light office work. This also includes situations where the worker does perform his routine duties but for less period of time than normal shift timings because of restriction of work.

**Lost Time Injury (LTI):** A work related injury or illness which results in the OGDCL's or contractor's workforce member declared medically unfit to attend duty on the next calendar day (24 hrs) after the day of injury. The criteria "24 hours" include rest days, weekend days, scheduled holidays, public holidays or subsequent days after ceasing employment; However, if medical practitioner declares that the injured person is fit to attend office within 24 hours, then the injury shall not be LTI.

**Permanent Partial Disability (PPD):** Any work related injury or illness which results in complete loss, or permanent loss of use, of any part(s) of the body or any permanent impairment of function or parts of body, regardless of any pre-existing disability of the injured member of impaired body function. A PPD is not related to the ability to perform normal work, e.g. it is classified as a PPD if he has lost a finger, toe, arm, limb, etc. but (upon recovery) is still able to do his normal work or any other work that permits for the partial disability.

**Permanent Total Disability (PTD):** Any work-related injury or illness, which permanently incapacitates an employee from doing any work and results in termination of employment.

**Fatality:** Death of OGDCL's or contractor's workforce member caused by a work related incident, regardless of the time intervening between injury and death.

- ☐ In addition, Employee's Workplace Exposure & Health (WEH) Record shall be maintained by the Location Medical Rep. as well.
- ☐ After recovering from an illness/ injury of duration 14 or more days, an employee shall be required to undergo Health & Fitness Evaluation by Medical Services Rep. who may also seek the opinion of relevant specialist(s) whenever necessary. Information pertaining to an individual's work environment, concentration/ level of health hazard and individual's exposure shall be provided by HSE Rep.
- ☐ Based on Health & Fitness Evaluation, Medical Services Rep. shall recommend whether or not the employee can resume his/ her normal duty or would require more time to recover. There may be some instances where light work/ restricted job is recommended for a specified time period. Return to Work Instructions shall be issued accordingly specifying recommendations regarding the actions required by the Line Management.
- ☐ Based on the assessment, recommendations shall be communicated to the employee's Line Manager/ HOD who will then decide to accommodate/ assign appropriate job to the employee and, if he cannot do it, will refer the case to HR Sections again for placement in some other area.

### 9.3.2 Activity-based Event Classification

**Controlled Activities:** This is an activity in a work environment (as a condition of employment i.e. physical location, equipment, material or vehicle) related to OGDCL workforce member where OGDCL can set HSE policies, standards and procedures (PSP) and directly supervise and enforce its application. Incidents arising from controlled activities are reported, investigated and tracked.

Scenario/ Example	Included in HSE Performance Measures	
	OGDCL	Contractor
An incident or illness involves signs or symptoms that result solely from a work-related event or exposure (performing job or driving company-owned vehicle) or caused by inhalation, absorption, ingestion or direct contact with workplace hazard(s) or by ingesting food contaminated by workplace contaminants, or gets food poisoning from food supplied by the company.	Yes	No
Incident arising from the hired bowsters/ carriage services/ service-company/ contractor/ sub-contractor crew performing job or driving vehicles under contractual obligation INSIDE OGDCL site boundaries.	Yes, where OGDCL employee/ asset is affected	Yes
An incident arising while traveling to or from fixed or temporary residence to or from fixed or temporary workplace in either company's-owned, company-hired or personal vehicle INSIDE OGDCL site boundaries.	Yes, where OGDCL employee/ asset is affected	Yes, where hired vehicle is involved

**Monitored Activities:** This is an activity where OGDCL can influence but cannot set HSE policies, standards and procedures (PSP) and cannot directly supervise and enforce its application. Incidents arising from monitored activities are reported, investigated (where possible) and tracked.

Scenario/ Example	Included in HSE Performance Measures	
	OGDCL	Contractor
Outsourced / hired company's seismic and drilling crew performing job or driving vehicle.	No	Yes
Incidents arising from the hired bowsters/ carriage services/ service-company/ contractor/ sub-contractor crew performing job or driving vehicles under contractual obligation OUTSIDE OGDCL site boundaries.	No	Yes*
An incident arising while traveling to or from fixed or temporary residence to or from fixed or temporary workplace in either company's-owned, company-hired or personal vehicle OUTSIDE OGDCL site boundaries.	No	Yes, where hired vehicle is involved
An injury or illness involves signs or symptoms that surface at work but result solely from a non-work-related event/ exposure outside the work environment like voluntary participation in a wellness program or in a medical, fitness, or recreational activity; eating, drinking, or preparing food or drink for personal consumption; or personal grooming, self-medication for a non-work related condition, or is intentionally self-inflicted.	No	No

\*Not to be included in the combined HSE KPIs

**Uncontrolled Activities:** If an activity is not controlled or monitored, it is an uncontrolled activity. This is an activity where OGDCL does not set or influence HSE policies, standards and procedures (PSP) and does not supervise HSE performance. Incidents arising from uncontrolled activities are neither reported, investigated or tracked; although these incidents should be assessed for potential learning that could be applied within OGDCL. Examples of uncontrolled activities include:

- ⊕ Activities in OGDCL's non-operated Joint Venture Partner's field by its own or contractors workforce members
- ⊕ Service company, contractor or sub-contractor crew performing job or driving vehicles as per contractual obligation outside OGDCL site boundaries

Note-1:

A work related injury or illness incurred to individuals of following categories working / visiting OGDCL site and declared medically unfit to attend duty on the next calendar day shall not be considered as OGDCL's lost time:

- ⊕ Hired driver
- ⊕ Visitor
- ⊕ Third party auditor
- ⊕ Supplier
- ⊕ Customer
- ⊕ Service companies crew
- ⊕ Contractor crew
- ⊕ Regulator

Incident caused to above categories shall be reported and investigated keeping in view the level and potential of incident and shall be considered in the HSE Performance only if the root cause is operational control or equipment failure but not due to individual's mistake.

Note-2:

For further clarification, HSEQ Department Head Office may be consulted.

### 9.3.3 Constitution and Eligibility Criteria of Investigation Committee

- ☐ The investigation should be led by a person independent of the activities being investigated.
- ☐ Incident Investigation Committee for the Significant Incidents shall comprise of:
  - ⊕ Investigation Committee Chairman
  - ⊕ Investigation Committee Member-I (Operation)
  - ⊕ Investigation Committee Member-II (HSE/ HR)
  - ⊕ Investigation Committee Member-III (Optional; Workers' (Staff) Representative)
- ☐ The formation, constitution and eligibility criteria of the Investigation Committee is explained below:

Severity Level*	Committee Appointed By	Eligibility		
		Committee Chairman	Committee Member-I	Committee Member-II
Catastrophic (5)	MD/ CEO	Executive Director	GM Operations	GM HSE
Critical (4)	MD/ CEO/ COO	Executive Director	GM/ Manager Operations	GM/ Manager HSE
Major (3)	Executive Director	GM HSE	Manager/ Chief Operations	Manager/ Chief HR Directorate
Marginal (2)	GM HSE	Manager/ Chief Operations	Medical/ Operations Rep.	HSE Rep.
Negligible (1)	Location IC	Section IC	Medical/ Operations Rep.	HSE Rep.

\* Ref. Table-A: Consequence Severity (C), Enterprise Risk Management (ERM) Procedure

- ☐ Investigation Committee members must successfully complete formal training on Incident Investigation.
- ☐ Investigation Committee shall formulate the investigation report on a prescribed format attached with this procedure titled **Incident Investigation Report (IIR)**.

### 9.3.4 Investigation Process

#### 9.3.4.1 Planning

- ☐ The investigation Committee should conduct formal planning prior to collecting data and interviewing personnel. The following provide an overview of activities, but not limited to, that needs to be conducted:

- ⊕ The planning stage may normally commence with a presentation from the Location Management giving an overview of the incident sequence and operation of the site. This presentation is not to be used to draw preliminary conclusions but is used only to familiarize the investigation Committee with the operations and the event sequence.
- ⊕ A site visit by the investigation Committee should be conducted before the information collection begins.
- ⊕ Physical evidence should be collected, protected, preserved, evaluated and recorded to ultimately determine how and why failures occurred.

- ⊕ Evidence should be documented (sketched, mapped, photographed, video), preserved and secured by the investigating Committee.
- ⊕ Prior to the removal of any evidence, the exact location and orientation must be recorded or referenced to the incident location.
- ⊕ If the scene of incident is declared a crime scene, no evidence can be removed.
- ⊕ Facts and data gathering should be initiated as soon as possible after an incident to limit the information "decay" with time.

### 9.3.4.2 Interviewing

- ☐ Those personnel directly involved with the incident, including contractors and temporary staff, should be interviewed.
- ☐ The Investigation Committee shall develop a standard set of interview questions and determine the most appropriate means of documenting interviews.
- ☐ The Investigation Committee may adopt the 5W1H technique (i.e. Who; What; When; Where; Why and How type questions) during investigation process.

### 9.3.4.3 Establishing Events Timeline

- ☐ Identify the main incident event. This should be a single line statement usually describing the point in time when the incident occurred.
- ☐ Progress backward in time to identify the pre-incident sequence of sub-events from the information collected.
- ☐ Progress forward in time from the incident to identify the post-incident sub-event sequence.
- ☐ For each sub-event, detail of relevant conditions at the time of that event to be noted.
- ☐ Each sub-event and condition to be discretely numbered so that the Timeline can be reconstructed.
- ☐ Events that require further investigation should be clearly marked so that the relevant information be acquired.

### 9.3.4.4 Identify Failed / Missing Barrier(s)

- ☐ Swiss-Cheese/ Bowtie Diagram may be drawn for accident causation to illustrate layers of defense between hazards and accidents.
- ☐ For any incident to occur, multiple barriers may have weakened or failed. Investigation Committee should determine why the barriers weakened or failed by assessing following Comprehensive List of Causes (CLCs):

#### 9.3.4.4.1 Active Failures (Primary Surface Causes)

- ⊕ Active failure is a factor which directly caused the incident. It is also called Primary Surface Cause of the Incident.
- ⊕ An active failure is an element of unsafe or unsatisfactory behavior or condition prior to an incident event which is significant in initiating the event.
- ⊕ Investigation Committee should determine why the active failure occurred and linking the replies with the other evidence.
- ⊕ Active failures (Actions and Conditions) can take a variety of forms and Investigation Committee shall identify the pertinent failures from the chart mentioned in the **Incident Investigation Report (IIR)** template.

#### 9.3.4.4.2 Preconditions (Contributory Causes)

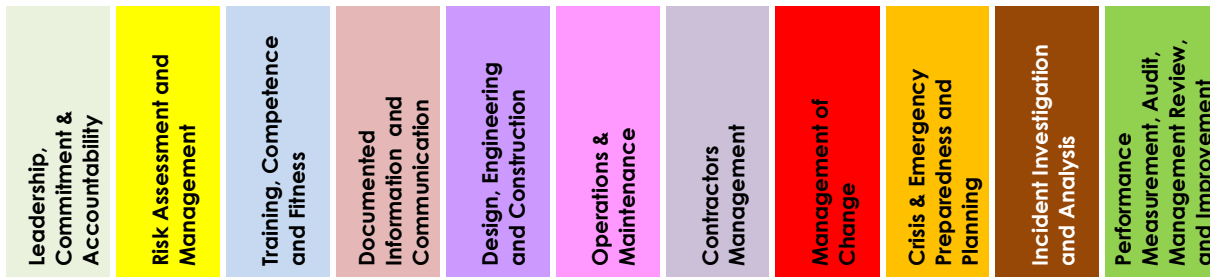
- ⊕ Preconditions are those conditions under which work is undertaken and that directly influence human or equipment performance.
- ⊕ These are also sometimes mentioned as Contributory Cause which directly contributes to Active Failure.
- ⊕ For each Active Failure, there can be a multiple number of Preconditions (Contributory Causes) and Investigation Committee shall identify the pertinent failures from the chart mentioned in the **Incident Investigation**



**Report (IIR) template.** (Contributory Causes are assigned distinct color scheme to be linked with Design Root Causes)

**9.3.4.4.3 Latent Failures (Design Root Causes)**

- ⊕ Latent Failures are HSE Management System failures which led to the pre-conditions of the incident. They are also mentioned as Design Root Causes and often ascribed to Elements of Management Systems or Elements of Performance Standards.
- ⊕ Latent Failures (Design Root Causes) are linked with Preconditions (Contributory Causes) using a distinct color scheme as visible from the list mentioned below:



- ⊕ Investigation Committee shall identify and elaborate the pertinent failures, gaps or deviations as design root causes in the **Incident Investigation Report (IIR)**.

**9.3.4.5 Findings and Report Writing**

- ☐ Assessment of all failed & missing barriers i.e. active failures (primary surface causes), preconditions (contributory causes) and latent failures (design root causes) shall be correlated and a comprehensive root cause analysis shall be summarized as findings.
- ☐ Immediate corrective measures as well as long-term corrective & preventive actions shall be determined along with timeframe.
- ☐ Standardized **Incident Investigation Report (IIR)** format shall be used for all investigations.

**9.3.4.6 Close Out of Corrective & Preventive Actions**

- ☐ Concerned HOD(s) shall be responsible to ensure that corrective and preventive actions are implemented as per prescribed timeframe.
- ☐ HSEQ Department shall develop a Checklist against the recommendations scribed in the IIR and review the compliance status on quarterly basis.
- ☐ Subsequently based upon satisfactory follow-ups on the effectiveness of actions taken, the Investigation Report shall be closed out by HOD, HSEQ Department.

**9.3.4.7 Communication of Lessons Learned**

- ☐ Investigation Report shall be retained as evidence of type / nature of the incidents that have occurred and the results of corrective & preventive actions taken, including their effectiveness.
- ☐ The lessons learned from the incident and the description of associated dangers shall be communicated through Safety Alert across the organization and with relevant stakeholders as well and it shall be encouraged that the Recipients of Safety Alert to share them further within their coworkers.



# Improvement: OGDCL's Integrated HSE System Manual

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OGF - HSE - 046(06)

## Oil & Gas Development Company Limited PRELIMINARY INCIDENT REPORT

( Must be reported on the same day to HSEQ Department OGDCL Head Office Islamabad)  
[ Fax.: 051-2623041; Email: HSEQReports@ogdcl.com ]

<b>PART I: General</b>						<b>Activity-based Event Classification</b>					
Date:	_____	<input type="checkbox"/> <i>Work-related</i>	<input type="checkbox"/> <i>Within OGDCL site boundary</i>								
Time:	_____	<input type="checkbox"/> <i>Non-work related</i>	<input type="checkbox"/> <i>Outside OGDCL site boundary</i>								
Activity:	_____	<input type="checkbox"/> <i>OGDCL crew</i>									
Area:	_____	<input type="checkbox"/> <i>Contractor crew</i>									
Location/ Field:	_____	<input type="checkbox"/> <i>Third party</i>									
Reported By:	_____										
						Severity	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
						<i>Note: Location IC shall assign Severity to the incident from the Matrix mentioned overleaf.</i>					
<b>PART II: Incident / Nonconformance / Deviation:</b>											
Summary:											
<input type="checkbox"/> Fire	<input type="checkbox"/> Gas Leakage	<input type="checkbox"/> Oil/ Chemical Spill	<input type="checkbox"/> Roadside Accident	<input type="checkbox"/> Improper Lifting	<input type="checkbox"/> Falling Object	<input type="checkbox"/> Struck By	<input type="checkbox"/> Confined space	<input type="checkbox"/> Explosive Blast	<input type="checkbox"/> Equipment Safeguarding	<input type="checkbox"/> Fall from Height	<input type="checkbox"/>
Description:											
<b>PART III: Summary of Consequences:</b>											
Asset Damage (Quantify)	Environment Damage (Quantify)	Human Damage		Production Loss (Quantify)	Reputation Damage						
		Injury(ies)	Fatality(ies)								
1. _____											
2. _____											
Name of Injured/ Fatality		Designation		Employment No		DOB		Section/Deptt.		Status*	
* Regular/ Contractual/ Work Charge/ Trainee/ Contractor/ Other											
<b>PART IV: Contributing Surface Cause(s):</b>											
<b>Unsafe Condition</b>						<b>Unsafe Act/Behavior</b>					
<input type="checkbox"/> Improper HSE Equipment <input type="checkbox"/> Improper HSE Documentation <input type="checkbox"/> Poor Illumination <input type="checkbox"/> Improper / Incomplete Resources <input type="checkbox"/> Non-provision of Necessary Protection Equipment <input type="checkbox"/> Unsafe Design or Construction <input type="checkbox"/> Poor / Inadequate Operating Conditions <input type="checkbox"/> Inadequate Warning System <input type="checkbox"/> Poor Housekeeping <input type="checkbox"/> Defective Tool <input type="checkbox"/> Slippery Surface <input type="checkbox"/> Bad Environmental Conditions <input type="checkbox"/> Any Other(s) _____						<input type="checkbox"/> Operating without Authority <input type="checkbox"/> Horseplay <input type="checkbox"/> Over-speeding <input type="checkbox"/> Overriding Safety Devices <input type="checkbox"/> Not Wearing Proper Protection Equipment <input type="checkbox"/> Ill Maintenance of Tools <input type="checkbox"/> Disobeying Instructions / Not Following SOP <input type="checkbox"/> Wrong Orders of Supervisor <input type="checkbox"/> Too Much Occupied/Over-worked/Fatigue <input type="checkbox"/> Lack of Skill / Knowledge of Worker(s) <input type="checkbox"/> Unsafe Act of Outsider(s) <input type="checkbox"/> Unsafe Act of Fellow-Worker(s) <input type="checkbox"/> Working in Bad Environmental Conditions <input type="checkbox"/> Any Other(s) _____					
<b>PART V: Immediate Cautions Taken On Affected Area/ Incident Site?</b>											
<input type="checkbox"/> Concerned informed/ evacuated	<input type="checkbox"/> Injured/ casualties removed	<input type="checkbox"/> Site barricaded & warning sign posted	<input type="checkbox"/> First aid provided	<input type="checkbox"/> Admin & Medical teams informed	<input type="checkbox"/> Hazards contained/ controlled	<input type="checkbox"/> Energy Isolated					
<b>PART VI: Regulatory Department/ Concerned Intimated?</b>											
<input type="checkbox"/> Families of Victims	<input type="checkbox"/> CIM	<input type="checkbox"/> EPA	<input type="checkbox"/> PNRA	<input type="checkbox"/> Police	Notes:						
Signature & Date: Reported By											

Ref. Section 09 (Improvement) of OGDCL's Integrated HSE System Manual



Oil & Gas Development Company Limited  
**PRELIMINARY INCIDENT REPORT**

( Must be reported on the same day to HSEQ Department OGDCL Head Office Islamabad)  
 [ Fax.: 051-2623041; Email: HSEQReports@ogdcl.com ]

Severity Matrix

Actual Severity	Potential Impact			
	Human	Environment	Asset / Financial	Reputation
Catastrophic (5)	Multiple Fatalities	<b>Massive Effect</b> Persistent Severe Environmental Damage or Severe Nuisance extending over a large area of commercial, communal or recreation use. Continuous excursions beyond allowable or regulatory limits.	Loss of > 10 Million USD	International Concern
Critical (4)	Single Fatality	<b>Major Effect</b> Severe environmental damage; the company is required to take Extensive measures to restore the damaged environment. Intermittent excursions beyond allowable or regulatory limits.	Loss of 2 – 10 Million USD	National Concern
Major (3)	Multiple Injury Cases esp. Lost Time Injury(ies)	<b>Local Effect</b> Limited Discharges affecting the neighborhood or damaging local environment. Excursions beyond allowable or regulatory limits.	Loss of 0.025 – 2 Million USD	Provincial / Regional Concern
Marginal (2)	Medical Treatment Case(s) / Restricted Workday Injury(ies)	<b>Minor Effect</b> Discharge or Contamination with no lasting effect. Rare excursions beyond allowable or regulatory limits.	Loss up to 0.025 Million USD	Local Concern
Negligible (1)	Near Miss/ Hit	<b>Slight Effect</b> Slight Damage within the premises of the facility	Nil	Awareness, No Concern

Ref. Section 09 (Improvement) of OGDCL's Integrated HSE System Manual



# INCIDENT INVESTIGATION REPORT TEMPLATE

< Mention Title of Incident Here >

**INCIDENT INVESTIGATION REPORT (IIR)**

**TABLE OF CONTENTS**

S#	CONTENTS	PG#
1.	<b>CONSTITUTION OF INCIDENT INVESTIGATION COMMITTEE</b>	
2.	<b>SUMMARY OF INCIDENT</b> ⊕ DATE, TIME, AND SPECIFIC LOCATION OF INCIDENT ⊕ NAMES, JOB TITLES, AND EMPLOYEES / CONTRACTORS INVOLVED AND IMMEDIATE SUPERVISOR(S) ⊕ NAMES AND STATEMENTS OF WITNESSES ⊕ EVENTS LEADING UP TO INCIDENT ⊕ EXACTLY WHAT EMPLOYEE / CONTRACTOR WAS DOING AT THE MOMENT OF THE ACCIDENT ⊕ ENVIRONMENTAL CONDITIONS ⊕ CIRCUMSTANCES (INCLUDING TASKS, EQUIPMENT, TOOLS, MATERIALS, PPE, ETC.) ⊕ SPECIFIC INJURIES (INCLUDING PART(S) OF BODY INJURED AND NATURE AND EXTENT OF INJURIES) ⊕ TYPE OF TREATMENT FOR INJURIES ⊕ DAMAGE TO ENVIRONMENT, EQUIPMENT, MATERIALS, ETC. ⊕ FLOWCHARTS / SKETCHES / PICTURES	
3.	<b>FAILED / MISSING BARRIER(S)</b> ⊕ SWISS CHEESE/ BOWTIE DIAGRAM ⊕ ACTIVE FAILURES (PRIMARY SURFACE CAUSES) ⊕ PRECONDITIONS (CONTRIBUTORY CAUSES) ⊕ LATENT FAILURES (DESIGN ROOT CAUSES)	
4.	<b>FINDINGS</b>	
5.	<b>RECOMMENDATIONS</b>	
6.	<b>ANNEXURES</b>	

Ref. Section 09 (Improvement) of OGDCL's Integrated HSE System Manual





**INCIDENT INVESTIGATION REPORT (IIR)**

**1. CONSTITUTION OF INCIDENT INVESTIGATION COMMITTEE**

Ref. Section 1.3 of Incident Investigation Procedure.

Ref. Section 09 (Improvement) of OGDCL's Integrated HSE System Manual

**INCIDENT INVESTIGATION REPORT (IIR)**

**2. SUMMARY OF INCIDENT**

- ✦ DATE, TIME, AND SPECIFIC LOCATION OF INCIDENT
- ✦ NAMES, JOB TITLES, AND EMPLOYEES / CONTRACTORS INVOLVED AND IMMEDIATE SUPERVISOR(S)
- ✦ NAMES AND STATEMENTS OF WITNESSES
- ✦ EVENTS LEADING UP TO INCIDENT
- ✦ EXACTLY WHAT EMPLOYEE / CONTRACTOR WAS DOING AT THE MOMENT OF THE ACCIDENT
- ✦ ENVIRONMENTAL CONDITIONS
- ✦ CIRCUMSTANCES (INCLUDING TASKS, EQUIPMENT, TOOLS, MATERIALS, PPE, ETC.)
- ✦ SPECIFIC INJURIES (INCLUDING PART(S) OF BODY INJURED AND NATURE AND EXTENT OF INJURIES)
- ✦ TYPE OF TREATMENT FOR INJURIES
- ✦ DAMAGE TO ENVIRONMENT, EQUIPMENT, MATERIALS, ETC.
- ✦ FLOWCHARTS / SKETCHES / PICTURES

Ref. Section 09 (Improvement) of OGDCL's Integrated HSE System Manual

**INCIDENT INVESTIGATION REPORT (IIR)**

**3. FAILED / MISSING BARRIER(S)**

· SWISS CHEESE DIAGRAM

· BOWTIE DIAGRAM

For any incident to occur, multiple barriers may have weakened or failed. Investigation team should determine why the barriers weakened or failed by assessing following Comprehensive List of Causes (CLCs):

PROBABLE ACTIVE FAILURES (PRIMARY SURFACE CAUSES)

PROBABLE PRECONDITIONS (CONTRIBUTORY CAUSES)

LATENT FAILURES (DESIGN ROOT CAUSES)

Ref. Section 09 (Improvement) of OGDCL's Integrated HSE System Manual

## INCIDENT INVESTIGATION REPORT (IIR)

### SELECT MOST PROBABLE ACTIVE FAILURES (PRIMARY SURFACE CAUSES)

Actions							
1.0 Following Procedures		2.0 Use of Tools or Equipment		3.0 Use of Protective Methods		4.0 Inattention / Lack of Awareness	
1.1.	Violation by individual	2.1.	Improper use of equipment	3.1.	Lack of knowledge of hazards present	4.1.	Improper decision making or lack of judgment
1.2.	Violation by group	2.2.	Improper use of tools	3.2.	Personal protective equipment not used	4.2.	Distracted by other concerns
1.3.	Violation by supervisor	2.3.	Use of defective equipment (aware)	3.3.	Improper use of proper personal protective equipment	4.3.	Inattention to footing and surroundings
1.4.	Operation of equipment without authority	2.4.	Use of defective tools (aware)	3.4.	Servicing of energized equipment	4.4.	Horseplay
1.5.	Improper position or posture for the task	2.5.	Improper placement of tools, equipment or materials	3.5.	Equipment of materials not secured	4.5.	Acts of violence
1.6.	Overexertion of physical capability	2.6.	Operation of equipment at improper speed	3.6.	Disabled guards, warning systems or safety devices	4.6.	Failure to warn
1.7.	Work or motion at improper speed	2.7.	Servicing of equipment in operation	3.7.	Removal of guards, warning systems or safety devices	4.7.	Use of drugs or alcohol
1.8.	Improper lifting	2.8.	Other	3.8.	Personal protective equipment not available	4.8.	Routine activity without thought
1.9.	Improper loading			3.9.	Other	4.9.	Other
1.10.	Shortcuts						
1.11.	Other						
Conditions							
5.0 Protective System		6.0 Tools, Equipment and Vehicles		7.0 Work Exposure To		8.0 Workplace Environment / Layout	
5.1.	Inadequate guards or protective devices	6.1.	Defective equipment	7.1.	Fire or explosion	8.1.	Congestion or restricted motion
5.2.	Defective guards or proactive devices	6.2.	Inadequate equipment	7.2.	Noise	8.2.	Inadequate or excessive illumination
5.3.	Inadequate personal protective equipment	6.3.	Improperly prepared equipment	7.3.	Energized electrical systems	8.3.	Inadequate ventilation
5.4.	Defective personal protective equipment	6.4.	Defective tools	7.4.	Energized systems, other than electrical	8.4.	Unprotected height
5.5.	Inadequate warning	6.5.	Inadequate tools	7.5.	Radiation	8.5.	Workplace layout

Ref. Section 09 (Improvement) of OGDCL's Integrated HSE System Manual

**INCIDENT INVESTIGATION REPORT (IIR)**

	systems				controls
5.6.	Defective warning systems	6.6.	Improperly prepared tools	7.6.	Temperature extremes - <i>displays less than adequate</i>
5.7.	Inadequate isolation of process or equipment	6.7.	Defective vehicle	7.7.	Hazardous chemicals - <i>labels less than adequate</i>
5.8.	Inadequate safety devices	6.8.	Inadequate vehicle for the purpose	7.8.	Mechanical hazards - <i>locations out of reach or sight</i>
5.9.	Defective safety devices	6.9.	Improperly prepared vehicle	7.9.	Clutter or debris - <i>conflicting information presented</i>
5.10.	Other	6.10	Other	7.10	Storms or acts of nature
				7.11	Slippery floors or walkways
				7.12	Other
				8.6.	Other

Ref. Section 09 (Improvement) of OGDCL's Integrated HSE System Manual



**INCIDENT INVESTIGATION REPORT (IIR)**

**SELECT MOST PROBABLE PRECONDITIONS (CONTRIBUTORY CAUSES)**

Personal Factors											
9.0 Physical Capability		10.0 Physical Condition		11.0 Mental State		12.0 Mental Stress		13.0 Behavior		14.0 Skills	
9.1.	Vision deficiency	10.1.	Previous injury or illness	11.1.	Poor judgment	12.1.	Preoccupied with problems	13.1.	Improper performance is rewarded	14.1.	Inadequate assessment of required skills
9.2.	Hearing deficiency	10.2.	Fatigue	11.2.	Memory failure	12.2.	Frustration	-	saves time or effort	14.2.	Inadequate practice of skill
9.3.	Other sensory deficiency	-	due to workload	11.3.	Poor coordination or reaction time	12.3.	Confusing directions/demands	-	avoids discomfort	14.3.	Infrequent performance of skill
9.4.	Reduced respiratory capacity	-	due to lack of rest	11.4.	Emotional disturbance	12.4.	Conflicting Directions demands	-	gains attention	14.4.	Lack of coaching on skill
9.5.	Other permanent physical disabilities	-	due to sensory overload	11.5.	Fears or phobias	12.5.	Meaningless or degrading activities	13.2.	Improper supervision	14.5.	Insufficient review of instruction to establish skill
9.6.	Temporary disabilities	10.3.	Diminished performance	11.6.	Low mechanical aptitude	12.6.	Emotional overload	13.3.	Inadequate identification of critical safe behaviors	14.6.	Other
9.7.	Inability to sustain body positions	-	due to temperature extremes	11.7.	Low learning aptitude	12.7.	Extreme judgment decisions/demands	13.4.	Inadequate reinforcement of critical safe behaviors		
9.8.	Restricted range of body movement	-	due to oxygen deficiency	11.8.	Influenced by medication	12.8.	Extreme concentration/ perception demands	-	proper performance is criticized		
9.9.	Inadequate size or strength	-	due to atmospheric pressure variation	11.9.	Other	12.9.	Extreme boredom	-	Inappropriate peer pressure		
9.10.	Substance sensitivities or allergies	10.4.	Blood sugar insufficiency			12.10.	Other	-	inadequate performance feedback		
9.11.	Diminished capacity due to medication	10.5.	Impairment due to use of drug					-	inadequate disciplinary process		

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## INCIDENT INVESTIGATION REPORT (IIR)

		or alcohol
9.12. Other	10.6.	Other

13.5	<i>Inappropriate aggression</i>
13.6	Improper use of production incentives
13.7	Supervisor implied haste
13.8	Employee perceived haste
13.9	Other

Job Factors									
15.0 Training / Knowledge Transfer		16.0 Management / Supervision Employee Leadership		17.0 Contractor Selection and Oversight		18.0 Engineering / Design		19.0 Work Planning	
15.1.	Inadequate knowledge transfer	16.1.	Conflicting roles/ responsibilities	17.1.	Lack of contractor pre-qualifications	18.1	Inadequate technical design	19.1.	Inadequate work planning
-	<i>inability to comprehend</i>	-	<i>unclear reporting relationships</i>	17.2.	Inadequate contractor pre-qualifications	-	<i>design input obsolete</i>	19.2.	Inadequate preventive maintenance
-	<i>inadequate instruction Qualifications</i>	-	<i>conflicting reporting relationships</i>	17.3.	Inadequate contractor selection	-	<i>design input not correct</i>	-	assessment of needs
-	<i>inadequate training equipment</i>	-	<i>unclear assignment of responsibility</i>	17.4.	Use of non-approved contractor	-	<i>design input not available</i>	-	lubrication/ servicing
-	<i>misunderstood instructions</i>	-	<i>conflicting assignment of responsibility</i>	17.5.	Lack of job oversight	-	<i>design output inadequate</i>	-	adjustment/ assembly
15.2.	Inadequate recall of training material	-	<i>improper or insufficient delegation of authority</i>	17.6.	Inadequate oversight	-	<i>design input feasible</i>	-	clearing/ resurfacing
-	<i>training not reinforced on the job</i>	16.2.	Inadequate leadership	17.7.	Other	-	<i>design output unclear</i>	19.3.	Inadequate repair
-	<i>inadequate refresher</i>	-	<i>standards of</i>			-	<i>design output</i>	-	<i>communication</i>

Ref. Section 09 (Improvement) of OGDCL's Integrated HSE System Manual

**INCIDENT INVESTIGATION REPORT (IIR)**

	<i>training frequency</i>		<i>performance missing or not enforced</i>
15.3.	Inadequate training effort	-	<i>inadequate accountability</i>
	- <i>inadequate training program design</i>	-	<i>inadequate or incorrect performance feedback</i>
	- <i>inadequate training goals/ objectives</i>	-	<i>inadequate work site walk-through</i>
	- <i>inadequate new employee orientation</i>	-	<i>inadequate safety Promotion</i>
	- <i>inadequate initial training</i>	16.3.	Inadequate correction of prior hazard / incident
	- <i>inadequate means to determine if qualified for job</i>	16.4.	Inadequate identification of worksite/ job hazards
15.4.	No training provided	16.5.	Inadequate management of change system
	- <i>need for training not identified</i>	16.6.	Inadequate incident reporting/ investigation system
	- <i>training records incorrect or out of date</i>	16.7.	Inadequate or lack of safety meetings
	- <i>new work methods introduced without training</i>	16.8.	Inadequate performance measurement and assessment

	<i>not correct</i>		<i>of needed repair</i>
	- <i>design output inconsistent</i>	-	<i>scheduling of work</i>
	- <i>no independent design Review</i>	-	<i>examination of parts</i>
18.2.	Inadequate standards, specifications, and/or design criteria	-	<i>parts substitution</i>
18.3.	Inadequate assessment of potential failure	19.4.	Excessive wear and tear
18.4.	Inadequate ergonomic design	-	<i>inadequate planning for use</i>
18.5.	Inadequate monitoring of construction	-	<i>extension of service life</i>
18.6.	Inadequate assessment of operational readiness	-	<i>improper loading</i>
18.7.	Inadequate monitoring of initial operation	-	<i>use by untrained people</i>
18.8.	Inadequate evaluation and/or documentation of change	-	<i>use for wrong purpose</i>
18.9.	Other	19.5.	Inadequate reference materials or publications

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## INCIDENT INVESTIGATION REPORT (IIR)

-	<i>decision made not to Train</i>
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16.9. Other

15.5. Other

- |       |  |
|-------|--|
| 19.8. | Inadequate audit/ inspection/ monitoring       |
| -     | <i>no documentation</i>                        |
| -     | <i>no correction responsibility assigned</i>   |
| -     | <i>no accountability for corrective action</i> |
| 19.7. | Inadequate job placement                       |
| -     | <i>appropriate personnel not identified</i>    |
| -     | <i>appropriate personnel not available</i>     |
| -     | <i>appropriate personnel not provided</i>      |

19.8. Other

Job Factors							
20.0 Purchasing, Material Handling and Material Control		21.0 Tools and Equipment		22.0 Work Rules (Policies, Standards & Procedures – PSP)		23.0 Communication	
20.1.	Incorrect Items Received	21.1.	Inadequate assessment of needs and risks	22.1.	Lack of PSP for the task	23.1.	Inadequate horizontal communication between peers
-	<i>inadequate specifications to vendor</i>	21.2.	Inadequate human factors / ergonomics considerations	-	<i>lack of defined responsibility for PSP</i>	23.2.	Inadequate vertical communication between supervisor and person
-	<i>inadequate specifications on requisition</i>	21.3.	Inadequate standards or specifications	-	<i>lack of job safety Analysis</i>	23.3.	Inadequate communication between different organizations
-	<i>inadequate control on changes to orders</i>	21.4.	Inadequate availability	-	<i>inadequate job safety analysis</i>	23.4.	Inadequate communication between work groups
-	<i>unauthorized Substitution</i>	21.5.	Inadequate adjustment / repair / maintenance	22.2.	Inadequate development of PSP	23.5.	Inadequate communication between shifts
-	<i>inadequate product Acceptance requirements</i>	21.6.	Inadequate salvage and reclamation	-	<i>inadequate coordination with process / equipment design</i>	23.6.	Inadequate communication methods

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## INCIDENT INVESTIGATION REPORT (IIR)

	<i>no acceptance verification performed</i>		21.7. Inadequate removal / replacement of unsuitable items		- <i>inadequate employee involvement in the development</i>		23.7. No communication method available
20.2.	Inadequate research on materials / equipment		21.8. No equipment record history		- <i>inadequate definition of correction actions</i>		23.8. Incorrect instructions
20.3.	Inadequate mode or route of shipment		21.9. Inadequate equipment record history		- <i>inadequate format for easy use</i>		23.9. Inadequate communication due to job turnover
20.4.	Improper handling of materials	21.11 Other			22.3. Inadequate implementation of PSP, due to deficiencies		23.10. Inadequate communication of safety and health data, regulations or guidelines
20.5.	Improper storage of materials or spare parts				- <i>contradictory requirements</i>		23.11. Standard terminology not used
20.6.	Inadequate material packaging				- <i>confusing format</i>		23.12. Verification / repeat back techniques not used
20.7.	Material shelf life exceeded				- <i>more than one action per step</i>		23.13. Messages too long
20.8.	Improper identification of hazardous materials				- <i>no check-off spaces provided</i>		23.14. Speech interference
20.9.	Improper salvage and/or waste disposal				- <i>inaccurate sequence of steps</i>		23.15. Other
20.10.	Inadequate use of safety and health data				- <i>confusing instructions</i>		
20.11.	Other				- <i>technical error / missing steps</i>		
					- <i>excessive references</i>		
					- <i>potential situations not covered</i>		
				22.4. Inadequate enforcement of PSP			
			- <i>inadequate monitoring of work</i>				
			- <i>inadequate supervisory knowledge</i>				
			- <i>inadequate reinforcement</i>				
			- <i>non-compliant not corrected</i>				
			22.5. Inadequate communication of PSP				
			- <i>incomplete distribution</i>				

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	<i>to work groups</i>
-	<i>inadequate translation to appropriate languages</i>
-	<i>incomplete integration with training</i>
-	<i>out of date revisions still in use</i>

22.6. Other

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**INCIDENT INVESTIGATION REPORT (IIR)**

**ANALYSIS OF LATENT FAILURES (DESIGN ROOT CAUSES)**

- ▣ Latent Failures are HSE Management System failures which led to the pre-conditions of the incident. They are also mentioned as Design Root Causes and often ascribed to Elements of Management Systems or Elements of Performance Standards.
- ▣ Latent Failures (Design Root Causes) are linked with Preconditions (Contributory Causes) using a distinct color scheme.
- ▣ Investigation Committee shall identify and elaborate the pertinent gaps or deviations as design root causes.

#	HSE System Element	Detail of Gap / Deviation
a.	Leadership, Commitment & Accountability	
b.	Risk Assessment and Management	
c.	Training, Competence and Fitness	
d.	Documented Information and Communication	
e.	Design, Engineering and Construction	
f.	Operations & Maintenance	
g.	Contractors Management	
h.	Management of Change	
i.	Crisis & Emergency Preparedness and Planning	
j.	Incident Investigation and Analysis	
k.	Performance Measurement, Audit, Management Reviews and Improvement	

Ref. Section 09 (Improvement) of OGDCL's Integrated HSE System Manual



**INCIDENT INVESTIGATION REPORT (IIR)**

**4. FINDINGS**

Assessment of all failed & missing barriers i.e. active failures (primary surface causes), preconditions (contributory causes) and latent failures (design root causes) shall be correlated and a comprehensive root cause analysis shall be summarized as findings.

Ref. Section 09 (Improvement) of OGDCL's Integrated HSE System Manual



**INCIDENT INVESTIGATION REPORT (IIR)**

**5. RECOMMENDATIONS**

Immediate corrective measures as well as long-term corrective & preventive actions shall be jot down along with timeframe.

Ref. Section 09 (Improvement) of OGDCL's Integrated HSE System Manual



**INCIDENT INVESTIGATION REPORT (IIR)**

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**6. ANNEXURES**

Ref. Section 09 (Improvement) of OGDCL's Integrated HSE System Manual