

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



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 Framework
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



7.1 Operational Planning and Control

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

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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	☑	☑	☑	☑	☑	☑	☑
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
Level 1 (F&G Failure)	Total Plant Shutdown with automatic depressurization	<ul style="list-style-type: none"> - Manually (from the Control Room), - Automatically from the F&G (confirmed fire) or - Automatically on SD/F&G system power failure. 	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.
Level 2 (Process Failure)	Total Plant Shutdown without automatic depressurization	<ul style="list-style-type: none"> - Manually (from the Control Room), - Automatically from process shutdowns (Instrument air failure, LP Flare KO Drum high liquid level and LP Flare KO Drum high pressure), - Automatically from the F&G (confirmed gas detection) or - Automatically from total main power generation failure. 	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.
Level 3 (Train Failure)	Single Train Shutdown without automatic depressurization	<ul style="list-style-type: none"> - Manually for a train, from the Control Room, - Via local pushbuttons located within the process train or - Automatically from process shutdowns. 	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.
Level 4 (Equipment/ Package Failure)	Process Shutdown without automatic depressurization	<ul style="list-style-type: none"> - Automatically from process shutdowns or - Automatically by machine monitoring shutdowns. 	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

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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
Physical Restraint Devices	-Used in conjunction with clasps, locks and tags. -Used to protect personnel and machinery in conjunction with tags.
Isolation Clasp	-Used in conjunction with multiple locks and tags. -Each lock on a clasp represents an individual associated with the task.
Isolation Padlocks	-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.
-



Operation: OGDCL's Integrated HSE System Manual
 Controlled Copy Do Not Duplicate For Internal Use Only

OIL & GAS DEVELOPMENT COMPANY LIMITED						
Ref. Section 07 (Operation) of OGDCL's Integrated HSE System Manual	OGF - HSE - 019(01)					
COLD 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						
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 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 lockout 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: _____						
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	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

GGF - HSE - 020(01)

SOUR/HOT WORK 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
%O ₂								
%CO ₂								
H ₂ (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 checklist)	<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 PFA 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"/> 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	
25. 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 Hit
(Tick/Cross)	<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

QGF – HSE – 023(01)

ELECTRICAL WORK 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 |

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 the equipment been properly de-energised & Tagged?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Is the breaker locked and tagged?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 If not, have the circuit breaker output leads been disconnected & Tagged?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Have you ensured that the equipment does not start from the local on/off switch?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 Has the equipment where work is to be done identified by the Performing Technician?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Will the Electrician work on live circuit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8 Has Explosivity in the area been checked out for working on live circuit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9 Has a stand by maintenance person been appointed for working on live circuit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10 Have you instructed the Electrician about the safe procedure of this job?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11 Have you instructed the Electrician to use insulated electrical tools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12 Have the unit affected by the work been 'notified'?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13 Is scaffolding arranged for safe execution of job? (Attach checklist)	<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 Equipment to be use: _____			
18 Reference of Power Isolation Slip & IO/TO: _____			
19 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	
20 Special Instructions: _____			

Authorization →	Permit Issue Authority	Release Section	Permit Review
	IC Electrical / Shift Engineer	IC Electrical / Shift Engineer	Supervisor/Performing Technician

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:-

(Tick/Cross)	Asset Damage	Environment Damage	Fatal	Non-Fatal	First Aid	Rear Hits
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 -- 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)

MEASUREMENT BY	DATE			
	TIME	RESULT	TIME	RESULT
% LEL				
% OXYGEN				
H-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	Release/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	Flair Hits
(Tick/Cross)	<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 - 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Is JSA required and attached to complete this job?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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	Radiograph Section	Permit Received
_____	_____	_____	_____

JOB COMPLETION

This job has been completed and area is clear for any unwanted material/Residue/keeping 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"/>					
Description:						

Signed by _____ Supervisor/Performing Technician	Checked by _____ Area Operator	Verified by _____ Receiving Authority
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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(03)

Excavation & Civil Work 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)

MEASUREMENT BY _____ DATE _____

TEST INTERVAL	TIME	RESULT								
% LEL										
% O ₂										
PS-(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 IHA 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"/> Coverall <input type="checkbox"/> Safety Shoes/Gum Boots <input type="checkbox"/> Heat/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/ Belt <input type="checkbox"/> SCBA	
18. Special Instructions, _____			

Authorization →
 Permit Issue Authority
 Release 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:-

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

Authorization →	Permit Issue Authority <small>Shift Engineer/Production Engineer</small>	Releasing Section <small>K / Shift Engineer</small>	Permit Receiver <small>Supervisor/Performing Technician</small>
-----------------	---	--	--

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:-

	Road Damage	Environment Damage	Fatal	Non-Fatal	First Aid	Loss HHA
(Tick/Cross)	<input type="checkbox"/>					
Description:						

_____ Signed by <small>Supervisor/Performing Technician</small>	_____ Checked by <small>HSE Section/Area Operator</small>	_____ Verified by <small>Receiving Authority</small>
---	---	--

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.

Performing Authority Name: _____ Signature: _____ Date / Time: _____

I have taken part in the Toolbox Talk with the Work Party and other involved persons to address specific Operations related matters.

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 D7 (Operation) of OGDCL's Integrated HSE System Manual

OGF – HSE – 02&00

SAFETY SYSTEM DEFEAT CERTIFICATE

Certificate No. _____

Section 1 - Description of Defeat			
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
Reason of Safety System / Safety Equipment Defeat			

Section 2 - Defeat Implementation Request (by Requester/Performing Authority)			Section 3 - Defeat Removal Request (by Requester/Performing Authority)		
Contractor/Dept. Name:	Signature:	Date / Time:	I hereby certify that work is sufficiently completed to allow for reinstatement		
			Contractor/Dept. Name:	Signature:	Date / Time:

Section 3a - Details of Defeat (by Isolating Authority) - Inhibit/Override/Isolation

Section 3b - Details of Safeguards (Precautions and Mitigations) while System/Equipment is Defeated

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.

Section 4 - Implementation of Defeat		Section 5 - Removal of Defeat	
4a. I hereby approve ¹ the defeat as described in Section 3	Approving Authority(Incharge of Process/Production) Signature: _____ Date / Time: _____	6a. I hereby authorise removal of the defeat as described in Section 3	Issuing Authority Name: _____ Signature: _____ Date / Time: _____
I hereby authorise the defeat as described in Section 3	Issuing Authority Name: _____ Signature: _____ Date / Time: _____		
4b. I hereby certify that the defeat has been applied as described in Section 3	Isolating Authority ² Name: _____ Signature: _____ Date / Time: _____	6b. I hereby certify that the defeat has been removed	Isolating Authority ² Name: _____ Signature: _____ Date / Time: _____
4c. I hereby certify that the defeat is in place	Area Authority Name: _____ Signature: _____ Date / Time: _____	6c. I hereby confirm that the defeat has been removed and site has been returned to its initial state	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:
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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
	<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

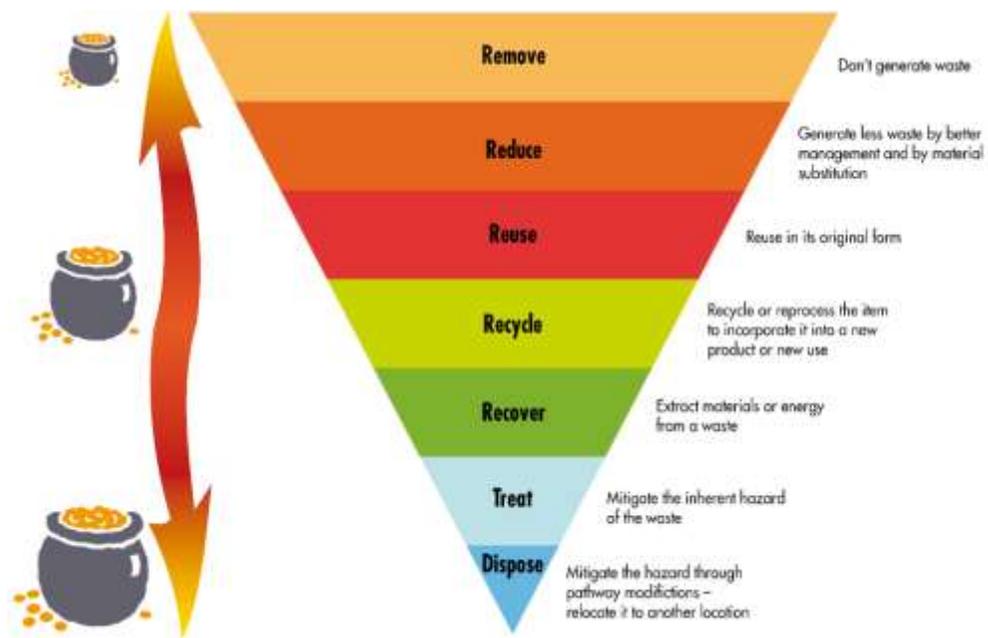
7.3.1 Waste Management Planning

- ☐ 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



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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



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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 rd 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).



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OIL AND GAS DEVELOPMENT COMPANY LTD. On-Site Waste Management Plan

OGF/XXX - HSE - 050D1

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



OIL AND GAS DEVELOPMENT COMPANY LTD. On-Site Waste Management Plan

OGF/XXX - HSE - 050D1

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



OGF/XXX – MMD – 032(01)

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:

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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:

P	Petrol: Is there enough fuel for the planned journey?
O	Oil: oil level ok? And no obvious leaks?
W	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?
E	Electrics: Are all the lights working and does the battery start the engine with ease?
R	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

- ☐ 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.
-



Oil & Gas Development Company Limited

OGF/XXX-TPT-001(00)

Location _____

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	
Safety & Security Briefing			First Aid Kit			Drinking Water			Security Escort (Guard/ FC/ Rangers)
Cellular Phones (Two-way Communication)			Radio Set			Protective Clothing			Under-run/ Rollover protection device
Emergency Toeing Kit			Fire Extinguisher			Route Map (GPS)			Shovel for sandy/ desert terrain
Flashlight/ Torch			Warning Triangle			Vehicle Fitness/ Checks			Other _____
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. ✓ in distinct 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.					Location InCharge				
					InCharge Admin.				
					InCharge TPT.				
					HSE Rep.				
					Security Rep.				
Note: Please attach the planned (priority) as well as alternate route map on the back of this form if available.									

Initiated by InCharge TPT	Reviewed by Security Rep.	Checked by HSE Rep.	Endorsed/ Approved by Location InCharge/ InCharge Admin.
------------------------------	------------------------------	------------------------	--



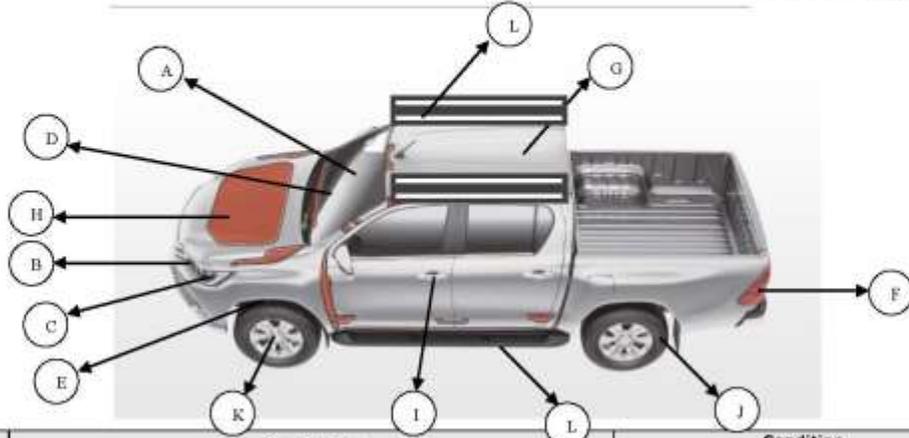
Oil & Gas Development Company Ltd.
Location: _____

OGC/TPT-001(09)

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	D		
7.	Windscreen / Washers / Wipers	E		
8.	Shock Absorbers			
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 Alignment	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 (H₂S) Management

OGM/P-HSE-7.5(00) Revision Number 00

Original Issue: November 28, 2019
This Issue: --

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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 ₂ S Detection Equipment (Location & Quantities) for Drilling Rigs	Manager HSE	GM HSE	MD/ CEO

7.5.1 Purpose

- ☐ Hydrogen Sulfide (H₂S) 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). H₂S 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(H₂S) Emergency Management during Rig Operations

- ☐ H₂S 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 H₂S 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.
 - ▣ H₂S 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 H₂S 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 H₂S gas bearing zones, especially during testing or coring.
 - ▣ Drilling crew must carry personnel H₂S 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 H₂S.
 - ▣ 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 H₂S 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 H₂S 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).

☐ H₂SEmergency Conditions can be subdivided into three conditions:

Condition-I: Caution (When H ₂ S concentration is more than zero but less than 10ppm)	<ul style="list-style-type: none"> ∞ Continuous Yellow Light flash over rig with no alarm ∞ Be alert for a condition change ∞ Keep emergency Breathing Apparatus (BA) like EEBA and SCBA nearby and ready in case H₂S levels increase beyond 10ppm
Condition-II: Potential Danger to Life and Health (When H ₂ S concentration is 10ppm to 15 ppm)	<ul style="list-style-type: none"> ∞ Red Light flashover rig with no alarm ∞ All Rig site personnel shall be advised of the change in the condition level ∞ Use the buddy system (i.e. work in pairs) to prevent anyone from entering or being left in an area alone ∞ Condition-II will remain in effect until the H₂S concentration drops below 10ppm and the yellow flashing light deactivates or Condition III develops



Condition-III: Extreme Danger
(When H₂S concentration is greater than 15 ppm)

- ∞ **Red Light Flash over Rig with continuous alarm**
- ∞ All non-essential personnel will mask-up and proceed to the upwind muster point
- ∞ A list of key personnel shall be compiled and included in Site Emergency Procedure who shall remain on site.
- ∞ All non-essential personnel or all personnel, as appropriate, shall be evacuated
- ∞ The "buddy" system (working in pairs) will be used to prevent anyone from entering or being left in an area alone, even wearing SCBA
- ∞ Do not remove masks until absolutely certain the air is safe to breath. Replenish air supply from cascade system as needed
- ∞ If a sudden gas release occurs without warning, you should:
 - 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.
 - If H₂S gas comes to surface, it is to be burned at the flare if possible. Check for SO₂ 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.
- ∞ When circulation with less than 10ppm H₂S 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.
- ∞ 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;
 - Human life and property are endangered.
 - There is no hope of controlling the gas release under the prevailing conditions at the well.
 - ▣ If the well is ignited, the burning H₂S will be converted to sulphur dioxide (SO₂), which is also highly toxic and heavier than air. Do not assume that area is safe after the well is ignited.
 - ▣ If the well must have to be ignited, the primary method will be with a flare gun.

Note:-

- ▣ Air Manifolds of Cascade Breathing Air Supply System shall be used for working in an H₂S 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 H₂S environment.
- ▣ Self-Contained Breathing Apparatus (SCBA) shall be used for "rescue" and "search" operation only.

7.5.3 Hydrogen Sulphide (H₂S) Emergency Management during Plant Operations

7.5.3.1 H₂S Hazards

- ☐ An evaluation of gas processing facilities shall be carried out to determine if fixed H₂S detection and alarm systems are needed. This evaluation should consider the likelihood of H₂S 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 H₂S rescue mockup drills and practice wearing and using breathing apparatus.
- ☐ Since concentration of H₂S 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:

Low Risk Sour Facility: (50 to 499 ppm)	
H2S Detection:	<ul style="list-style-type: none"> ∞ Hydrogen Sulfide Risk assessment of the facility shall be conducted to identify locations of Hydrogen Sulfide Fixed Gas Detectors. ∞ Fixed Gas Detector Reading shall be made available in plant control room and shall activate plant emergency alarm in case of H₂S detection > 10 ppm.
H2S Protection:	<ul style="list-style-type: none"> ∞ If H₂S 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 H₂S detectors. ∞ 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 H₂S. ∞ Wind Socks shall be installed and maintained at all prominent locations. ∞ All employees shall be imparted with H₂S training as part of induction including Competencies in H₂S, 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 H₂S release. ∞ 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. ∞ 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. ∞ Sampling of sour fluids will be strictly controlled and managed, using engineered sample points, breathing apparatus and the buddy system.
High Risk Sour Facility: (+500 ppm)	
H2S Detection:	<ul style="list-style-type: none"> ∞ All employees shall be required to carry personnel H₂S Monitors when entering plant or wellhead facilities. ∞ Fixed H₂S 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. ∞ Fixed Gas Detector's real-time readings shall be made available in plant control room and shall activate plant emergency alarm in case of H₂S detection > 10 ppm. ∞ The Plant shall be configured to automatically blow down to flare in case H₂S is released due to leakage / loss of containment in excess of 50 ppm. ∞ 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.
H2S Protection:	<ul style="list-style-type: none"> ∞ 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. ∞ 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 H₂S during rescue and search operations in the event of loss of containment or the failure of flare systems that may combust fluids containing H₂S. ∞ 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 H₂S detectors and 5/10 minute EEBA.



- ∞ 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 H₂S.
- ∞ Wind Socks shall be installed and maintained at all prominent locations.
- ∞ All employees shall be imparted with H₂S training as part of induction including competencies in H₂S 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 H₂S 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 H₂S Areas shall be specified and access to High Risk H₂S 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 H₂S 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 H₂S 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 H₂S 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 H₂S 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 H₂S environment.
- Self-Contained Breathing Apparatus (SCBA) shall be used for "rescue" and "search" operation only.

7.5.4 Treatment After H₂S Exposure

- ☰ Treatment of life threatening H₂S 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 H₂S 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 O₂ 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 H₂S. Apply O₂ 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 H₂S poisoning is essential: this is the fastest method for counteracting the effects of H₂S 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

H₂S Detection Equipment (Location & Quantities) for Drilling Rigs

Personal H₂S Monitors

Minimum **15** (actual to be determined & provided after risk assessment)

Fixed H₂S 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	TOTAL	10

Fixed LEL Gas Sensors

RIG FLOOR	x 1	CELLAR	x 1	CHOKE	x 1
MUD TANKS	x 1	SHAKERS	x 1	TOTAL	05

H₂S 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
		TOTAL	09

LEL Alarms

SHAKERS	x 1	RIG FLOOR	x 3
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Multi Gas Detectors (H₂S, CO, LEL, O₂)

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	TOTAL	07



7.6 Management of Contractors, Subcontractors & Service Companies

OGM/P-HSE-7.6(08) Revision Number 8

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

Updated By:

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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&p 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

OGM/P-HSE-7.7(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: 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

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)

Features: Anti-Static

Weight: 180 – 200 gm/ m²

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 6-1/2" 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)..



Sample

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 1/2 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

- ☐ 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 H₂S 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: --

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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&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
<i>Initiation/ Custodianship</i>	I	R&A	R&A	C	I
<i>Budget Allocation/ A.F.E.</i>	R&A	R&A	R&A	I	I
<i>Assessment/ Categorization</i>	I	I	I	R&A	I
<i>T.O.R./ I.T.B.</i>	R&A	R&A	R&A	C	I
<i>Technical Evaluation</i>	R&A	R&A	R&A	C	I
<i>Job Execution/ Coordination</i>	R&A	R&A	R&A	C	I
<i>QC/Lab. Analysis/Progress Reporting</i>	R&A	R&A	R&A	C	I
<i>Conflict Resolution</i>	R&A	I	I	I	R&A
<i>Invoice Verification</i>	R&A	R&A	R&A		
<i>N.O.C. from Landowner(s)</i>	I	I	I	I	R&A
<i>Endorsement Certificate from RB*</i>	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-338(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 & 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)