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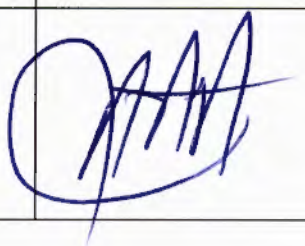
Approved by: Name : Ali Ahmad Almirza Designation : A/Manager, HSE Group		3/7/22

Revision History

Rev.	Date	Change description or Nature of change
0	05.11.2018	Initial Issue - Issued for Implementation
1	19.06.2022	• Document modified to align with HSSEMS Doc. Control Procedure. • Structure of the document and clauses are re arranged. • The Document is Reviewed & updated with changes which are marked vertical line is drawn in the right margin. • Risk Assessment (KIPIC/HSE SF/SAF/18/0301) included • and Document name amended as Safe Work Practice on Work Permit System and Risk Assessment. • User shall refer to the entire document to acquaint with changes which are in italic fonts • Executive Summary added. • Abbreviation section added. **Major changes are mentioned below:** • Counter Signature column added in Work Permit Form. • WPRA Template Changed & WPRA Checlist provided. • WPRA Matrix Revised. • Toolbox Attendance Sheet template provided. • Work Permit validity extended for low-risk activities up to 7 days (including of first-day issue) for Major turnaround, New Projects Activities, and Office Building area activities. • Guidelines for Contractor work Permit System (Green Field).

Distribution of Controlled Copies

Copy Ref.	To be issued to
Electronic Copy	Available on HSSE MS portal for all users of KIPIC
Master Copy	Safety Team (Al Zour Refinery) / HSE Group
1	All Group Managers
2	

Note - Controlled version of document is available on HSSE MS portal (Un-controlled if printed).

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EXECUTIVE SUMMARY

In the Oil & Gas industries, the operation and maintenance risks are many, high in both probability and consequences, unless adequately managed. The Work Permit System with Risk Assessment plays a vital role in ensuring health, safety, environment by proper communication and identifying activities related hazards with control measures.

The conditions set out on the work permit are meant as general guidelines and shall not be assumed to cover every condition or circumstance that may be present or may arise during the course of activities. The permit in itself does not make the job safe but shows to what extent the job has been made safe. Issuers, executors, and their superiors are responsible and accountable for ensuring strict compliance with this work permit system.

The contractor's work permit system mentioned in this document can be adopted in the greenfield areas only in compliance with the KIPIC Safe Work Practices and Procedures.

The Work Permit System and Risk Assessment (WPRA) are detailed, and all previous major incident recommendations have been considered in this document.

1. INTRODUCTION

This document intends to address the safe work practices to protect KIPIC / Contractor's employees and assets from various hazards arising during non-routine maintenance and construction activities by following the work permit system and risk assessment.

2. PURPOSE

The basic purpose of the Work Permit System and Risk Assessment is to assign the responsibility of each party for the safe execution of the activities, i.e., prevent injuries to personnel, protect assets, the environment, and the company's reputation by ensuring that all activities are carried out in the safest possible manner.

For all non-routine activities to be carried out within KIPIC premises, it shall have an appropriate work permit and applicable authorization, and the same shall be authorized by the respective permit issuer without any exception.

3. SCOPE

This document is applicable to all KIPIC sites including Al-Zour Refinery (ZOR), Liquefied Natural Gas Import (LNGI) facility, Petrochemical's project (PRIZe), Head office (HO), and other areas wherever KIPIC has a degree of control.

The work permit authorizes the specific activities to be carried out in the work permit area in KIPIC Premises and serves as a formal written system and official document of conditions and requirements as agreed upon between authorized work permit Issuer & Executor. Various designations mentioned in the document are refinery-based. Equivalent designations shall be applicable for other locations/sites.

4. TERMS, DEFINITIONS & ABBREVATIONS

- **Authorized Work Permit Issuer:** Person who is authorized by KIPIC HSE Group to issue work permits, after an appropriate assessment.
- **Authorized Work Permit Executor:** Person who is authorized by KIPIC HSE Group to apply for and receive work permits, after an appropriate assessment.
- **Authorizations:** means the document associated with the work permit, issued to competent authority, which shall grant the right/possibility to execute their work.
- **Battery Limit:** A geographic boundary, enclosing a plant or unit, established for the purpose of providing a means of specifically identifying certain portions of the plant, related groups of equipment, or associated facilities.

- **Brown Field:** The facilities are inside the KIPIC Controlled Area, where the hydrocarbons present, which includes underground or above-ground pipelines, vessels, equipment, and/or associated services such as electrical, instrumentation, telecom, network, cathodic protection, cables, or wiring, etc.
- **Contractor:** Person(s) or companies contracted to carry out work for and on behalf of the organization including self-employed persons and subcontractors, for a period of time as defined by the contract
- **Cold Work:** Activities that does not generate heat or spark or introduce a source of ignition. i.e., the tools and equipment used or the activities itself do not generate any spark.
- **Fence:** A physical barrier / structure enclosing an area of ground to prevent or control access. The structure and installation of fence shall be in such a way that the primary purpose of controlling access shall not be defeated at any point of time.
- **Green Field:** The land outside the KIPIC controlled area, but where KIPIC has a degree of control and it is hydrocarbon-free, including underground /aboveground pipeline / flow line/ vessel / equipment, and/or services such as electrical, instrumentation, telecom, network, cathodic protection-cables, or wiring, etc.
- **Hot Work:** Work / activities involving actual naked flames, sparks or has potential for creating sparks or heat, tools/equipment that can producing spark.
- **Hazard:** Source, situation, or act with a potential for harm in terms of human injury or ill health, adverse environmental impact, asset damage or adverse impact on the organization's reputation.
- **Work Permit:** A formal and detailed agreed document used to control work which is identified as potentially hazardous. It contains location, time, equipment to be worked on, scope of work and tools and equipment to be used, hazard identification, mitigation / precaution measure(s) used and the names of those authorizing the work and performing the work.
- **E-Work permit (e-WP):** Electronic Work Permit (e-WP) is a web-based solution to manage electronically through KIPIC intranet.
- **Project Controlled fenced area:** A fenced area inside which construction activities for installation of an additional unit/ facility is done by Asset Custodian Team/Group.
- **Risk:** Combination of the likelihood of an occurrence of a hazardous event or exposure(s) and the severity of consequence (injury or ill health, environment impact, asset damage, reputation loss) that can be caused by the event or exposure(s).
- **Risk Assessment:** Overall process of risk analysis and risk evaluation, which consists of deciding whether the risk is tolerable.

- **Risk Control:** Process of decision-making for managing and/or reducing risk; its implementation, enforcement, and re-evaluation from time to time, using the results of risk assessment as one input.
- **Risk Reduction Measure:** A specific hardware, software system, or administrative control designed to maintain a process within safe operating limits, to safely shut it down in the event of a process upset, or to reduce human exposure to the effects of an upset.
- **Routine Activity:** Activities carried out by Asset Owner / Custodian as a part of their day-to-day requirement without affecting safety & integrity of facility or area under their custody.

ABBREVATIONS

ALARP	*: As low as reasonably practicable*
CCB	*: Central Control Building*
CSE	*: Confined Space Entry Authorisation*
CWP	*: Cold Work Permit*
DCEO	*: Deputy Chief Executive Officer*
EDC	*: Emergency Dispatch Centre*
EPC	*: Engineering, Procurement and Construction*
ERP	*: Emergency Response Plan*
FAR	*: Field Auxiliary Room*
FO	*: Field Operator*
HAZOP	*: Hazard and operability study*
HIRA	*: Hazard Identification & Risk Assessment*
HSE	*: Health, Safety and Environment*
HSSE	*: Health, Safety, Security and Environment*
HWP	*: Hot Work Permit*
IRT	*: Inter Refinery Transfer*
LEL	*: Lower Explosive Limit*
OH & S	*: Occupational Health & Safety*
O & M	*: Operation & Maintenance*
PMC	*: Project Management Consultant*
MP	*: Major Projects*
RA	*: Risk Assessment*
RAM	*: Risk Assessment Matrix*
RCA	*: Root Cause Analysis*
SCBA	*: Self-Contained Breathing Apparatus*
SEEP	*: Site Emergency Evacuation Plan*

SIMOPS *: Simultaneous Operations*
SOP *: Safe Operating Procedure*
SWP *: Safe Work Practice*
TL *: Team Leader*
TLV *: Threshold Limit Value*
TWA *: Time Weighted Average*
WMS *: Work Method Statement*
WPRA *: Work Permit Risk Assessment*

5. RESPONSIBILITIES

KIPIC Management has the responsibility to implement this document Safe Work Practices on "Work Permit System & Risk Assessment"

CEO & DCEO's:

The CEO / DCEO's shall ensure that suitable, sufficient personnel and financial resources are available to enable the business to gain an appropriate level of assurance that HSSE risks are being effectively managed through the Work Permit System & Risk Assessment.

All Managers / Team Leaders:

1. *Implement this procedure and ensure that the requirements of this procedure are communicated to all relevant personnel in KIPIC facilities.*
2. *Ensure that the guidelines and requirements set forth in this procedure are complying in all KIPIC facilities.*
3. *Ensure qualified and technically competent persons are executing this procedure.*
4. *Ensure that periodical audits are conducted to verify the compliance of this procedure.*
5. *Other responsibilities are explained in the various clauses of this document.*

All Employees:

KIPIC & Contractors Employees are responsible to ensure strict compliance at all levels to all clauses of the Work permit system & Risk Assessment.

6. HAZARD IDENTIFICATION AND RISK ASSESSMENT

Hazard Identification and Risk Assessment (hereinafter referred to as HIRA) is an essential part of the risk management process. HIRA is done in several forms and for various purposes at KIPIC.

The HIRA processes and procedures relevant to maintenance, construction, and related non-routine activities that are being followed at KIPIC are listed below.

6.1 ***OH & S RISK REGISTER:***

The basic form of Hazard Identification & Risk Assessment (HIRA), which considers all the activities (routine, non-routine, & emergency activities) with occupational health and safety risks (OH & S), how they are managed to risk levels, and how employees are protected from these occupational health and safety hazards of a particular craft / team, is the OH & S Risk Register.

6.2 ***SAFE WORK PRACTICES & GUIDELINES:***

Safe Work Practices, Guidelines specify hazards associated with specific activities and appropriate control measures to prevent exposure to hazards.

6.3 ***WORK PERMITS & AUTHORIZATIONS:***

The Work Permit system is the basic form of the risk assessment process (activity-based). Hazard Identification and Controls (Hot Work & Cold Work permits and Confined Space Entry & Excavation authorization) are a basic type of HIRA tool that aids in the determination of Hazard Identification and Controls for specific (Maintenance, Construction, and other non-routine) activities.

6.4 ***WORK PERMIT RISK ASSESSMENT (WPRA):***

Work Permit Risk Assessment (WPRA) is a form of HIRA that is applied to critical activities (Maintenance, Construction, and Non-routine activities). This will be carried out by a multi-disciplinary team.

The above-mentioned processes address a wide risk spectrum related to maintenance, construction & non-routine activities. A combination of one or more of these processes shall be applied for managing risks associated with such activities executed with work permits. The processes which are used in addition to Work Permits will be explained in the various sections of this document.

7. *ELECTRONIC WORK PERMIT SYSTEM AT KIPIC:*

An electronic work permit system is implemented at KIPIC sites. Whenever an electronic work permit system is not working / where not available, manual work permits should be used by following the below procedure.

- Take a screen shot of the message appearing on the system.
- Send it by e-mail to Team Leader through Section Head (or through Senior Engineer of the permit issuing team) and get his approval for using manual work permit.
- Users shall make necessary efforts to get the electronic work permit system restored as early as possible.
- For further details refer e-Work permit user manual.

8. WORK PERMIT REQUIREMENTS, TYPES & FEATURES

Work permits specify the hazards associated with an activity and prescribe controls / precautions to prevent exposure to those hazards.

Any maintenance, construction, or non-routine activity done by a person (KIPIC employee or contractor) who is an outsider to the area (the area for which the asset custodian is another team) shall be done with a work permit only.

No work shall be carried out without a valid work permit and associated authorization unless the work or area has been declared permit-free (refer clause # 8.3)

8.1 WORK REQUIRING A PERMIT

A work permit is required for the jobs including, but not limited to the following:

8.1.1 Maintenance Activities (Mechanical, Electrical, Instrument, Civil etc.)

8.1.2 Construction, Alterations / Modifications and Project works & working on fragile roofs.

8.1.3 Process equipment cleaning activities.

8.1.4 Inspection and condition monitoring.

8.1.5 Vehicle/mobile equipment entry into Hazardous Areas.

8.1.6 Underwater maintenance, Marine construction.

8.1.7 Hydro testing / pneumatic testing of piping & equipment, confined space entry & painting at yards (except painting yard) and workshops shall not be classified as routine activities and they shall be done only with appropriate work permits and other applicable processes.

8.1.8 Painting inside buildings (irrespective of elevation) requires work permit.

8.1.9 Non-routine activities in workshops, warehouse, etc. other than those excluded under clause # 8.2 (e.g., Building modification Civil / Mech./ Elect / AC work in these buildings) etc.

8.1.10 Any non-routine activities carried out by operational personnel.

8.1.11 Other activities serving the Refinery / LNGI operations and Jobs under KIPIC control executed outside KIPIC facilities.

8.2 WORK NOT REQUIRING A PERMIT

A work permit is not required for the following routine activity when carried out by the respective craft:

8.2.1 Routine activities are carried out in workshops, site offices, and adjacent yards with fixed boundaries (including contractors).

8.2.2 Routine activities (Materials handling) in well-established warehouses and adjacent laydown yards with clearly defined boundaries.

a) If the employees (KIPIC/Contractors) of workshops, warehouses, and yards do the routine work, the following requirements shall be fulfilled:

- A list of routine activities to be identified
- All routine activities shall be subjected to Hazard Identification, Risk evaluation with Determining Controls process by incorporating them in the concerned team's OH & S Risk Register; the control measures determined shall bring the risks posed by the hazards to an acceptable level.
- Roles and responsibilities for implementing identified control measures (including supervisory responsibility) shall be clearly defined.
- Personnel executing routine activities shall be made aware of the hazards posed by the activities and associated risks and made competent for the implementation of identified control measures as indicated in the OH & S Risk Register.
- Proper implementation of control measures shall be ensured by the asset custodian team.
- Standard Operating Procedures shall be prepared and utilized wherever necessary.
- A comprehensive audit program to verify compliance with the control measures as mentioned in the relevant OH & S Risk Register shall be established.
- In the event of the addition of any new activity, the OH & S Risk Register is to be updated.

b) In the case of work execution by a contractor engaged by the asset custodian team of workshops, warehouses, and yards, buildings the KIPIC Work Permit system shall be followed.

- The "contractor" stated in the above (paragraph b) does not mean a regular contractor; it specifies those contractors who are engaged temporarily (for example, contractors engaged for scrap removal).
- Before commencing the work, such contractors must be properly trained on HSE procedures and the work permit system (including work permit executor training).

8.2.3 Routine office work, cleaning, servicing of office equipment, communication equipment, and furniture.

- Personnel performing cleaning with cleaning agents and equipment, as well as servicing of office equipment, communication equipment, and furniture (without the use of power tools), shall carried out with implementation of proper control measures identified in their OH & S Risk Registers.
- They shall be made aware of hazards posed by the work and associated risks and made competent in the implementation of identified control measures as indicated in the OH & S Risk Register.

8.2.4 Maintenance - Cold work in buildings but only in non-hazardous areas that does not exceed climbing of ladders or scaffolds over 2 meters. re-lamping, servicing of air conditioners, and painting using hand tools.

- Personnel performing such activities shall follow the proper control measures outlined in their OH&S Risk Register.
- They shall be made aware of hazards posed by the work and associated risks and made competent in the implementation of identified control measures as indicated in the OH & S Risk Register.
- Standard Operating Procedures shall be prepared and utilized wherever required.

8.2.5 Visual inspection or checking without using any tools in operation areas with verbal permission of the respective asset custodian (Operation Controller) and names, purpose of visit, etc. must be logged in the unit visitor logbook which is maintained in MOB's (if such activities involve confined space entry, confined space authorization is required).

8.2.6 Formalized paraphrase If vendors or external parties conduct visual inspections or checks, they must be made aware of KIPIC emergency response procedures and must carry personal H2S monitors. Additionally, an employee of the team who invited the vendor/external party must accompany them.

8.2.7 Activities performed by Operations Group personnel as part of their routine and operations, start-up, and shutdown (e.g., operating valves, pumps, and so on) in accordance with the operations manual and OH & S Risk Register

8.2.8 Any other activities approved by KIPIC's respective Safety team as permit-free Upon written request from the concerned team.

8.3 WORK PERMIT FREE AREA

- Work carried out in areas designated as 'Work permit free area' by written approval from KIPIC Respective Safety Team. Request for approving an area as "Work Permit permit free area" shall be accompanied by details as required by KIPIC Safety, to enable declaration of the area as 'permit free'.
- Asset custodian division shall.
  - ensure continuous supervision in areas designated as 'work permit free'.
  - shall decide level of supervision for the activities and the availability of safe work procedure which will be followed in the areas designated as 'work permit free'.

However, all Medium & High-Risk activities shall be carried out with valid work permit and other related documents.

8.4 TYPES OF WORK PERMITS & AUTHORIZATION

There are two types of work permits at KIPIC, each with specific colors assigned for easy identification. Other "Associated Authorizations" are also required depending on the nature of the work / activity.

a) **Cold Work Permit** (Green Colour Permit) is required for any activities that does not involve the use of or generate a source of ignition (Refer Annexure - C).

b) **Hot Work Permit** (Red colour permit) is required for any activities that involve the use of or generate a source of ignition capable of igniting a flammable mixture or combustible material (Refer Annexure - E).

Other authorizations as explained below.

c) **Confined Space Entry Authorization** (Yellow colour authorisation) is associated with work permit for personnel entry into a confined space (Refer KIPIC HSE document on "Safe Work Practices on Confined Space Entry").

d) **Excavation Authorization** is associated with work permit for excavation work (Refer Safe work Practice on "Excavation").

e) Other authorizations, such as Temporary Hose / Electrical connection authorization, Hot tapping authorization, etc. must be obtained in accordance with KIPIC Procedure.

8.5 FEATURES OF WORK PERMIT FORM

The features of the electronic work permit system and the manual work permit system are given below.

8.5.1 Electronic Work Permit System (e-Work Permit System)

- Two copies (one executor copy to be displayed at the work site & one field operator copy to be retained at the field operator shelter) to be printed.
- The Issuer and Safety Engineer can access the issued work permit through the Maximo system as and when required.

However, in the event of non-functioning of the electronic work permit system, manual work permit forms can be used.

8.5.2 Manual Work Permit System.

Printed Work Permit form consists of the following features:

The Original and 3 copies

- Original marked "DISPLAY AT WORK SITE" (belongs to Executor)
  - 1st copy marked "Field Operator copy/File copy"
  - 2nd copy marked "Safety copy" (inserted in the permit box)
  - 3rd copy marked "Issuer copy"

The following details will appear on the work permit form:

- Printed serial number (max. 45-6 digits) on the top left-hand corner (When serial # exceeds 99999, new series should be started)
- Latest revision date of the permit form on the lower left-hand corner
- Arabic translation of the English text side by side, General and Special Conditions of the permit on the back of the form (Reannexed - D and F).
- Instructions on "HOW TO FILL WORK PERMIT FORM" in English with Arabic translation is available in Annexure - G.

9. WORK PERMIT SIGNING REQUIREMENTS

The eligibility and training requirements for personnel eligible to sign a work permit are described in the following clauses.

9.1 REQUIREMENTS:

9.1.1 Respective Team Leaders are responsible for ensuring that all nominated personnel are technically competent and experienced enough to fully understand the potential hazards of the work/activity and site.

9.1.2 To ensure competence and compliance with contractual requirements, all contractor employees shall be approved by their custodian teams related to their job functions.

9.1.3 Team Leaders shall also ensure that executors sign and execute only work permits related to their craft. i.e., A Mechanical supervisor / Foreman can only sign off on Mechanical-related work that is not related to electrical or Civil work, and a Mechanical Maintenance / Construction personnel cannot sign as an executor for lifting / scaffolding activity. Craft Specific Supervisor / Engineer only can execute the activities.

a) **Has basic Safety knowledge:** Attend training courses as defined in the KIPIC "Procedure on Development, Delivery, And Monitoring of HSSE Training", which should generally cover *HSSE Induction, PPE & Hearing Conservation Program, KIPIC Safe Work Practices, Work Permit & Confined Space Awareness, Hazard Identification and Work Permit Risk Assessment, Site Emergency & Evacuation, Basic Fire Fighting, etc.* as per the mandatory HSE training matrix.

b) **Has Craft Specific (Executor) Safety knowledge:** Attend training courses covering the safety aspects (SWP) of an employee's craft. They shall be fully conversant with this procedure, confined space entry, PPE and other KIPIC HSE documents relevant to the craft.

c) **Is technically competent** (qualified and experienced) to fully understand the potential hazards of the work, the site conditions under which it will be performed, and the safety requirements. The executor of the work permit must be of the same craft as the one for which he is signing the work permit.

9.2 TRAINING & CERTIFICATION

- The HSE Group shall train the employees on "Work Permit Authorization" and conduct tests to certify the nominated person to sign the work permit.
- Defined prerequisite training (Refer # 9.1.3 a) for work permit authorizations shall be conducted by contractors for their employees.

- The validity of certification shall be a maximum of 3 years for KIPIC / Secondment / Contractor employees. Acting personnel can also be given temporary authorization for the acting period as per the respective group Manager's request.

9.3 OTHER REQUIREMENTS

- If a certified person is transferred to another team or company, their certification will remain valid, provided the change is endorsed by KIPIC HSE Group.
- Each Team's leader office shall maintain a record of certified issuers and executors and apply for timely renewal or new authorization. KIPIC HSE Group/HSE Technical Support shall maintain a central database of work permit training and issuance of authorizations.
- KIPIC Operator-I (Oprn.), KIPIC Foreman (Maint.), including secondment personnel, maintenance contractor foreman, and project contractor foreman, shall be the lowest level to sign a work permit as Issuer/Executor.
- Both Issuer and Executor shall ensure that in work permit all relevant sections from 1 to 4 have been properly filled before signing section 5.
- In case, if the issuer and executor disagree on safety compliance, it should be raised with KIPIC site Safety (e.g., inadequate preparation before hand-over of equipment, permit conditions such as specifying excessive protective measures).

10. LOW RISK, MEDIUM & HIGH-RISK ACTIVITIES

10.1 LOW RISK ACTIVITIES:

Any works / activities (maintenance, construction, and non-routine activities) with a potential risk level of "Low" as defined in the Risk Assessment Matrix provided in Clause #21.8 of this document. Such activities shall be executed with the appropriate type of work permit.

10.2 MEDIUM & HIGH-RISK ACTIVITIES (CRITICAL ACTIVITY):

The following activities are considered as Medium & High-risk Activities.

a) *Any Works /activities (Maintenance, Construction, and Non-routine activities) with a potential risk level of "medium/high" as defined in the Risk Assessment Matrix given in Clause # 21.8 of this document and*

b) *Works (Maintenance, Construction & Non-routine works) with hazards whose consequences are most severe even though the 'likelihood' of such hazards causing an incident is low. A list of such predetermined works is listed in clause. # 21.1.*

Such activities require a WPRA (as explained in clause # 21 and other KIPIC Procedures) in addition to the appropriate type of work permit and authorization.

11. GUIDELINES FOR PROJECT CONTROLLED FENCED AREA:

This section is intended to give guidelines for declaring any project construction area that is within existing Refinery or LNGI facilities as a project-controlled fenced area. However, this guideline does not cover the finalization of the location of project-controlled areas within KIPIC.

11.1 CRITERIA FOR DECLARING A CONSTRUCTION AREA AS PROJECT CONTROLLED FENCED AREA:

To declare a project-controlled fenced area, the following criteria shall be applied:

The fence for the new construction area shall be located at least 15 meters away from the battery limit of existing operations units or from any vessel/ equipment containing hydrocarbons and/or any other flammable material.

A detailed risk analysis, as mentioned in clause # 11.2 of this procedure, shall be conducted. This risk analysis shall identify all hazards arising from:

- Activities in the Projects construction area that will have an impact on the nearby operations unit(s).
- Activities in nearby operations unit(s) that will have an impact on the Project's construction area.
- During the risk analysis, the risk associated with each of the identified hazards shall be evaluated and appropriate hazard control measures (to reduce the risk to an acceptable level of LOW) shall be determined for all the hazards. All the identified hazards & control measures shall be properly documented.
- A structured checklist shall be prepared & used to force the examination of all hazards. (A guidance checklist is provided in Annexure - A).
- Before declaring the area as a project-controlled fenced area, risk analysis findings must be considered in addition to the minimum 15-meter distance criteria. Any

decision to increase the 15-meter distance can be taken by the risk analysis team based on the risk analysis findings.

- In case the project construction area is within 15 meters distance from the nearby operations unit(s) battery limit, then the area shall not be declared as a project-controlled fenced area and the operations asset custodian team shall issue work permits for all the activities.
- If the project area falls within pipe racks or near IRT lines, then the same can be addressed specifically by the Risk Analysis team; a decision to declare it as a fenced area will be taken by the Risk Analysis team. Based on the risk analysis findings, work permit issuers can be decided by the team. If the team decides to use the Asset Custodian team as the work permit issuer, operations shall countersign.
- Facilities close to the project construction area which is to be declared as fenced areas may also contribute to mutual risk (for example, yard, storing flammable or explosive material, buildings, portacabins, etc.). Therefore, the respective custodian/s shall also be invited to participate in the risk analysis by the initiator of the risk analysis process (i.e., the Concerned Asset Custodian team) and the risk posed by and to those nearby facilities shall also be considered during the risk analysis.

11.2 RISK ANALYSIS

- A team consisting of representatives (at the level of senior engineers) from operations, Asset Custodian, HSE Teams, Security & Fire, Engineering Services, concerned PMC / EPC Contractor Manager, etc. shall conduct the risk analysis.
- Concerned Asset Custodian team shall initiate the risk analysis process. The Team Leader of the concerned/adjacent Operations team shall head the risk analysis team and approve the risk analysis. The Asset Custodian team shall explain the complete details of activities that are to be carried out inside the fenced area to the Operations team.
- A guidance checklist is given in (Annexure-A) of this procedure. All the applicable hazards in the guidance checklist shall be considered for determining appropriate control measures. In addition to the hazards mentioned in the checklist, additional hazards which may be applicable to a specific location/situation shall also be identified and added during the risk analysis meeting.

- For all Medium & High risks, appropriate risk mitigation measures shall be determined to reduce the risk to a low level.
- The risk analysis findings shall be properly documented, signed by the team leader and all the members, and retained for reference during work permit issuance and other safety and risk reviews. The risk analysis report format is available in Annexure-B.
- In case the project location is shared by or close to more than one operations area, representatives from all Operations areas shall also be part of the team. Concerned Team Leader, Operations of the proposed team shall decide and coordinate with other shared custodians for attending the risk analysis meetings.
- In case the project location is shared by or close to more than one operations area, representatives from all Operations areas shall also be part of the team. Concerned Team Leader, Operations of the proposed team shall decide and coordinate with other shared custodians for attending the risk analysis meetings.
- The coordinates of the fence shall be marked by Asset Custodian Team and to be verified by the risk analysis team during site visit and recorded in the risk analysis report. After the completion of risk analysis, a clear drawing showing the layout of the fenced area and nearby operations unit/s to be issued for future reference by the Asset Custodian team.
- To evaluate changes in hazards, the risk analysis shall be reviewed periodically (not later than 3 months) or whenever a change in process/ operations occurs. The same shall also be reviewed following any lessons learned from incidents in the fenced area. The concerned Asset Custodian team shall initiate this task. Any other member of the team can also bring this to the notice of the Operations asset custodian once in 3 months.
- Location, type & requirement of fixed continuous gas monitors along the fenced area shall be identified during risk analysis. The monitors shall have a local hooter & flasher.
- Risk analysis team to determine the number & location of emergency exits from inside the fence. A minimum of two exits (with heavy vehicles access) shall be available.
- Hazard control measures shall be categorized as those to be implemented before and after declaring the area as a project-controlled fenced area. The risk analysis team shall conduct an audit to check for mitigation measures implementation before

erecting the fence. Then the team shall conduct an audit to check for mitigation measures implementation once a month.

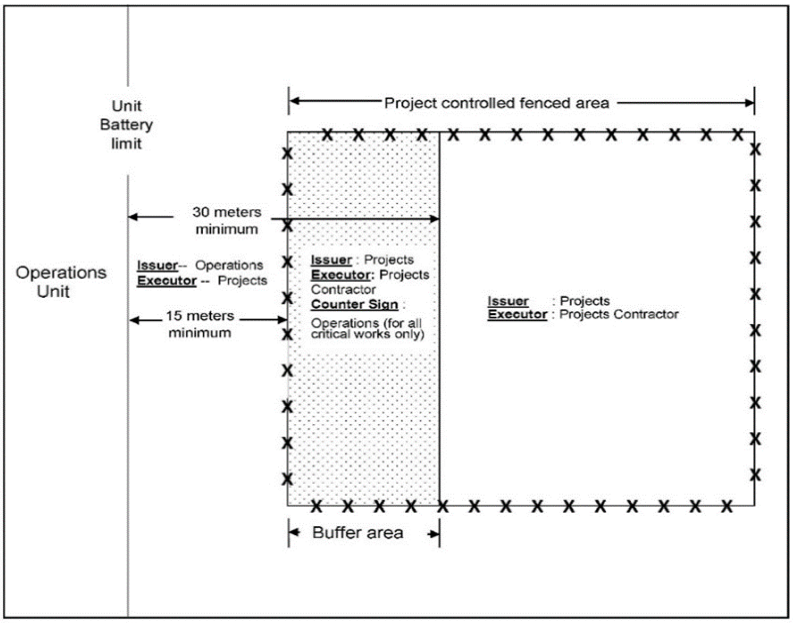
- This risk analysis is only a tool to decide whether a project construction area in the KIPIC facilities can be declared as a project-controlled fenced area.
- For individual critical activities carried out as part of the project activities (whether inside or outside the fenced area) Work Permit Risk Assessment (WPRA) shall be carried out separately.
- While doing WPRA for critical activities, this risk analysis shall be referred for additional control measures.
- In the Work Permit Risk Assessment of critical project activities (outside the fenced area & for jobs whose work permits will be countersigned by operations inside the fenced area) participation of the operations representative (of the nearby operations unit/s) shall be ensured.

11.3 WORK PERMIT ISSUING AUTHORITY INSIDE & NEAR AREAS DECLARED AS PROJECT CONTROLLED FENCED AREAS:

For construction areas declared as project-controlled fenced areas, the following procedure shall be considered for deciding the work permit issuer (refer Clause # 11.4.1 - Table # 1).

- Based on the below table, the permit issuer shall be decided. All the procedures as mandated by the HSE documents and "SWP on Work Permit System and Risk Assessment" shall be followed for all the activities carried out inside the Project controlled fenced area.
- In case the project construction area is near to more than one Operations unit, then Manager, Operations will decide the work permit issuer. Even if permit is issued by one area, countersignature from other operations areas (which are close to the project area) is mandatory.
- The concerned Operations Team personnel shall issue the work permit for the erection of fence / removal of fence.

11.4 WORK PERMIT ISSUER / EXECUTOR FOR PROJECT CONTROLLED FENCED AREA ACTIVITY



11.4.1 Work Permit Issuer/ Executor for Project Controlled Fenced Area Activity - Table#1.

#	Distance	Issuing Authority	Counter Signature	Executing Authority
1.	Within 15 meters from the edge of the unit battery limit to fence or the distance determined by the Risk Analysis team (RA team) whichever is higher.	Operations	*Asset Custodian Team (Controlled fenced area)*	*Contractor Supervisor or Above*
2.	Between 15 to 30 meters from the edge of the unit battery limit to fence. a. Outside of Project fence (Open Area)	Operations	*Asset Custodian Team (Controlled fenced area)*	*Contractor Supervisor or Above*
	b. Inside fenced area	Asset Custodian Team	*Operations (for all critical activities)*	*Contractor Supervisor or Above*
3.	Beyond 30 meters from the edge of the unit battery limit (inside the fenced area).	Asset Custodian Team	*No counter signature*	*Contractor Supervisor or Above*

11.5 REQUIREMENTS OF WARDEN, WARDEN'S QUALIFICATION & RESPONSIBILITIES:

The TL of the asset custodian executing that project shall assign a warden for each fenced area, who shall communicate any emergencies within the fenced area to the Operations/Emergency Dispatch Centre (EDC), etc.

A person assigned with the Warden duty shall be available on duty during the period for which work is carried out inside the fenced area. During off-hours when personnel is not present, the requirement to keep a warden can be decided by the risk analysis team. Warden's contact number shall be distinctly displayed in the controlled fenced area and informed to EDC. The unique contact number shall remain the same.

Warden's Qualification:

- He shall be able to read & write English and shall have a working knowledge of languages spoken by the working crew.
- He shall be conversant with the evacuation routes and way to the nearest assembly point.
- He shall be conversant with the Risk Analysis findings (the Risk Analysis done for declaring the area as Projects Controlled fenced area) and shall be conversant with the WPRA process.
- He shall know the roles & responsibilities of the Evacuation Group Leader.
- He shall have attended the following HSE training.
    - Site Emergency Evacuation Plan (SEEP) Training.
    - Basic Firefighting Training.
    - Work Permit awareness training.

The personnel possessing the above qualifications shall be evaluated approved by Asset Custodian Team/group Safety Team as Warden.

Warden's Responsibilities:

- The personnel designated as wardens shall be available continuously in the fenced area, know the emergency procedures, and communicate any emergency immediately to EDC.
- Emergency to be communicated to EDC through emergency number (170) hotline and to other locations through available means of communication.

- The warden shall discharge the duties & responsibilities of the evacuation group leader for those working inside the fenced area.
- In case the assigned warden needs to leave the area at any point of time, he/she shall relieve his/her job to an alternate person, who is similarly trained. The warden must have a megaphone with a hooter. The hooter tone shall be different from other siren tones.

11.6 OTHER REQUIREMENTS:

11.6.1 Construction Signboard shall be installed at the entrance of project fenced area showing project details, warden's name & number, and emergency contact numbers of contractor and Asset Custodian Team / Group. Contact details of the Team Leader of the Asset Custodian responsible for that project work shall be made available to EDC & all concerned teams.

11.6.2 Whenever there is any deviation in the normal functioning, such as process upsets, shut down, maintenance, etc. that may lead to the formation of a hazardous atmosphere, the same is to be informed to Asset Custodian by operations team. Refinery Shift Leader or the concerned Section Head of the Operations Area or his delegate shall communicate the same immediately to the warden of the fenced area and advise stoppage of activities and safe evacuation of the site as necessary in the project fenced Area. This shall also be communicated to the Asset Custodian team Safety Engineer / Refinery Area Safety Engineer.

11.6.3 Requirement of an audio-visual alarm system (beacon/hooter), in the fenced area to alert those working in the fenced area in case of plant upsets, emergency, etc. to be decided by the risk analysis team.

11.6.4 In case Asset Custodian Team intends to modify or cut the fence at any time, it shall be informed to the operations asset custodian. Asset custodian shall give written concurrence after ensuring that the 15-meter distance criteria is not violated and after conducting a review of the risk analysis.

11.6.5 The requirement of a hotline telephone connection between the Construction area and Operations / EDC for communication of emergencies shall be decided by the risk analysis team. Other communication modes such as radio, intrinsically safe mobile shall be used.

11.6.6 Asset Custodian Team representative shall be called by Operations to attend the daily Operations area meeting of the unit/s adjacent to the fenced area and based on the requirement, whenever any activities that may have an impact on the fenced area are planned. Also, Asset Custodian Group representatives shall attend the above-mentioned meeting whenever any activities that can affect the safety of the nearby unit/personnel such as radiography, hydro blasting, hydro test, pneumatic test, grit blasting are planned. Asset Custodian Team representative shall inform the same to Operations during the meeting.

11.6.7 Refinery Area Safety Engineer shall attend the daily Operations area(s) meeting of units adjacent to the fenced area and be aware of the activities planned for the day. If there are any activities that can affect the safety of the activities conducted in the fenced area, the same shall be brought to the notice of the concerned Asset Custodian Group / Team Safety Engineer by the Area Safety Engineer.

11.6.8 Assigned safety engineer shall make periodic visits to the project fenced areas based on the criticality of the job and satisfy himself on the safe execution of the jobs. Also, he shall satisfy himself on the safe execution of jobs at locations where project related jobs are done, either inside or outside the fence.

11.6.9 Refinery / LNGI area safety engineer shall make periodic visits based on the job criticality outside the fenced area where Projects jobs are executed and satisfy himself on the safe job execution. Also, the Area Safety Engineer shall make periodic visits inside fenced area up to 30 meters from battery limit and satisfy himself on the safe execution of jobs. They shall stop the job if they find that it will affect safety. Project assigned Safety Engineer & Refinery / LNGI Area Safety Engineer can do joint inspection on PD fenced areas once in 15 days.

11.6.10 Windsocks shall be installed in locations close to the fenced area if one is not already available in a visible position.

11.6.11 All Project employees & contractor personnel working inside & outside the fenced area shall be trained on emergency evacuation procedures & mock drills shall be conducted. The operational area should always be kept clear for firefighting purposes and access for Fire tender if needed.

11.6.12 Asset Custodian team shall explain complete details of activities which is to be carried out inside the fenced area to the Operations Team.

11.6.13 The Risk Analysis team shall decide the requirement of portable fire-fighting equipment inside the fenced area (type, number & location).

11.6.14 The fenced area shall not block the evacuation route of the nearby operations unit/s or other facilities; if blocked alternate routes shall be identified & a diversion board shall be installed.

11.6.15 A signboard indicating the location of the fenced area, the location of the nearest assembly point, and the route to it shall be displayed at the entrance of the fenced area.

11.6.16 Asset Custodian team/group shall follow the distance criteria as mentioned in SHELL DEP 34.17.10.35 'Siting of Onshore Occupied Portable Buildings', for installation of Portacabins.

11.6.17 Key personnel working in the fenced area (the warden of the area and at least one person in every work permit crew) should be trained in first aid firefighting.

11.6.18 For those project areas which are inside the refinery but accessible from outside, KIPIC - fence specification shall be applicable for the external fence.

12. *GUIDELINES FOR GREEN FIELD WORK PERMIT SYSTEM:*

This section is intended to give guidelines for contractor work permit system for green field projects (Construction site outside the KIPIC controlled area but where KIPIC has a degree of control, a location free from hydrocarbon facilities, underground or above ground hydrocarbon carrying pipelines, vessels, equipment, and/or services such as electrical, instrumentation, telecom, network, cathodic protection, cables, or wiring, etc.,). In such areas, Contractor work permit system maybe be adopted in compliance to the requirement stated in clause 12.1.

12.1 GENERAL REQUIREMENTS FOR CONTRACTORS WORK PERMIT SYSTEM

Contractors shall develop their work permit system in line with KIPIC's SWP on Work Permit System & Risk Assessment and other applicable procedures.

Contractors are responsible & accountable for the implementation of approved HSEMS, WPRA, Standard Operating Procedures, Work Method Statement, etc.

Contractors Work Permit System Review & Approval:

The following is the process for review and approval of the Contractor Work Permit System:

- Contractor shall formally request Contract Custodian to organize a review Workshop on Work Permit System with stakeholders from HSE, Operations, Engineering, Maintenance, and other Concerned teams.
- Contractor shall present their work permit system and categorization of activities, hazardous identifications and risk mitigation interfaces, procedures, safe work practices, etc.
- Upon completion of the workshop, Contractor shall revise the Work Permit System and Risk Assessment Procedure. The revised procedure shall be submitted to the respective custodian group for review and approval.
- The respective group shall approve the contractor work permit system in consultation with stakeholders.
- Once the contractor's work permit system is approved by KIPIC, then all the permits will be issued by the contractor for the activities that are executed by the contractor/sub-contractor in green field.
- Contractor's work permit system shall be reviewed every 2 years, or earlier in case of any changes in company procedures or as recommended by the company.

12.2 KIPIC FUNCTIONS IN GREEN FIELD:

KIPIC employees from Major Projects / Representatives from PMC and Major Project Safety Engineer shall monitor all activities on a daily basis and conduct regular site inspections or audits to assess the compliance with control measures, permit conditions, and other safe work practices requirements.

The COMPANY representative, designated HSE personnel / coordinator or senior personnel (i.e., above unit supervisor/engineer's level) are authorised to suspend the activities and withdraw the Contractor's Work Permit, in case of any deviation / violation on work permit conditions.

12.3 WORK PERMIT SYSTEM WHEN GREEN FIELD CONTRACTORS WORKING IN BROWN FIELD:

12.3.1 For all activities, the KIPIC Work Permit System (Ref. Annexure-L Table # 3) shall be followed.

12.3.2 All work permits shall be countersigned by the respective Craft KIPIC Custodian Representative (Major Project Team / PMC).

12.3.3 Before signing the permit for any activity (low, medium, or high risk), the counter-signing person shall inspect the work site along with the executor.

12.3.4 Countersigning implies understanding the nature of the job and subsequent monitoring of site conditions during the work.

12.3.5 All counter signing persons shall comply with the requirements as defined in clauses 9.1 and 9.2, and also attend "Work Permit Awareness Training" and have a valid training card (Annexure-I).

13. WORK PERMIT ISSUER

13.1 ISSUING AUTHORITY:

13.1.1 Operation Area Issuers:

i. Operator I (Grade 14).

ii. Operation Controller (Shift Supervisor) or above are eligible to be authorized as issuers of all types of work permits in Operations areas.

iii. Control Room Operator / Operator II (Grade 13) are also eligible to be authorized as issuers for special circumstances such as shutdown subject to approval by respective site Operations Manager.

iv. Other than the above personnel, the operation manager may authorize the commissioning management support services / O & M Service contractors (operational personnel only) as issuers equivalent to the KIPIC designation.

13.1.2 **Other Areas / Buildings Issuers:** Other asset custodians or technical personnel in office buildings / Substation / FAR can be authorized to issue all types of work permits for their respective areas.

i. Shift Fire officer, Lab Shift supervisor and above

ii. Supervisor level or above of workshop, warehouse.

iii. Supervisor or above level person with technical background, designated as Asset Custodian for an office building /Substation / FAR etc.

13.1.2.1 **Electrical Substations / Field Auxiliary Room (FAR):**

- *Electrical substations/Field Auxiliary Room (FAR) within / near battery limit of Operations areas / Units:* Operations Controller (i.e., Operations Supervisor) will issue permit for maintenance work that have any actual or potential impact on Operations activity (e.g.: isolating pumps / compressors / Control panels). For other maintenance activities that do not have any impact on Operations (e.g.: painting the substation / FAR) will be issued by Electrical / Instrument Maint. However, Operations Controller will countersign the permit if such work affects the safety of the unit (e.g., Hot work inside substation).
- *Electrical Substations / Field Auxiliary Room (FAR) outside Operations areas / Units:* Electrical / Instrument Maintenance Team will issue permit for maintenance / construction activities. Operations Controller shall counter sign if the work affects the safety of the units.

13.1.2.2 **Shift Leader or Controller-I:**

- Shall issue permits for areas where the asset custodians are not designated / assigned (e.g., main roads, yards (scrap / salvage) etc.).
- He shall also issue permits for areas after the normal workhours and during weekend / holidays also when Asset Custodian / Permit Issuers is not available.

13.1.2.3 **Shift Safety Engineer:** Shall issue permits for work (only low risk activities) at buildings in non-operational area & other assets in non-operational area (except the roads), after office hours and during weekends / holidays when the asset custodian permit Issuer is not available.

- He shall not issue permits for excavation or similar work which can impact or suspected to impact any operation or custodian asset.
- He shall not issue any critical activities work permit.

13.1.2.4 Other than operational areas, the respective Custodian Group Manager may authorize the Commissioning Management Support Services, O & M Services, Maintenance Service Contractors as issuers equivalent to KIPIC designation.

13.1.2.5 *Only specifically authorized Maintenance Service Contractors personnel based on the justification provided by asset custodian will act as work permit issuers for low-risk activities only. Furthermore, the respective Team Leader shall maintain a list of work permit issuers and the same shall be reviewed and updated every quarter.*

13.1.3 Work permit issuers for controlled fenced area within the refineries / LNGI shall be determined in accordance with clause # 11 of this document.

13.1.4 If the activities affect or can impact the safety of adjoining / other unit / group, other affected unit / group issuer shall countersign the permit to indicate awareness of the job. (E.g., Work on Unit-A pipeline crossing Unit-B, supervisor of Unit-B also shall countersign in counter sign column).

13.1.5 Issuer's team: The team leader shall ensure the number of permits to be signed by one issuer in a day / shift does not hamper his primary duty of running the plant safely. If the issuers are overburdened with work permit issuance, other issuers, such as the shift controller (controller I) or the section head, should cover to ensure effective control of work.

13.1.6 The above-mentioned personnel shall satisfy the conditions in clause 9.1 and must complete work permit authorization training and have a valid authorization card.

13.1.7 In the case of multiple issuers at the same location, it needs to be ensured that all the issuers are fully aware of the various permits issued.

13.2 ISSUER & *FIELD OPERATORS* RESPONSIBILITIES:

13.2.1 The issuing authority is responsible for preparation and handing over of the equipment in a safe condition to perform the work. His signature as issuer implies understanding of the job, safe handover, and subsequent monitoring of site conditions during the work and return in safe condition after the work.

13.2.2 Issuer shall fill Sections 2 and 3 of the work permit form (Issuer may fill Section-1 and executor is to assist issuer in filling section 3c). Section 4 (A) of work permit shall be signed by an authorised gas tester not necessarily by issuing authority, but he shall ensure that gas test is carried out and section 4 (A) signed by authorised gas tester. (Refer Clause #16.2). Issuer may tick "Not required" or arrange necessary signatories for Sections 4 (B): Electrical Isolation (refer Clause # 16.3).

13.2.3 Issuer shall inspect the work site with the Executor before issuing the permit for all activities (low, medium & High-risk activities) during normal running of the units.

13.2.4 He shall inform EDC (170) about all critical activities (copies of Risk Assessment Reports shall be available with both Issuer and Executor) and he shall also inform EDC about road closures. EDC shall log it and inform KIPIC Safety team for further vigilance.

13.2.5 Immediately after signing, Issuer shall drop the safety copy in the box provided (if manual permit is issued). In case no box is provided, Issuer shall ensure handing over of safety copy to respective KIPIC Safety Engineer.

13.2.6 In case of electronic work permits, the Executor/ Issuer shall print two copies once the permit is active (After executor declaration), Issuer & Executor may not require sign the work permit copies since the permits are approved electronically.

13.2.7 **Field Operators**

- Shall read the work permit & check the site compliance to work permit conditions.
- Sign on original work permit with field operator copy (signing issuer copy is optional), sign the two hard copies (electronic Permit) and
- Shall retain the field operator copy / One copy (for electronic Permit).
- Field operators monitor the site conditions and executing team compliance to permit conditions. He shall check that site is accepted back in safe condition before the permit is closed. He shall register the work in his log.

13.2.8 All Field Operators shall have proof of valid "Work Permit Awareness" training card (Annexure-I) / HSE Training Passport.

13.2.9 Operator-II shall sign along with or in place of field operator for permits, where trip bypass or similar work are confined within control room / workstation. For any Trip Bypasses (Trip bypass procedure shall be followed).

13.3 OPERATION WORK PERMIT AREA

- For work permit issue purposes, Operation Work Permit area shall include.
  Unit battery limit area (usually marked by a yellow line or in some cases by fence around unit).

- Surrounding area at least 15 m from battery limit including surrounding roads, feed / product / other lines / cables feeding the unit beyond battery limit and IRT

lines unless they are assigned to another specific area. For work in Electrical Substations please Refer clause # 13.1.2.1.

- Scattered assets / facilities outside battery limit (such as utilities, flare systems) which are directly supervised by the Operation Controller.
- Operation assets outside KIPIC premises.
- Operation Manager shall ensure clearly identified boundaries between and beyond units and make each issuer aware of his work permit area.

13.4 ISSUERS FOR GREEN FIELD PROJECTS (ISSUING AUTHORITY):

EPC Contractor Supervisors or above in line with KIPIC.

14. WORK PERMIT EXECUTOR

14.1 EXECUTOR (EXECUTING AUTHORITY):

14.1.1 Authority to execute all types of work permits shall be granted to KIPIC Employees, Service contractor's (Maintenance / Operation & Maintenance, etc.), PMC, Major Projects EPC Contractor (in the case of projects) personnel at foreman level and above as executors.

14.1.2 Technicians can be considered for special situations such as shutdown, for cold work which is not related to opening of vessels, disconnecting lines in flammable or toxic service, radiography, hot work related to use of portable battery-operated instruments (vibration, thickness, multi-meters) and for vehicle entry.

14.1.3 Equivalent categories of other group personnel can be granted similar authority (e.g., Admin Services, KOC etc.).

14.1.4 Only authorized personnel shall be Executors. Respective team Team Leader shall maintain a live list of work permit Executors in his / her team by name & their signature. A list of authorized personnel shall be maintained by the team in their group/team website. This list shall be reviewed & updated every quarter.

14.1.5 Executing Team: Team Leader should ensure that each executor is not overloaded with too many permits, which can hamper effective supervision.

14.1.6 Contractor's personnel shall be considered as executors based on respective Manager's requests for authorizing Maintenance Services, PMC, and Project Contractor's, etc personnel equivalent to KIPIC Foreman or above as executors.

14.1.7 In case a contractor person is transferred from one company to another during validity period, the respective KIPIC Team may request HSE Group to continue using same certification with endorsement to the new company.

14.1.8 Contractor Column (In Section # 5) – The actual site supervisor of work performed by contractor (Contractor or Subcontractor person) shall sign this column to indicate understanding of permit conditions for compliance. He shall meet the conditions in sec. # 9. and shall attend Work Permit have valid "work permit awareness" training card (Annexure- I). Executor card is not required for the person signing this column.

14.1.9 Responsibility for safe execution of the job primarily lies with the KIPIC Maintenance / other executing team for all jobs carried out by them including those where contractor's personnel have signed as Executors.

14.2 EXECUTOR FOR GREEN FIELD PROJECTS (EXECUTING AUTHORITY)

EPC Sub Contractor's (Tier-1) Forman and above level in line KIPIC requirements.

14.3 EXECUTOR FOR BROWN FIELD PROJECTS (EXECUTING AUTHORITY)

EPC Contractor's Supervisors at or above the level in line with KIPIC requirements shall be authorized as executors inside and near-by operation areas (refer clause # 12.3 & Annexure-L).

14.4 EXECUTOR FOR PROJECTS CONTROLLED FENCED AREA:

Work permit executing authority inside & near-by areas of Project Controlled fenced areas - Please refer in clause # 11.4.1 Table -1).

14.5 EXECUTOR RESPONSIBILITIES

14.5.1 After checking the site, the Executor himself (not the deputies) shall request for a Work Permit / Authorization from the respective issuer, to carry out the work. He shall forward associated authorizations to the Issuer (for excavation, hot tapping, etc.).

14.5.2 Executor shall fill Sections 1 of the work permit form and assist the issuer in filling section 3c, Name of Fire watch & BA Attendant.

14.5.3 Adequate supervision shall be ensured for all jobs. The Executor of Critical Activities shall remain on the worksite continuously.

14.5.4 Executor shall not sign more than one critical work permit unless it is in the same location of vicinity.

14.5.5 Separate work permits shall be obtained for different crafts & jobs. A person with a valid executor card shall only sign permits for crew under his supervision.

14.5.6 Separate work permits shall be obtained for each critical activity.

14.5.7 He shall indicate the types of tools and equipment necessary for performing the work. He shall forward valid Safety Certificate for vehicles and engine driven equipment.

14.5.8 He shall ensure that, the tools, equipment and accessories are in good condition.

14.5.9 He shall apprise his workers about job (Brief Scope of Work & Exact Work Sequence), related hazards and mitigations measures through toolbox talk before start of the activity and provide proper PPE (personal protective equipment).

14.5.10 Once the issuer signs and issues the permit, the executor shall authorize it by signing Section 5 (Manual Declaration). His signature indicates understanding the requirements and compliance with relevant conditions specified on (both sides of) the permit.

E-Work Permit: Once the issuer signs and issues the permit, the executor shall authorize it by signing Section 5 (e-declaration), whereby the permit will be activated.

14.5.11 Executor shall take "Original" and "Field Operator Copy" (For manual work permit and both the printed hard copies in case of electronic work permit) to the field operator and obtain his signature before starting the work (signing on issuer & safety copy by field operator is optional in case of manual permits).

14.5.12 Executor shall display the permit at work site with associated authorizations in suitable manner and protected from direct sun and moisture. Annexure – J shows a sample of a permit display board as a guideline. Vehicle entry permit shall be displayed on the back of the windshield. If the nature of work involves moving from one place to another, (e.g., Thickness or vibration measurement) it shall be displayed centrally and shifted as the work progresses.

15. WORK PERMIT VALIDITY, TRANSFER RESPONSIBILITY, RECORD & SAFETY FUNCTION

15.1 VALIDITY PERIOD OF WORK PERMIT:

15.1.1 Maximum validity of the initial issue of a Work Permit shall be for the duration of the work / activity or until the end of the shift / workday, whichever is less. The issuer or executor shall not sign for a period of time that exceeds their working hours.

15.1.2 If the activity continues uninterrupted, the permit can be renewed twice (during normal running of the unit) provided that the job and surrounding area are reinspected, gas tests are repeated where appropriate, and each renewal is signed by all signatories on the original and field operator copy (signing issuer copy is optional) in case of manual permits.

15.1.3 In case of electronic work permits, the signature of the field operator shall be on both the copies after the renewal of the permit electronically by the issuer and executor. The renewal of a permit is a transfer of responsibility and an affirmation by the issuer/executor that conditions are safe to continue the work.

15.1.4 Work permit duration can be extended by more than one day subject to written approval from KIPIC's respective site safety team based on the following conditions:

a) ***During turnarounds****, if the work continues uninterrupted, time period up to which the same permit can be renewed (if there is no change in the scope of the job description) is based on the category of work (refer Table #2). Other requirements such as re-inspection of the job and surrounding area, gas tests remain the same.*

Work permit Extended Duration: *Table #2*

Low risk activities (works executed with a work permit only)	*Can be renewed on daily basis / shift wise up to a maximum of 7 consecutive days (including of first issuance) or up to the period the job description remains the same, whichever is less.* *Note: Renewal decision (for renewing more than 2 times and up to a maximum of 7 days) can be taken by the Controller (Permit Issuer) based on site conditions.*

Medium Risk Activities (works executed with a work permit & WPRA)	*Critical Activity work permit validity shall not exceed one day or 24-hour period.*
High Risk Activities (works which require work permit, WPRA.	

In case work permit is extended more than two times, 'Permit Renewal Sheet' (format given in Annexure-H) shall be used for renewal and recording gas test results and attached along with the work permit.

b) *The above conditions can be considered for implementation in new projects (projects controlled by fenced areas), Office buildings and other sites on a case-to-case basis subject to the approval from the respective Team Leader-Safety.*

c) *The above procedure is not applicable to Confined Space Entry authorizations. They can be renewed only twice after initial issue.*

d) *Extended duration of work permits (after first issue or after subsequent renewals) for tasks such as major turnarounds and major projects will be based on extended duration of shift hours of Issuer / Executor. In any case that renewal duration shall not exceed 12 hours.*

15.1.5 If work in hazardous area is not started or is stopped for over 2 hours for any reason (i.e., Shortage of tools / re-sources, climate etc.) the permit becomes invalid. It shall be renewed before starting or resuming the activity. However, the permit shall be closed if the activity / work is not started / resumed before the end of executor's workday. Non-hazardous area permits can be reused next workday without closing.

15.2 SUSPENSION OF WORK PERMIT:

- In case of an emergency, work shall be suspended, and validity of any work permit ceases in the affected area.
- Executor or his crew shall immediately stop the activity when a fire or emergency alarm is sounded, or accident of any kind occurs. Approval from the Incident Commander (definition as per KIPIC Emergency Response Plan - ERP) shall be obtained after necessary preliminary investigations, to resume such activities. The

Work Permit shall be renewed to resume the work after the fire or emergency is over.

- Issuer, his deputy or KIPIC Safety is authorized to suspend work and withdraw the Work Permit, if the Permit conditions or safe work practices are violated and/or if the site conditions have changed leading to a hazardous situation. Person stopping the work shall immediately inform the reasons for stopping to the Issuer/Executor or their superiors.
- If work is not started or is suspended due to safety reasons after a Work Permit has been issued, the work shall only be started or resumed after establishing safe conditions and renewal of the Work Permit.

15.3 CLOSING AND FILING

15.3.1 The objective of the work permit is to ensure a safe handover of the site. Both the copies of the electronic work permit shall be signed by the field operator and the closing shall be done electronically in the system by the Executor and the Issuer. In the case of manual permits, the executor, field operator, and issuer shall fill out and sign section # 6 (Permit Closure) on the "Original" and "Field Operator Copy" of the work permit after the completion of work or the end of the last renewal, whichever comes earlier (during closing issuer & safety copy is optional in the case of manual permits).

15.3.2 Executor and Field Operator Copies of different types of permits shall be filed separately in chronological (date) order in box files for future reference for at least one month (30 days) from the date of issue or closure. This is applicable to both manual and electronic work permits.

15.3.3 The "Executor copy (Original)" which belongs to the executor shall be filed and available with the KIPIC /Contractor supervisor in charge of execution of the job.

15.3.4 "Field Operator copy" shall be filed and available at the issuing office or CCB/CCR workstation (for manual work permits, filing or retaining of issuer copy is optional).

15.3.5 In the case of manual work permits, "safety copy" which has been dropped in the permit box by the issuer shall be collected by the Area Safety Engineer every workday and filed. A safety engineer is responsible for ensuring that the permit box is locked and not allowed to overflow. For activities inside fenced areas where

the Major Projects Group is the issuing authority, a safety copy of the permit is to be handed over to the Safety Engineer of the Major Projects Team of that area.

15.4 TRANSFER OF RESPONSIBILITY OF SUPERVISION

- In case the work permit issuer needs to leave the site, responsibility is transferred to another issuer by renewal of the permit.
- In case the work permit executor needs to leave the site at any time, the work shall be suspended until the responsibility is transferred to another executor of the same craft by renewal of the permit.

15.5 SAFETY TEAM FUNCTION:

Safety Team has an advisory and monitoring function. Hence Safety Engineers are not required to sign on the work permit unless he / she is the issuer.

He / She shall audit the work permit compliance on a daily basis, as per workload. The safety engineer shall write his/her site instructions in the safety log maintained at the issuer's office with date, time, and signature or issue an official memo.

16. SAFETY REQUIREMENTS, GAS TEST AND ELECTRICAL ISOLATION:

16.1 SAFETY REQUIREMENTS (SECTION - 3):

16.1.1 Operations or the asset custodian shall prepare the equipment for the safe execution of the work before handing it over to executors. The extent of preparation depends on the nature of work as described in other sections. Cold work (Clause 16.1), hot work (Clause 16.2), and confined space entry (Clause 16.3).

16.1.2 Operations or the asset custodian shall prepare the equipment for safe execution of the work before handing over to executors. The extent of preparation depends on the nature of work as described in other sections. Refer cold work (Clause 16.1), hot work (Clause 16.2) and confined space entry (Clause 16.3).

16.1.3 Issuer shall tick all items of Section 3 (A) (B) & (C) either 'Y' (Yes) or 'N'/'NR' (No / Not required) as applicable. Executor should assist issuer in ticking section 3(C).

16.1.4 Name of the fire watch / BA Attendant and others/ details shall be filled by executor and issuer shall ensure it.

16.2 GAS TEST FOR WORK PERMIT (SECTION - 4 A):

Gas tests are required for hot work and confined space entry. It may also be required for some cold work and excavations. Section-4 (A): Gas Test section of Work Permit shall be filled to record results of Combustible / Flammable vapour / Toxic Gases and Oxygen concentration as applicable to the location of work.

16.2.1 Issuer shall determine the requirement of gas test, the gases to be measured and frequency of repeating the test (intermittent monitoring) or the need for continuous monitoring. Minimum requirement shall be once at the beginning of Shift / Work. Detailed explanation of intermittent & continuous monitoring is given below.

A. ***Testing Requirement:*** *Continuous or intermittent (Re-test) gas testing is required when there is a likelihood of changing gas concentrations and / or there is a high risk to workers if the gas concentration changes unexpectedly.*

Continuous monitoring *of the atmosphere means uninterrupted (without stopping) monitoring using a fixed equipment or portable long-term continuous gas monitor.*

Intermittent (Re-test) monitoring *means testing at a predetermined frequency which is decided by the Issuer depending on the circumstances of hazards present. (e.g.: everyone hour). The device used for intermittent monitoring is generally the normal Portable Multi Gas Meter used for spot testing.*

B. Locations requiring continuous monitoring: *Continuous presence of gas can happen near Sewer basins, Effluent Treatment Plant areas, Effluent discharge outlets etc.*

This can occur due to trapped gases or due to process upsets / leaks etc. In such cases, continuous monitoring of the atmosphere will be necessary and the same will have to be mentioned as a condition in the work permit.

C. Portable continuous monitoring instrument: *It is available with Operations / Maint. Team. These instruments give visual as well audible alarms when high concentration of gas is detected. Such instrument shall be used and monitored when work is being done in areas where flammable / toxic gases can be continuously or intermittently present.*

D. Guidelines on operation of continuous Gas Monitoring:

- Gas tests shall be done, and results recorded in the permit at the time of issuing the permit.
- Thereafter, for intermittent monitoring, gas tests as frequently as mentioned in the permit shall be conducted by the Issuing authority and results shall be logged in the permit. If the rows of gas testing section {sec.# 4 (A)} of the permit are filled up, results shall be logged in a separate sheet showing the time, name of Gas Tester, location of testing and the readings obtained etc.
- After initial readings are taken, for continuous monitoring, Issuer and Executor can rely on the alarm and data logging capability of the portable continuous gas monitor.
- In the case of Continuous gas monitoring instrument, the identification details (number, make) shall be mentioned in the work permit.
- Portable continuous gas monitoring instruments shall be in strategic locations of work site considering wind direction, likely source of gas leak etc.
- Location, number of instruments needed for each location and need (if required) for change of position of the instrument at work site shall be explained to the Executing Authority by the Issuer.
- Location and number of portable gas monitors shall be decided based on the extent of work area and proximity to areas/ units where gases can emanate. This shall be jointly decided by the Issuer and Executor based on Risk Assessment.
- Executor and Gas Tester shall frequently check the readings of the instrument and confirm that it has not exceeded the limits.
- Issuer shall explain the actions to be taken during sounding of alarms to the Executor. Executor shall make this known to all members of the team and people working in the area.
- Executor may utilize the monitors available with Operations Group. However, for long term jobs as in the case of large projects, this shall normally be provided by Executing Group.
- Executor shall ensure continuous gas monitoring instruments have valid calibration. He shall also frequently check the life of battery.

- Whenever permit is renewed either in the next shift or next day, Issuer shall ensure continuation of the requirement of continuous gas monitoring.

Given below are pictures of types of Continuous Gas Monitoring Portable Instruments:



- An Authorized Gas Tester, who has been certified by KIPIC HSE Group and holding valid certification card (Annexure-I), shall carry out the gas test using an approved gas meter which is duly Tested, Calibrated & Certified. He/she shall check the meter in fresh air and keep it on before actual test.
- Combustible / Flammable gas / vapour is measured as a percentage of Lower Explosive Limit (LEL). For hot work, the reading at the point of work shall not exceed 1%, preferably 0%. For cold work without respiratory protection, breathing area Combustible / Flammable gas / vapour LEL shall be less than 10%.
- At least 13% Oxygen is required to obtain an accurate LEL reading from a catalytic combustible type of gas meter. Hence, these cannot give a proper reading in inert atmospheres (e.g., system purged with nitrogen or steam). *In such situations LEL gas meters with Infra-Red (IR) sensor for detecting flammable vapours shall be used or special test methods shall be adopted (as per instruction manual of the gas meter or lab analysis). While making available both types of LEL detectors (i.e., IR sensor type & catalytic combustion type) to the end users, they shall be made aware of the limitations of both the type of LEL detectors.*

i. **Major limitation of catalytic combustion type:** It will not show correct flammable gas / vapour concentration when oxygen is less than 13%.

ii. Major limitation of IR sensor LEL detector: It will not detect Hydrogen & Acetylene.

- Moisture/dust filter and/or liquid trap is required when measuring probe comes in contact with excessive moisture/dust and liquid to prevent sensor damage.
- Gas meters used for leaded gasoline shall be equipped with special filters to prevent damage to the sensor by lead resulting in reading errors.
- Gas tester wearing Self Contained Breathing Apparatus (SCBA) or carrying an escape mask shall test for Toxic gas if the presence of toxic vapour or gases is known or suspected.
- Temperature and humidity are related to each other and do not have fixed limits. Precautions shall be taken such as air conditioning, work time adjustment, or special clothing depending on each situation as per KIPIC HSE document on "Heat Stress Management Program".

16.3 ELECTRICAL ISOLATION (SECTION-4B):

16.3.1 Before a work permit can be issued, it is essential to ensure that the equipment / facility to be worked on is electrically safe by isolating power to the extent necessary for the safe execution of the authorized work.

16.3.2 Issuer, Executor and Electrical Maintenance personnel shall jointly decide the extent of isolation required (Refer KIPIC HSE document on 'Electrical Safety' for further details) and fill Section (4B) of the Work Permit for electrical isolation.

16.3.3 An authorized person from Electrical Maintenance shall isolate electrical power of the circuit/equipment to be worked on after obtaining a separate work permit *(Cold Work),* then close that permit. He shall sign section 4 (B) (i) of the subsequent work permit for the craft that will be working on the equipment/circuit.

16.3.4 The "Not required" option can be used when the isolation is not applicable (i.e., the work is not connected to an electrical power supply) or when the particular work requires the power to be ON (ex: vibration monitoring, instrument checking, etc.).

16.3.5 "DO NOT OPERATE" tag option shall be used when isolation by local switch is decided as adequate protection. Executing authority shall fill and hang this tag at the switch. There is no need of signature either by executor or authorised electrical

person in such cases in this section. (Refer KIPIC HSE document on Electrical Safety).

16.3.6 A MULTILOCK SYSTEM shall be used when different crafts are involved. This is the safest way of ensuring protection from electrical hazards. If only the electrical maintenance team is involved, they may use a single lock. After installing the locks and signing the permit, the keys of the locks shall be retained by the respective locking authorities until the job is completed.

16.3.7 Keys shall be transferred, and multi-lock signatures shall be renewed when the permits are renewed. When the work is finished, the executor must remove the tag / lock and close the permit. This circuit shall not be re-energized until the permit is closed.

WORK ON CATHODICALLY PROTECTED EQUIPMENT: Before any work is carried out on impressed current cathodically protected pipelines or tanks, prior notice shall be given to the corrosion team, who shall isolate the electrical current at least 24 hours in advance and bond/ground the equipment as necessary. Due to residence time, disconnecting the system will not immediately reduce the electrical potential to zero. No work shall be carried out until the corrosion team has declared it safe to avoid the risk of sparking and the consequent danger of fire.

For detailed procedure refer to KIPIC document 'Procedure for lock-out / tag-out of electrical equipment in KIPIC (KIPIC/MAINT/E&I/18/010 Rev 0).

17. COLD WORK PERMIT

A "Cold Work Permit" shall be obtained for all general work that does not involve activities related to hot work, i.e., the tools and equipment used or the work itself do not generate any spark. e.g.

a) Routine maintenance, inspection, and condition monitoring activities using non-sparking hand tools, intrinsically safe instruments, or explosion proof equipment.
b) Excavation by hand tools, erection of scaffolds and barricades, chemical cleaning, and use of air driven power tools which do not generate sparks during use.
c) Opening of process equipment such as, vessels, towers, pumps, compressors, heat exchangers, filters, tanks, etc.
d) Blinding (Spading), blanking, breaking of flanges and unions, tightening of flanges, hot bolting, tapping, cold cutting, hot work preparations, etc.
e) Industrial radiography uses ionizing radiation sources (excluding X-ray generators).

f) Cold cutting is done with cold cutting machines or hacksaws and running water on the cut.

g) Cold drilling using a pneumatic drill with running water at the point of drilling

h) A concrete chipper with hand tools and running water.

17.1 GENERAL REQUIREMENTS FOR COLD WORK (REFER ANNEXURE – D):

17.1.1 The executor shall ensure that no sparks are produced by the tools used (for example, a brass hammer, running water while concrete chipping, cold cutting, or cold drilling with a pneumatic drill).

17.1.2 The executor shall indicate to the issuer that his battery/electric-operated items are intrinsically safe or explosion-proof. The equipment shall be labelled with such certification (e.g., suitable for use in Class I, Div. 1 or 2).

17.1.3 If the work involves the release of flammable material, no hot work shall be allowed within a 15-meter radius. Already assigned hot work permits will be suspended.

17.1.4 If there is a job on or near any vessel under nitrogen purging, the operation or asset custodian shall arrange to display "Nitrogen Purging", or "Contaminated Area" text written in red on the warning board and tape barricade to stop entry within the contaminated area. The executor shall, on the advice of Operations, erect warning boards or red tape to barricade the area.

17.2 WORKING WITH RESPIRATORY PROTECTION IN OPEN AREAS / NEAR (NOT INSIDE) EQUIPMENT CONTAINING HYDROGEN SULPHIDE (H_2S):

When working in areas where toxic gas or vapour concentrations are higher than TLV-TWA or where toxic gas or vapour concentrations are expected to be higher than TLV-TWA, an "**Airline Respirator with an Escape Cylinder**" shall be worn. Any other requirement mandated by the KIPIC HSE document "Respiratory Protection Program "shall be complied.

17.3 WORKING WITH RADIOGRAPHY EQUIPMENT:

17.3.1 A Hot Work Permit is required when an ionizing radiation source is being used with non-intrinsically safe radiation measurement instruments. X-Ray generators that constitute a source of ignition, A Cold Work Permit can be used when using intrinsically safe instruments and radioactive sources other than X-Ray generators.

17.3.2 Boundaries based on the maximum allowable radiation level of 0.25 mrem/hr (2.5 micro-SV/hr) shall be defined and roped off.

17.3.3 All personnel shall clear the roped area. Work shall be scheduled when the number of people is at a minimum in the area, such as the weekend, night, or break times.

17.3.4 Adequate warning signs on the outskirts of the roped area shall be provided. Warning flashlights shall be provided for night radiography.

17.3.5 An authorized person shall announce the start of the job and the duration through the plant paging/PA system and monitor the radiation at the boundary limit during radiography.

17.3.6 An authorized person shall always be present on site in a safe area during radiography, and the equipment shall never be left unattended.

17.3.7 Employees who work with radiography equipment shall wear film badges and dosimeters. Dosimeter readings shall be checked prior to and following the exposure, in addition to weekly checks. All readings shall be properly recorded.

17.4 OFFSHORE-SEA ISLAND / LNGI PIER / SOLID PIER ACTIVITIES

17.4.1 Employees working on offshore / piers shall wear life jackets wherever proper working platforms with guardrails are not provided.

17.4.2 Any person other than those required for ship mooring shall not be permitted to remain within the roped area while a ship is moored.

17.4.3 Any employee working below deck and away from a proper platform must wear a safety harness with double lanyards and a lifeline, in addition to life jacket.

17.4.4 Life buoys with a 27 m (90 feet) rope line shall be available or arranged at the work location.

17.4.5 Diving: Issuer / Executor shall ensure that divers are qualified, trained and medically certified for diving and that their certifications are valid.

17.4.6 SCUBA diving should not be carried out between sunset and sunrise time (dark hours). In restricted water, such as beneath pier structures, either a lifeline or the buddy system must be used.

For more details, refer to KIPIC HSE document "Safe Work Practices on Marine Terminals and Offshore Activities".

18. HOT WORK PERMIT

18.1 GENERAL REQUIREMENTS FOR HOT WORK (REFER ANNEXURE – F):

18.1.1 The permit issuer is responsible for ensuring that the site and equipment (vessels, piping, etc.) are properly prepared to avoid the risk of fire and explosion involving flammable material.

18.1.2 The issuer shall ensure that the equipment is emptied, cleaned of flammable materials, and isolated from sources of hydrocarbons or flammable materials by means of disconnection, blinding, Isolation by closed valve is allowed only if there is no other possible way of isolation and this has been approved by the Risk Assessment Team.

18.1.3 The issuer and executor shall ensure that, within 15 meters of a hot work site, any sample point, drain, surface manhole cover, or relief valve outlets are covered to prevent the escape of flammable gas and vapours (sealed using flame-retardant tarpaulin, wet rags, or metal plate). They should also ensure that these seals are maintained in good condition.

18.1.4 If there are any open drains or ditches into which flammable liquid can escape, the same shall be dammed and pumped dry. Outlets of all unit drains shall be plugged to isolate them from the rest of the sewer system.

18.1.5 Authorized Gas Tester shall conduct the test for flammable gases (% of LEL) in a radius of 15 meters around the location of work. (Flammable gases / vapours concentration shall be 1% or less, LEL test is a must for all hot work including vehicle/equipment entry and use of battery/power operated ordinary equipment, which is not explosion proof or not intrinsically safe, in hazardous area.

18.1.6 Before hot cutting a long pipe, a cold cut or hole shall be made to test combustible gases, flammable gases, or vapours at the point of cut. Cold cutting should be the preferred option.

18.1.7 Issuer & executor shall ensure that, heavy oil deposits, dried vegetation, or other flammable/combustible materials within 8 meters of a hot work site are cleared.

18.1.8 To prevent the spread of sparks and molten metal, surround the work area with fire-resistant or flame-retardant tarpaulin or metal sheets (refer KIPIC SWP on Welding, Cutting, and Heating Procedure).

18.1.9 Proper ventilation and air circulation for the welder shall be ensured. The barricade may also be required to keep others from coming into direct contact with the welding arc.

18.1.10 Executor shall arrange water for quenching sparks or molten slag and minimum of 2 fire extinguishers within 8 meters from the place of hot work. Extinguishers, hoses, and nozzles in process area shall not be used for this purpose.

18.1.11 The executor shall ensure grounding/bonding to avoid static electricity (sand blasting, spray painting, refuelling, etc.).

18.1.12 The issuer shall inform the fire station (EDC–170) as per site, about all critical activities.

18.1.13 The executor shall ensure that the work area is made safe at the end of the Job / workday.

18.2 ENGINE DRIVEN MOBILE EQUIPMENT / VEHICLE ENTRY

18.2.1 A Hot Work Permit is required for the entry of any vehicle or engine-driven mobile equipment into hazardous areas (Division 2). Such areas shall be clearly demarcated with signs indicating "No Entry of Vehicles without Permit" and / or with removable chain barriers.

18.2.2 Cars, Buses, and other passenger transport vehicles that have been assigned or pooled are not permitted to enter hazardous areas. Only mobile equipment, lifting appliances, and vehicles used to load, or unload material are permitted.

18.2.3 The executor shall ensure that all vehicles and equipment are equipped with approved type exhaust spark arrestors and fire extinguishers with valid certification.

18.2.4 KIPIC owned or leased equipment / vehicles or contractor's vehicle / equipment shall have a safety certificate when applying for a permit to enter or use in Hazardous Area. Certificate (or copy) shall be available with the equipment / vehicle.

18.2.5 The issuer shall verify the validity of the safety certificate and indicate its number on the permit.

18.2.6 The driver should be given clear instructions on which route to follow, and the field operator's initials shall be obtained on the work permit before entering a hazardous area.

18.3 USE OF PORTABLE INSTRUMENTS

18.3.1 Electrical, instrument, inspection, condition monitoring, and some other activities require the use of battery-operated portable instruments (meters). User Teams should procure intrinsically safe instruments to carry out the work with a Cold Work Permit.

18.3.2 Equipment (which is not intrinsically safe) shall be treated as potential source of ignition. If intrinsically safe instruments are not available in the market, they can be used in hazardous areas with hot work permit.

18.3.3 Gas test shall cover entire area of use of such instrument. User of the instrument shall know the location of the nearest fire extinguisher. The requirement for a dedicated fire extinguisher, tarpaulin barricade, water hose, covering drains, etc. can be waived.

18.3.4 Users are recommended to carry personal LEL detector/alarm.

18.4 CONTROL OF IGNITION SOURCES:

Use of lighters, matches, non-intrinsically safe personal pagers, mobile telephones, cameras, calculators, and any other ordinary battery-operated appliances is prohibited in hazardous areas unless approved by the KIPIC Security Team and a Hot Work Permit is obtained.

18.5 OFFSHORE / OIL PIER HOT WORK:

18.5.1 In addition to the requirements in clause 14.5 and clause 17.4, a high degree of control and supervision is required to carry out hot work at the loading berths in the ports (Piers and Sea Island).

18.5.2 Hot work shall be prohibited within 30 meters of a ship being loaded, unloaded, or gas freed/inerted.

18.5.3 The issuing authority shall liaise with the captain if a ship has been berthed (but not engaged in loading or unloading) within 30m of the work site before authorizing hot work.

18.5.4 The frequency of monitoring for flammable gases shall be determined and portable continuous gas detector alarms shall be used if necessary.

For more details, refer to KIPIC HSE document "Safe Work Practices on Marine Terminals and Offshore Activities".

19. CONFINED SPACE ENTRY

"CONFINED SPACE" means space that meets all three of the following conditions:

i. Is large enough and so configured that an employee can bodily enter and perform assigned work.
ii. Has limited or restricted means for entry or exit.
iii. Is not designed for continuous employee occupancy.

Ex. Vessels, tanks, furnaces, heat exchanger shell open from one end or from both ends, culverts or excavations or pits or manholes or sewers or trenches … etc. deeper than 1.2-meter, entry on floating roof tanks when the roof is more than 1.5 meters down from the top, AC ducting systems, very large diameter piping and ducts etc.

Work within a confined space requires a Confined Space Entry Authorization in addition to the hot or cold work permit. Serial number of work and entry permits shall be cross-referred in each permit. (Refer Safe Work Practices on Confined Space Entry).

20. EXCAVATION AUTHORIZATION

a) An excavation authorization associated with the work permit is required for all excavations (refer KIPIC Safe Work Practices on Excavation for details). Copy of authorization shall be attached to the work permit. Serial no. of authorization shall be written against associated Excavation no.
b) A Cold Work Permit is required if non-sparking hand tools are being used for excavation and a Hot Work Permit if powered tools or mechanical equipment are being used (e.g., jackhammer, backhoe).
c) For excavations more than 1.2-meter-deep a Confined Space Entry Permit is also required.
d) **WAIVER**: In emergency situations (e.g., rupture of a pipeline), excavation activity may be required beyond the normal working hours or on weekends or holidays. In such cases, the shift leader can waive the requirement for obtaining an Excavation Authorization for carrying out urgent repairs.
e) He shall advise the issuing authority to issue a cold work permit without excavation authorization to contain the emergency. "Waived" shall be mentioned against "Associated Excavation. No."

f) He shall inform the concerned Operation Team Leader and KIPIC Safety. Shift Leader shall countersign on the relevant permits. No mechanical excavations are permitted in such cases except, for the removal of concrete or asphalt.

21. WORK PERMIT RISK ASSESSMENT

Critical activities as defined in Clause 10.2 shall be subjected to a "Work Permit Risk Assessment" (WPRA) where the risk level is medium or high. The risk assessment shall be done by a multi-disciplinary team, in addition to the work permit.

Work Permit Risk Assessment (WPRA) shall address (but not be limited to) the following hazards:

Location Specific Hazards

- Adjacent areas on which the critical work may have an impact.
- Non availability of emergency access / egress.
- Activities related to critical work impair the function / availability of safety systems & fire equipment (such as blocking access to eye wash safety shower, fire monitor, isolation valves & affecting emergency shutdown instrumentation).
- Inherent, introduced, and adjacent hazards (including configuration specific hazards) in case of confined space entries.
- Hazards associated with equipment / tools that will be used for the (maintenance & construction) activity.
- Hazards due to any simultaneous operations which occurring in the adjacent area.
- Other hazards which are not covered in SWP & Work Permit.
- Additional control measures to control / mitigate hazards for which the control measures specified in the SWP / work permit are not sufficient.
- Hazards and control measures that are not addressed in the SWP and cannot be addressed in work permits must be included in the WPRA.
- WPRA is specific to each critical activity. Combining of many critical activities into one WPRA is not permitted.

21.1 ACTIVITIES / CIRCUMSTANCES WHICH REQUIRE WPRA:

The following activities are classified as critical activities and hence require WPRA (Work Permit Risk Assessment) in addition to work permits and other authorizations/certificates (such as excavation authorizations and safety certificates) for their execution.

List of activities determined as critical activities (but not limited to):

21.1.1 All Confined Space / Inert Entry

21.1.2 Excavations:

- All excavations whose depth is more than 1.2 meter and excavations where live underground installations are detected / located are critical activities & require WPRA. Even excavations less than 1.2-meter depth may also be classified as `critical activities based on the site conditions by the asset custodian.

21.1.3 Hydro Testing & Pneumatic testing.

21.1.4 Hot Works in Operation Units

21.1.5 Hot tapping

21.1.6 Online leak arresting

21.1.7 Tie-in (by hot work) on hydrocarbon contaminated lines

21.1.8 Working at height over 6 feet fall possibility such as scaffold erection, de-Erection.

21.1.9 Working on pipe rack without working platform & without scaffold, working on crane with man basket & man lift.

21.1.10 For doing any work, such as opening flanges where there is a potential for oil spill/leak, injury to personnel, fire, explosion, exposure to toxic gases above TLV-TWA concentration.

21.1.11 Blinding in Process line & Hazardous system.

21.1.12 Lifting Activities (Simple, complicated & complex critical lifts as defined in SWP on Lifting Appliances & Tackles).

21.1.13 If the hazards associated with any activity (other than the above) are not known (and if the hazards covered by the work permit), then that activity shall be considered as critical work.

21.1.14 Any work which is not done before & which is not covered by any of the existing KIPIC Safe Work Practices / Guidelines.

21.1.15 Any other activity (other than the above) which is determined by the issuing team or executing team as critical work.

21.2 RESPONSIBILITY FOR CONDUCTING WPRA:

People who control or carry out onsite jobs, and use work permits to do so are the ones who should conduct a Work Permit Risk Assessment (WPRA). They shall be thoroughly and formally trained in all aspects of WPRA and be able to demonstrate full understanding and practical application.

a) **For Planned Activities:**

WPRA Team Composition for Planned Activities/Works	
Lead of the WPRA team	
Operation Section Head	For Operation Area
Senior Engineer of Executing Team / Custodian	For Project controlled fenced areas (under Major Projects team custodianship)
Senior Engineer of Asset Custodian team	For non-operations areas
Members of the WPRA team	
Controller – I / II	For Operations areas
Rescue Coordinator	For deciding rescue team requirement
KIPIC Safety Engineer	
KIPIC Engineer (Maintenance / Construction)	
Contractor Engineer (Maintenance / Construction)	
Contractor Safety Engineer or Contractor Safety Supervisor (if a Safety Engineer position is not available for the contract)	
Any other personnel considered necessary for the job (Decided by WPRA Team) Ex. PSM, Process, etc.	

b) **For Unplanned Activities:**

WPRA Team Composition for Un Planned Activities/Works	
Lead of the WPRA team	
Controller - I (Old title: Shift Controller)	
Members of the WPRA team	
Controller - II	Respective Operations areas
Shift Fire Officer	For deciding rescue team requirement
KIPIC Safety Engineer	
KIPIC Engineer (Maintenance / Construction)	
Contractor Engineer (Maintenance / Construction)	
Contractor Safety Engineer or Contractor Safety Supervisor (if a Safety Engineer position is not available for the contract)	
Any other personnel considered necessary for the job (Decided by WPRA Team)	

21.3 WHEN & HOW IT IS TO BE DONE AND COMMUNICATED?

- Work Permit Risk Assessment (WPRA) shall be prepared for all critical activities.
- Sperate WPRA shall be prepared for each critical activity.
- The execution team shall plan the activities well in advance and WPRA shall be done before the job is started for all critical activities (maintenance, construction, and non-routine activities), including those specified in clause # 21.1.
- A joint site visit by each/all members of the WPRA team is mandatory to identify site-specific hazards and situations and discuss options/alternatives. After the site visit, the team will meet and carry out the WPRA together.
- The executing team shall ensure the availability of competent (knowledgeable, trained, skilled, experienced) personnel for carrying out WPRA and critical work.
- WPRA Team shall ensure WPRA is carried out by competent people (who have the required knowledge to help with the process).
- The issuing team shall initiate the process by calling for a meeting of concerned people as given in clause # 21.2 and b.

- The Execution Team / Executor shall ensure that the work method statement is approved by KIPIC and the draft WPRA is available. The same shall be utilized by the team during site visit and meeting.
- The executor shall make a detailed step-by-step explanation of the work, a methodology-based approved method statement, which tools and equipment are to be used, the competency of the manpower to be employed, and to facilitate the identification of associated hazards by the WPRA team.
- The Risk Assessment Team is responsible for finalizing the hazards, as well as any additional hazards and mitigation.
- Respective team allot the reference number and fill in the risk assessment form. It shall be signed by all members of the team.
- The participating team members representing the participating teams, including the contractor safety engineer or safety supervisor (if a safety engineer position is not available for the contract), shall sign the risk assessment form.
- The WPRA Team's Lead (Section Head / Sr. Engineer) shall maintain the database for all completed Work Permit Risk Assessment forms.
- Once it is completed, the original (master copy) shall be filed by the custodian team and a copy shall be given to the issuers/execution team (Controller-I (Operations Supervisor) for Operations areas) for attachment with the relevant work permit.
- The issuer shall mention the risk assessment reference number on the work permit (on the right top corner above section-1 of the permit format).
- The leader of the WPRA team shall communicate to the permit issuer, the hazards identified with hazard control measures determined in WPRA. The member of the executing team who participated in the WPRA shall communicate the same to the executors/contractors.
- The executor shall conduct toolbox talk and inform the working crew of the following before the start of any critical work:
- Executor shall conduct a task specific toolbox talk including the following information prior to each activity in a language understandable by all the crew members.
  - Brief Scope of Permitted Activity, Exact Work Sequence.
  - Hazards identified in Work Permit Risk Assessment (if the Activity is defined as Critical - with Medium or High Risk), Existing & Additional Control Measures identified in Work Permit Risk Assessment.

- Each Crew Member shall provide their consent by signing the task specific toolbox talk form in acknowledgement of such understanding. (Refer annexure - N).
- Executor shall attach Copy of WPRA, and Toolbox talk and display it along with Work permit (Executor 's copy) at work site.
- The job shall be audited by a KIPIC Safety Engineer who has participated in the risk assessment or the Safety Engineer who is covering the area on the day of job execution.
- The issuing and executing supervisors have to ensure implementation of the hazard control measures determined in WPRA prior to the start of the job and throughout the duration of the job.
- The executor shall inform the lower tier work force of all hazards identified in the WPRA and shall ensure all control measures are implemented before starting the job and while executing the job.

21.4 WPRA REVIEW

- The WPRA review frequency for critical activities shall be decided by the WPRA team, but it shall not be exceeded by more than 3 months. The review frequency is limited to three months, but it shall be revalidated whenever any one of the conditions listed below occurs.
    - When the scope of the job changes / site condition changes,
    - When methodology of job execution changes,
    - When any new hazard (which is not identified during the WPRA) is identified during the job,
    - When any accident happens during the job,
    - As per the review frequency decided by WPRA team for long duration critical jobs (explained in the next clause).
- When the site conditions change or in case of any emergency, continued compliance with WPRA conditions shall be reconfirmed by the Issuer and Executor before recommencement of work.
- Prior to the recurrent permitted activity, the WPRA Master Copy shall be thoroughly reviewed, refreshed with the hazards identified earlier, and revalidated for current site conditions. WPRA shall be prepared each time when the work is being carried out.

- The filed master copy can be utilized in the future if the same job is repeated (without any change in job scope) for reference only.
- This may require more members from various disciplines than those who participated in the earlier WPRA.
- Even if there is no change in members, it is mandatory to redo the WPRA as the review will refresh the details about hazards and control measures, provide an opportunity to identify any changes in the site condition (i.e., work environment), and provide an opportunity to identify hazards which have not been identified earlier.

21.5 LONG DURATION CRITICAL ACTIVITIES - REQUIREMENTS RELATED TO WPRA:

- Long-duration critical activities are those critical activities that take a long time to complete (e.g., erecting scaffold inside storage tanks, tank reconstruction activities, erection of pipe racks, EPC contractors' activities, etc.).
- Any critical work that exceeds 4 weeks shall be declared a long-duration critical work. The WPRA team may declare certain critical activities which may be executed and completed in less than 4 weeks as "long-duration critical activities."
- For long duration critical jobs: WPRA will have two parts for long-duration critical jobs: Part-A and Part-B. Part-A will contain the actual WPRA, and Part-B will contain a WPRA compliance checklist, which will list the mitigation measures determined during the WPRA; this checklist will be used for verifying and ensuring mitigation measure implementation. The WPRA format is given in Annexure-K.
- The WPRA Execution team will prepare both Part-A and Part-B. The Issuer and Executor shall sign the WPRA checklist at least once every 7 days or as per the frequency decided by the WPRA team, whichever is less.

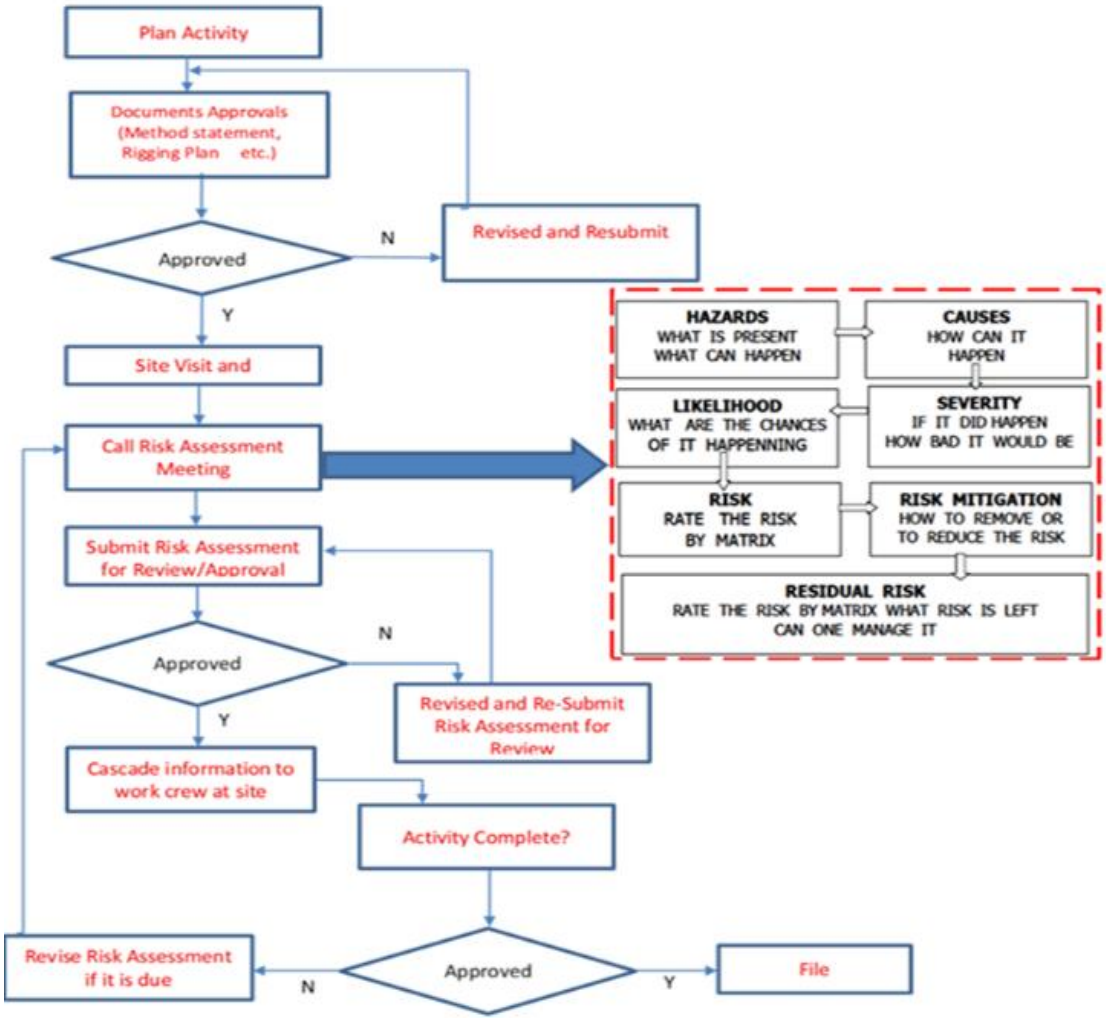
21.6 WPRA STEPS:

- Identify the hazards associated with the work as per the approved method of statement / critical task procedure and list them in the format.
- Assess the initial risk
- Put controls / safeguards (both preventive controls and mitigation controls) in place if the initial risk is "HIGH", and if the initial risk is "MEDIUM", a hierarchy of controls (Elimination, Substitution, Engineering Controls, Administrative

Controls, Use of PPE) shall be followed while determining existing and additional control measures.

- Re-assess the risk with controls in place (Residual risk)
- Confirm that the residual risk is 'LOW'
- The WPRA team shall ensure that the WPRA and Work Permit comprehensively identify and address all hazards associated (location specific hazards, hazards due to the competency of the working crew, hazards due to inability to comply with SWP requirements, if any) with the critical work.
- Members shall suggest / apply their experience and knowledge to visualize undesired consequences.
- The team may need to utilize skills from RCA and HAZOP techniques (what can go wrong?)

21.7 RISK ASSESSMENT PREPARATION AND APPROVAL FLOW CHART



21.8 WPRA MATRIX:

The matrix given shall be utilized for assessing risk.

Descriptors		SEVERITY (HAZARD) OFCONSEQUENCE				
		Negligible (1)	Minor (2)	Moderate (3)	Major (4)	Severe (5)
LIKELIHOOD OF OCCURRENCE	Very Unlikely (A)	LOW	LOW	LOW	LOW	MEDIUM
	Unlikely (B)	LOW	LOW	LOW	MEDIUM	MEDIUM
	Possible (C)	LOW	MEDIUM	MEDIUM	MEDIUM	HIGH
	Likely (D)	MEDIUM	MEDIUM	HIGH	HIGH	HIGH
	Frequent (E)	MEDIUM	MEDIUM	HIGH	HIGH	HIGH

- WPRA risk matrix consists of both the dimensions of risk namely, likelihood (or frequency) and consequence
  - Likelihood of occurrence of an incident is given vertically on the left-hand side
  - Severity of consequence is given horizontally at the top
  - Likelihood descriptors & Severity (Hazard) descriptors are given in the next two sections.

In the risk matrix given above, risks are classified as

a. Low
b. Medium
c. High

- The purpose of the WPRA is to identify hazards & determine effective additional hazard control measures to reduce the residual risk to 'Low'.

Actions to be done for different Risk level.

Risk Level	Action required
LOW	One can proceed with the work
MEDIUM	WPRA team's lead to consult his / her superior, reassess & determine further control measures which may reduce the risk to Low. If risk is reduced to Low, then do the job. (*In case the risk cannot be reduced to low, Then WPRA shall be endorsed by the respective custodian Team Leader level subject to the condition as specified in the WPRA.*)
HIGH	Stop the job; it is too dangerous; find out some alternate safe method / safe timing (such as during shutdown) of doing the job

21.9 WPRA RISK MATRIX 'LIKELIHOOD DESCRIPTORS'

WPRA RAM - Likelihood Descriptors	
Frequency Category	**Descriptor**
Very Unlikely (A)	• Never happened in the last 10 years in KIPIC
Unlikely (B)	• Has happened in the last 10 years in KIPIC
Possible (C)	• Has happened in the last 3 years in KIPIC
Likely (D)	• Has happened once at the same unit / Location per year or more than once per year in the same facilities
Frequent (E)	• Has happened more than once per year at the same unit / location.

21.10 WPRA RISK MATRIX 'SEVERITY (HAZARD) CONSEQUENCES DESCRIPTORS':

People:

Severity (Hazard Consequence)	Consequence Descriptor
Negligible (1)	First Aid Case
Minor (2)	Medical Treatment Case (MTC) / Restricted Workday Case (RWC)
Moderate (3)	Single Lost Time Injury (LTI)
Major (4)	Multiple Lost Time Injury (LTI) / Permanent Partial Disability
Severe (5)	Fatality / Permanent Total Disability

Environment:

Severity (Hazard Consequence)	Consequence Descriptor
Negligible (1)	Negligible Environmental damage (contained near the work location)
Minor (2)	• Spill —less than 3 barrels (Contained within a part of the Unit) • Slight environmental damage – not having lasting impacts • Single exceedance of statutory or other prescribed limit
Moderate (3)	• Spill —3 barrels or more and less than 10 barrels (Contained within the Unit) • Environmental damage that will persist or require cleaning up • Frequent exceedance of statutory or other prescribed limits
Major (4)	• Spill —10 barrels or more (Contained within the Refinery / Site) • Major environmental damage that will require extensive measures to restore beneficial uses of environment • Extended exceedances of statutory or other prescribed limits
Severe (5)	• Spill —10 barrels or more (extending outside the Refinery / Site) • Severe environmental damage (leading to loss of natural resources over a wide area) that will require extensive clean up and remediation measures

Assets

Severity (Hazard Consequence)	Consequence descriptor	
	Asset Damage Cost	**Downtime**
Negligible (1)	Asset damage cost not exceeding US $25,000/-	No interruption to plant operation (No downtime of the any equipment /Unit)
Minor (2)	Asset damage cost not exceeding US $50,000/-	Minor disruption to asset availability (non-availability of an equipment or a section of the Unit for less than 24 hours)
Moderate (3)	Asset damage cost not exceeding US $75,000/	Shutdown of Unit for more than 1 day and up to 3 days
Major (4)	Asset damage cost not exceeding US $100,000/-	Shutdown of Unit for more than 3 days and up to 10 days
Severe (5)	Asset damage cost more than US $100,000/-	Shutdown of Unit for more than 10 days

21.11 GUIDELINES FOR RISK ASSESSMENT & PRECAUTIONS IN PLACE:

After identifying the hazards associated with the work, the team should assess the risk and its severity and likelihood to reach at risk level as per WPRA matrix. If the risk is not reduced to an acceptable level, i.e., low, put precautions in place until one reaches the residual risk to an acceptable level. The team shall write all this information on the Work Permit Risk Assessment (WPRA) form and sign it as described. The following two lists describe a few examples as guidelines for ready reference on risk assessment and precautions that need to be put in place for mitigation.

21.11.1 Hazard identification, Risk Assessment & precautions in place:

- To assist the process, the following guidelines have been developed for hazard identification, risk assessment, and precautions that need to be put in place for mitigation to reach an acceptable level of risk.

21.11.2 Hazard identification prompts:

- The team should ask following questions about the job to arrive at various hazards associated with work and fill in the Work Permit Risk Assessment form given as Annexure – K.

Details of the work	What substances	Other factors
What is the Job	Toxic	What else is going on
Where is the job	Pyrophoric	What process pressure
What is involved	Oxidizing	Working at height
Who is involved	Corrosive	Confined space
When is it to be done	Steam	Flammable
How is it to be done	Water	Radiation
How long will it take	Dust	Electricity
What equipment/tool		Temp. / Humidity
Surrounding area		Sea level

The following table lists some of the hazard categories which may be utilized while identifying hazards.

Hazard category	Hazards
Chemical	Dust, vapor / gas, particulates, liquid, Solid, flammable gas
Physical	Noise, ionizing radiation, slips, trips, falls, compressed gas, temperature, humidity, vibration, manual handling
Mechanical	Rotating equipment, mechanical lifting, operation of vehicles
Electrical	Static charge, Electrocution
Biological	Microbiological organisms, viruses
Ergonomic	moving equipment, machinery / equipment design, approach / access to work equipment
Psychosocial	Shift patterns, work organization
Environment	lighting, space, ventilation, Weather extremes
Natural	Wind, Dust, rain, lightning
People	New / inexperienced personnel, Insufficient resources, Lack of competence, Insufficient manpower
Personnel competency monitoring	Inadequate Operator visit frequency, inadequate compliance to identified control measures
Adjoining hazards	Hazards to or due to activities in the adjoining areas
Marine Hazards	Hazards due to Marine/Offshore activities like high tide/low tide, Sea roughness etc.

21.11.3 Guidance on Control Measures for Work Permit Risk Assessment

What Can Happen	Control Measures
What could go wrong? **Could you** • Fall • Get trapped • Get burnt • Suffocated • Be poisoned • Harm others • Damage things • Be electrocuted • Get Fatigued **Could it** • Leak • Catch fire • Explode • Fall over • Cave in • Damage environment • Collapse	**Put precautions in place** • Permit • Right certificates • Isolation/s • Electrical • Process • Utilities • De-pressured • Drained • Purged • Ventilated • PPE • Emergency equipment/ personnel • BA • Fire fighting • Vacuum tankers • Rescue team • Sandbags • Contingency plans

21.11.4 Training and certification requirements:

- Concerned Teams - Team Leaders should ensure that all KIPIC and contractor's personnel acting in roles associated with work permit & risk assessment are trained to perform the activities defined in the document.
- For contractors and their employees, Refer KIPIC HSE document on HSE S&F Guidelines for Contractors.
- HSE Group (HSE Technical Support & Safety Teams) and any other e.g., Key personnel of contractors or external body approved trainer (by HSE group) shall provide training for personnel's.
- This training must be provided before personnel perform any duties related to these roles.
- Training for personnel must be provided by knowledgeable and experienced instructors.
- Trainings shall be documented.
- Refresher training should be provided at an interval of no more than three years from the previous training.

22. MANAGEMENT SYSTEM

a) **Document Control**

Records shall be retained in compliance with the KIPIC Document Control Program (KIPIC/ZOR/HSE/TS/0502). The contact for this document is the KIPIC HSE Group.

b) **Audit Requirements**

Compliance with this document shall be audited as part of Work Permit & Compliance audits, IMS audits & HSSE MS audit program.

c) **Document Renewal Process**

This document shall be reviewed and revised by KIPIC HSE Group as necessary and, at a minimum, not later than three years from the date of the last revision.

23. REFERENCES

a) KPC HSSE Management Standards.
b) KIPIC Document "Safe Work Practices on Confined Space Entry"
c) KIPIC Document "Safe Work Practices on Excavation & Civil work"
d) HSSEMS Element – 6, Operating Procedures & Safe Work Practices
e) Document No. KPC/HSSE/E06/SA/S03 "KPC HSSE Management System Standard Occupational Safety Management"
f) Document No. KPC/HSSE/E04/GE/S01 "KPC HSSE Management System Standard HSSE Risk Management"
g) SHELL DEP 34.17.10.35 Siting of Onshore Occupied Portable Buildings
h) KIPIC Document "Safe work Practices on Engine Driven Equipment Safety"
i) KPC Recommendation for all major incidents.

ANNEXURE-A- GUIDANCE CHECKLIST FOR RISK ANALYSIS

{This analysis shall be conducted before declaring Projects fenced area, by Team Leader, Operations along with the multidisciplinary team as mentioned in clause # 8.1 (a)} **Ref.No: KIPIC/ZOR/HSE/SAF/0630- C1**

#	Hazards	Risk Ranking	Hazard Mitigation Measures	Residual Risk Ranking
1.	Is the area exposed to flammable or toxic or explosion hazards from the nearby operations units?			
2.	Are there below ground facilities such as pits, sumps, etc. in the project construction area where toxic / flammable material can collect?			
3.	Is there any process sewer / drain trench close to the project construction area?			
4.	Is the project construction area falling under the hazardous area of the nearby operating units? (I.e., whether the hazardous area classification drawing of the nearby unit/s show that the hazardous area extends into the project construction area?)			
5.	Can Venting / draining of flammables/ toxic material to atmosphere done in the nearby unit/s during normal operations or during abnormal situations such as emergency shutdowns affect the safe execution of project construction?			
6.	a) Operating parameters (pressure, temperature) of nearby units' vessels, equipment (especially those at the periphery of the unit/s) and if they handle flammables above their flash point? b) Location of high-pressure equipment / vessel and exothermic reactors at the periphery of the nearby unit/s or inside the nearby unit/s? c) Flare & fired heaters located near to the project construction area?			
7.	Predominant wind direction in the project construction area and the nearby unit/s & whether the project construction area will be affected due to predominant wind direction in case of toxic gas leaks / fire in the nearby units?			
8.	Is there a possibility for spread of flammable vapours / toxic gases (in case of abnormalities such as leak) into the project construction area or in its vicinity that will endanger personnel / property in the project area or nearby unit?			

#	Hazards	Risk Ranking	Hazard Mitigation Measures	Residual Risk Ranking
9.	Proximity of the following to project construction area: a) large inventories of flammables / toxic material & consequences of loss of containment b) IRT & inter unit transfer lines c) Potential release points			
10.	Effect of thermal radiation from fire in nearby unit/s.			
11.	If an explosion / fire would occur, whether the fire water supplies will be hampered? The firewater network will get damaged?			
12.	QRA findings of nearby unit/s--- (if available) Extent of QRA Risk Contour & whether it extends into the project construction area?			
13.	Credible emergency scenarios & Worst-case scenarios of the nearby unit/s (as identified in Emergency scenario register of the nearby unit/s & from operations drills) and the impact of those scenarios on the project construction site (if available). Also, scenarios of operations mock drill & the effect of such scenarios on the project construction site.			
14.	Are the ends of horizontal pressure vessels facing towards the project construction area?			
15.	Activities that resulted in incidents during similar project construction work in refineries in either KIPIC or elsewhere. (Lessons Learnt)			
16.	Exit routes of nearby unit/s & access of emergency responders/ emergency response vehicles to the nearby unit/s obstructed by the project construction area.			
17.	If the use of lifting equipment such as crane & the extent of their boom length especially when operating from near the proposed fence will affect the operations unit?			
18.	In case of erection of heavy equipment near the proposed fence, the potential of any abnormal event (such as falling of the equipment), the same to be considered with respect to its impact on the running process unit nearby.			
19.	Impact of activities in project construction area, such as hot work, excavation,			

#	Hazards	Risk Ranking	Hazard Mitigation Measures	Residual Risk Ranking
	a) on the facilities (pits, sumps, underground / above ground lines, electrical instrumentation cables associated with operations unit/s) situated in the project construction area b) on the nearby operations unit/s.			
20.	a) Is the project construction area not accessible to emergency responders & emergency response vehicles? b) Are fire hydrant outlets and facilities for firefighting not available in the project construction area?			
21.	Whether flammable and combustible material will be stored inside the proposed fenced area?			

- This checklist provides a guidance and is not inclusive. Additional hazards, which may be location / situation specific, shall be identified and properly addressed.

ANNEXURE-B- RISK ANALYSIS

Ref.No: KIPIC/ZOR/HSE/SAF/0630- F1

Location of Project construction area: Risk Analysis ref. #:

Date of Risk analysis: Revision #:

Part- A:

Sr.#	Hazards*	Risk Ranking**	Hazard Mitigation Measures	Residual Risk Ranking

Part – B: Key Decisions of Risk Analysis Team:

- Minimum distance from unit battery limit:
  (To be specified if it is more than 15 meters)
- Location of fixed gas detectors in the fenced area:
- Fixed gas detector for H_2S / Hydrocarbon / SO_2 / NH_3 etc.:
- Number of fixed gas detectors:
- Requirement of an audio-visual alarm (hooter /beacon):
- Portable firefighting equipment requirement inside the fenced area.
- Type of firefighting equipment:
- Number of firefighting equipment:
- Location of firefighting equipment:
- Requirement of hot line telephone:
- Number / location of emergency exits:
- Availability of warden during off hours:

Name: Sec. Head, Operns. Services	Name: Sr. Engineer, Major Projects	Name: Sr. Engineer, Engg.
Signature:	Signature:	Signature:
Name: Contract Manager Projects	Name: Chief Fire Officer	Name: Sr. Engineer, Safety Major
Signature:	Signature:	Signature:

Approved by:
Name:
Team Leader, Operations
Signature:

1. Consider location specific hazards, chemical hazards, physical hazards, fire/explosion hazards, toxic gases exposure hazard, material / equipment lifting/erection hazards while using crane and other situation specific hazards.
2. As a minimum all the hazards in the guidance checklist to be assessed; in addition, other relevant hazards shall also be identified & addressed.
   a) Risk ranking to be done as per the procedure given in document "Procedure on Hazard identification and Risk Assessment".
   b) For all Medium & High risks, appropriate risk mitigation measures shall be determined to reduce the risk to a Low level.

ANNEXURE-C- COLD WORK PERMIT

Ref.No : **KIPIC/ZOR/HSE/SAF/0630- F2**

SER. NO:	Continues from permit: تصريح عمل بارد COLD WORK PERMIT	KIPIC	Associated Excavn. / Entry No.: الشركة الكويتية للصناعات البترولية المتكاملة KUWAIT INTEGRATED PETROLEUM INDUSTRIES COMPANY

1.(A) Exact Location — 1- (أ) الموقع الفعلي
(Area / Unit / Equip. /etc.) .... (منطقة / وحدة / معدة / ...إلخ)
☐ ZOR Refinery ☐ PRIZe ☐ LNGI ☐ HO.......... ☐ Other ....

(B) Description of Work (attach sketch if required) — (ب) وصف العمل (أرفق مخططاً إذا لزم الأمر)
....
Using .... باستخدام
(mention tools/equipment) (اذكر الأدوات / المعدات)

(C) Issued to .... (ج) صادر إلى
Group/ Team/ Craft/Contractor المجموعة / الفريق / حرفة / المقاول
Issuer Tel.: ....
Executor Tel.: ....

2. Work is Critical ☐ Yes ☐ No — 2- هل العمل خطر
Fire Station / EOC informed (Tel. No.) ☐ Yes ☐ Not Required (NR) — هل تم إبلاغ مركز الإطفاء / مركز إرسال الطوارئ
Issuer & Executor jointly checked work site ☐ Yes ☐ Not Required (NR) — هل قام المصدر والمنفذ بفحص موقع العمل معاً
Work Permit Risk Assessment done & attached ☐ Yes ☐ Not Required (NR) — هل تم عمل تقييم للمخاطر وإرفاقه

3. Safety Requirement (USE OF SAFETY HELMET, SPECTACLES AND BOOTS IS MANDATORY) — 3- متطلبات السلامة (يلزم استخدام خوذات ونظارات وأحذية السلامة)

Y	NR	(أ) هل تم للمعدة؟ (A) Has the equipment been?	Y	NR	(ب) المخاطر المحيطة والمتوقعة (B) Expected Residual Hazards	Y	NR	(ج) إجراءات الوقاية (C) Protection measures
☐	☐	عزل الكهرباء / البخار / الهواء Isolated from power/steam/air	☐	☐	غاز و/أو سائل قابل للاشتعال Combustible gas &/or liquid	☐	☐	قفازات (حدد النوع.........) Gloves (type..............)
☐	☐	عزل من السائل أو الغازات Isolated from liquid or gases	☐	☐	نقص الأكسجين Lack of O_2	☐	☐	سدادات / واقيات الأذن Ear plug / Muff
☐	☐	تصريف للضغط و / أو تصريف للسوائل Depressurised &/or drained	☐	☐	كبريتيد الهيدروجين / غازات سامة H_2S/Toxic gases........	☐	☐	واقيات العينين / واقي الوجه Goggles (........)/Face shield
☐	☐	عزل /تم استخدام صفيحة عزل / فصل Blanked/ Blinded/ Disconnected	☐	☐	مواد كيميائية آكلة Corrosive chemicals	☐	☐	ملابس واقية (..............) Protective clothing (..........)
☐	☐	غسيل / تطهير Flushed / Purged	☐	☐	حديد تلقائي الاشتعال / قشور Pyrophoric iron / Scales	☐	☐	قناع غبار / غاز / قناع متصل بخرطوم هواء Dust / Gas / Airline mask
☐	☐	تهوية (طبيعية / ميكانيكية) Ventilated (natural/mechanical)	☐	☐	كهرباء / كهرباء استاتيكية Electricity / Static	☐	☐	عدة السلامة وحبل إنقاذ Safety harness & lifeline
☐	☐	انسياب مستمر للغاز الخامل Cont. inert gas flow arranged	☐	☐	حرارة / بخار / ثلج Heat/ Steam / Frost	☐	☐	شخص جاهز مع جهاز / قناع التنفس Standby with SCBA/Airline mask
☐	☐	تبريد مناسب Adequately cooled	☐	☐	رطوبة عالية High humidity	☐	☐	حاوية لتجميع السوائل Liquid collector underneath
☐	☐	موافقة قسم التفتيش (انظر أدناه) Approved by Inspection (see below)	☐	☐	إشعاع متأين Ionizing radiation	☐	☐	طفاية حريق / خرطوم الماء Fire extinguisher/Water hose
☐	☐	....	☐	☐	....	☐	☐	أدوات لا تصدر شرراً Non-sparking tools
☐	☐	....	☐	☐	....	☐	☐	تسوير المنطقة بشريط / ألواح معدنية / طربال /....... Barricade with tape / Sheet / Tarpaulin / ....

Name of Fire Watch: / BA Attendant: .... اسم مراقب حالة الحريق وأجهزة التنفس

Others / Details: .... تفاصيل أخرى
See the back of this permit for additional requirements and other conditions. — انظر خلف هذا التصريح لمعرفة المتطلبات الإضافية والشروط الأخرى
Inspection approval paper shall be attached for work on a corroded tank roof. — يجب إرفاق موافقة قسم التفتيش في حالة العمل على سطح خزان متآكل

4.(A) Gas Test ☐ Not Required غير مطلوب — 4- (أ) فحص الغاز
☐ See associated Entry Authorisation انظر تصريح الدخول المرفق ☐ Continuous monitoring مراقبة مستمرة

الوردية Shift	الحد الأدنى للاشتعال Comb. LEL <10%	أكسجين O_2 % >19.5	كبريتيد الهيدروجين H_2S PPM <10	أول أكسيد الكربون CO PPM <25	ثاني أكسيد الكبريت SO_2 PPM <2	أخرى Others	درجة الحرارة Temp. °C	نسبة الرطوبة RH %	فاحص الغاز GAS TESTER'S: التوقيع Name & Signature	رقم التوظيف Emp. No.	التاريخ Date	الوقت Time

(B) Electrical Isolation — (ب) العزل الكهربائي
☐ Not Required (or N/A) غير مطلوب (أوغير قابل للتطبيق) ☐ Use "DO NOT OPERATE" Tag استخدم بطاقة "لا تشغل"
☐ Use single lock استخدم القفل الفردي ☐ Use Multilock استخدم نظام القفل المتعدد

(i) All electrical circuits / equipment have been isolated by: — (i) تم عزل جميع المعدات والدوائر الكهربائية بواسطة:

Emp. Name. اسم الموظف	Emp. No. رقم التوظيف	Designation الوظيفة	Signature التوقيع	Tel. هاتف

(ii) Multi Lock System — (ii) نظام القفل المتعدد

الوردية Shift	Name / Emp. No./ Signature اسم/التوقيع / رقم التوظيف: Electrical Maint. الصيانة الكهربائية	Mechanical Maint. الصيانة الميكانيكية	Others أخرى	التاريخ Date	الوقت Time

5. Authorization/Renewal (It is safe to proceed with this job) — 5- التصريح / التجديد (الوضع امن ويمكن البدء في هذا العمل)

الوردية / التاريخ Date / Shift	Time الوقت: من From	إلى To	Name / Emp. No./ Signature اسم / رقم التوظيف / التوقيع: المصدر Issuer	المنفذ Executor	المقاول Contractor	توقيع مصاحب (إذا لزم الأمر) Counter Signature (If Applicable)	مشغل الحقل Field Operator

6. Permit Closure — 6- إغلاق التصريح
(A) Work ☐ Completed تم إنجازه ☐ Stopped توقف ☐ Will continue on.............. سوف يستمر في — (أ) العمل
Site handed over ☐ Yes ☐ No تم تسليم الموقع بوضع امن Housekeeping done ☐ Yes ☐ No تم تنظيف المكان
In safe condition **Multilock Removed** ☐ Not applicable ☐ Yes ☐ No نظام القفل المتعدد أزيل

اسم المُنفِذ Executor name	رقم التوظيف Emp. No.	الوظيفة Designation	التوقيع Signature	الوقت Time	التاريخ Date	هاتف Tel.

Remarks: .... :ملاحظات

(B) Agreed to above. Site was checked and found safe. ☐ Yes ☐ No — (ب) تمت الموافقة على ما ذكر أعلاه، وفحص الموقع ووجد امناً
Field Operator signature/Emp. No.......................... توقيع مشغل الحقل / رقم التوظيف

اسم المُصدِر Issuer name	رقم التوظيف Emp. No.	الوظيفة Designation	التوقيع Signature	الوقت Time	التاريخ Date	هاتف Tel.

Rev.-1/JANUARY 2022 في حالة الطوارئ اتصل على هاتف رقم "١٧٠" IN ANY EMERGENCY DIAL "170"

ANNEXURE-D- (REVERSE OF COLD WORK PERMIT FORM)

GENERAL CONDITIONS OF PERMIT

1. Display the permit at work site with associated authorizations.
2. Separate permits are required for different Maintenance crafts & jobs.
3. Only authorized personnel holding valid "Work Permit Issuer/Executor" card can sign permit.
4. Only field operators/contractors with valid "work permit awareness training" card can sign respective column.
5. Only authorized gas testers holding valid certification for gas test can sign gas test.
6. Issuer may authorize work, only if the gas tests results are within the permissible range.
7. Mention Clear description of the work. Issuer or executor may fill Section-1.
8. Issuer must fill or tick all relevant items from Sections 2 to 4. Specify additional requirements under remarks. Inform critical work and road closures to EDC (EDC will inform Safety)
9. Operation's Issuer is responsible for safe handing over of equipment to Maintenance.
10. Field operator must check site and sign the permit before start of the work.
11. Executor must not start work before getting permit or on an incomplete work permit.
12. Executor must provide adequate supervision and must be always present during critical work.
13. Executor must ensure providing all recommended protectives before starting work and compliance to all permit conditions. He must ensure his people are wearing appropriate PPE's.
14. Suspend all work in case of plant emergency or accident.
15. Issuing Team and Safety personnel have the right to stop the job any time on safety reasons.
16. Field operator shall monitor permit conditions and site conditions frequently.
17. Executor must renew the permit if the work is "stopped" or "not started" for over 2 hrs.
18. Close the permit by completing Section-6 of original and field operator copy. Keep in file for 1 month.
19. All tools and equipment shall be secured, and personnel protected from falling objects.
20. Do not anchor to or suspend loads on process piping.
21. Do not use scaffolds without valid green scaffold tag.
22. Do not use wooden planks in running units.
23. Any exemption shall be with prior approval of KIPIC Safety.

SPECIAL PRECAUTIONS FOR COLD WORK

1. When using gas mask (Chemical Cartridge) in open area, Escape set or SCBA must be available for emergency.
2. In dangerous (IDLH) atmospheres, use airline mask (BA) with escape cylinder and attendant having BA.
3. Always wear BA when disconnecting flanges or opening manways in lines/eqpt. containing H2S.
4. Radiographers must wear film badges and dosimeters. Provide radiation survey meter and barricade 0.25 millirems/hr level area with warning signs.
5. Oil pier workers must wear life jacket wherever proper platforms with guardrails are not provided.

الملحق - د- (نموذج عكس تصريح العمل البارد)

الشروط العامة للتصريح

1. يجب وضع التصريح في موقع العمل مع التصاريح ذات العلاقة .
2. يجب استخراج تصاريح مستقلة لكل عملية صيانة مختلفة .
3. لا يقوم بالتوقيع على التصاريح إلا الأشخاص المخولون بذلك، الحاصلون على بطاقة مصدر/منفذ إذن العمل سارية المفعول .
4. يمكن فقط لمشغلي الحقل وعمال المقاول في الحقل التوقيع في خانات الأعمدة الخاصة بهم في التصاريح إذا كانوا قد تلقوا التدريب وحصلوا على بطاقة برنامج التوعية بنظام تصاريح العمل .
5. لا يقوم بالتوقيع على اختبار فحص الغاز إلا الأشخاص المخولون بذلك ، الحاصلون على بطاقة سارية المفعول صادرة من قسم السلامة تفيد بأنهم تلقوا تدريباً على فحص الغاز .
6. لا يقوم مصدر تصريح العمل بالتصريح بأداء العمل إلا إذا كانت نتائج فحص الغاز ضمن المدى المسموح به .
7. يجب إعطاء وصف تفصيلي واضح للعمل . وعلى مصدر التصريح أو منفذه استيفاء بيانات لقسم
8. يجب على مصدر تصريح العمل استيفاء كل البنود ذات العلاقة من القسم 2 إلى 4 ، وتحديد المتطلبات الإضافية بذكرها تحت بند الملاحظات ، على أن يتم إخطار مركز تحكم اتصالات الطوارئ بالأعمال الخطرة وإغلاق الطرق (ويقوم المركز بإخطار قسم السلامة) .
9. يكون مصدر تصريح العمل من العمليات مسئولاً عن تسليم المعدات بصورة مأمونة إلى الصيانة
10. على مشغل الحقل أن يتفقد الموقع ويوقع على التصريح قبل بدء العمل .
11. على القائم بالتنفيذ عدم مباشرة العمل قبل حصوله على تصريح العمل أو على تصريح عمل غير مكتمل .
12. على القائم بالتنفيذ توفير إشراف مناسب ويجب أن يكون موجوداً طوال فترة تنفيذ أي عمل يتسم بالخطورة .
13. على القائم بالتنفيذ أن يتأكد من توفير كل مستلزمات الوقاية الموصى بها قبل البدء في العمل , والالتزام بجميع الشروط الواردة في التصريح . ويجب عليه أن يتأكد من ارتداء الأشخاص التابعين له معدات الوقاية الشخصية .
14. يجب إيقاف جميع الأعمال في حالة الطوارئ أو عند وقوع حادث .
15. يحق لجهة إصدار تصريح العمل وموظفي السلامة الصلاحية بإيقاف العمل في أي وقت عند عدم الالتزام بشروط السلامة .
16. يجب على مشغل الحقل مراقبة الشروط المذكورة في التصريح ومراقبة ظروف الموقع ، وذلك بين فترة وأخرى
17. يجب على القائم بالتنفيذ تجديد التصريح إذا أوقف العمل أو لم يبدأ بعد انقضاء ساعتين من إصداره .
18. يجب إقفال التصريح بإكمال القسم السادس من النسخة الأصلية ونسخة مشغل الحقل. يحتفظ بنسخة في الملف لمدة شهر واحد .
19. توضع الآلات والمعدات في مكان آمن لحماية الأشخاص من سقوطها عليهم .
20. يجب عدم وضع حمولات أو تعليقها على أنابيب العمليات .
21. تأكد من أن السقالات موافق عليها قبل استخدامها ، وذلك بفحص اكتمال القائمة ووجود البطاقة الخضراء .
22. لا تستخدم الألواح الخشبية في الوحدات العاملة .
23. يجب الحصول على موافقة مسبقة من قسم السلامة بالشركة الكويتية للصناعات البترولية المتكاملة في أية حالة استثنائية .

احتياطات خاصة بتصريح العمل البارد

1. عند استخدام قناع الغاز (فلتر كيميائي) في منطقة مكشوفة ، يجب توافر معدات النجاة أو جهاز تنفس مستقل للاستخدام في حالات الطوارئ .
2. في الأجواء الخطرة (IDLH) استخدم قناعاً متصلاً بخرطوم هواء مع اسطوانة نجاة ، ويجب توافر شخص للمراقبة يكون مزوداً بجهاز تنفس .
3. يجب ارتداء جهاز التنفس دائماً عند فصل أية شفة (فلانجة) أو فتحات الدخول في الخطوط والمعدات المحتوية على غاز كبريتيد الهيدروجين .
4. يجب على القائمين بأعمال التصوير بالأشعة ارتداء شرائح أو أجهزة كشف جرعات الإشعاع . يجب توفير مقياس للمسح الإشعاعي وإحاطة المنطقة التي يصل فيها مستوى الإشعاع إلى 25 ملي رم/ساعة بوضع علامات تحذيرية.
5. يجب على العاملين على رصيف الزيت ارتداء سترة النجاة في حالة ما إذا كانت المنصات غير مزودة بحواجز مناسبة .

ANNEXURE–E- "HOT WORK PERMIT"

Format ref.No : KIPIC/ZOR/HSE/SAF/0630- F3

ANNEXURE-F- "(REVERSE OF HOT WORK PERMIT FORM)

GENERAL CONDITIONS OF PERMIT

1. Display the permit at work site with associated authorizations.
2. Separate permits are required for different Maintenance crafts & jobs.
3. Only authorized personnel holding valid "Work Permit Issuer/Executor" card can sign permit.
4. Only field operators/contractors with work "permit awareness training" can sign respective column.
5. Only authorized gas testers holding valid certification for gas test can sign gas test.
6. Issuer may authorize work, only if the gas tests results are within the permissible range.
7. Mention Clear description of the work. Issuer or executor may fill Section-1.
8. Issuer must fill or tick all relevant items from Sections 2 to 4. Specify additional requirements under remarks. Inform critical work and road closures to EDC. (EDC will inform Safety)
9. Operation's Issuer is responsible for safe handing over of equipment to Maintenance.
10. Field operator must check site and sign the permit before start of the work.
11. Executor must not start work before getting permit or on an incomplete work permit.
12. Executor must provide adequate supervision and must be always present during critical work.
13. Executor must ensure providing all recommended protectives before starting work and compliance to all permit conditions. He must ensure his people are wearing appropriate PPE's.
14. Suspend all work in case of plant emergency or accident.
15. Issuing Team and Safety personnel have the right to stop the job any time on safety reasons.
16. Field operator shall monitor permit conditions and site conditions frequently.
17. Executor must renew the permit if the work is "stopped" or "not started" for over 2 hrs.
18. Close the permit by completing Section-6 of original and field operator copy. Keep in file for 1 month.
19. All tools and equipment shall be secured, and personnel protected from falling objects.
20. Do not anchor to or suspend loads on process piping.
21. Do not use scaffolds without valid green scaffold tag.
22. Do not use wooden planks in running units.
23. Any exemption shall be with prior approval of KIPIC Safety.

SPECIAL PRECAUTIONS FOR HOT WORK

1. Flammable Gas Test (LEL) within 15 meters (radius) is compulsory prior to any hot work. This includes vehicle entry and use of portable battery-operated instruments.
2. Cover and seal sewers, drains, vents, or any other gas escaping points within 15 meters (radius). Use flame retardant tarpaulin for barricading.
3. Issuer must check the Hot Tapping Authorization form approved by all parties before authorizing hot tapping, patchwork on live lines and work on corroded tank roof.
4. Positively isolate the line/equipment by blinding for welding, cutting, or grinding. Closing valve alone is not acceptable.
5. Clear combustible material and heavy oil deposits within 8 meters (radius).
6. Ensure 2 fire extinguishers are available within 8 meters (radius). Do not use plant / unit extinguishers. Personnel engaged in the job must know how to use fire extinguishers.
7. Carry out all possible fabrication and welding outside unit area. Limit site welds to minimum.
8. Welder and helper must wear eye protection. Welder must use face shield, which can be fitted to the helmet.
9. Welders must wear leather or flame-resistant gauntlets/gloves, apron, and high safety boots.
10. Welder must use leather shoulder covers and ear plugs for overhead work.
11. Check the welding machine, terminals, cables & cable laying before start of work.
12. Provide adequate ventilation or respiratory protection against welding fumes.
13. Field operator must guide the drivers on which route to follow when entering a plant / unit.
14. Issuer must check valid safety certificate for mobile equipment and vehicles.
15. Vehicle entry allowed only for loading and unloading and not for remaining in hazardous area or passenger transport.

الملحق-و- (نموذج عكس تصريح العمل على الساخن)

الشروط العامة للتصريح:

1. يجب وضع التصريح في موقع العمل مع التصاريح ذات العلاقة .
2. يجب استخراج تصاريح مستقلة لكل عملية صيانة مختلفة .
3. لا يقوم بالتوقيع على التصاريح إلا الأشخاص المخولون بذلك الحاصلون على بطاقة مصدر/منفذ إذن العمل سارية المفعول .
4. يمكن فقط لمشغلي الحقل وعمال المقاول في الحقل التوقيع في خانات الأعمدة الخاصة بهم في التصاريح إذا كانوا قد تلقوا التدريب وحصلوا على بطاقة برنامج التوعية بنظام تصاريح العمل .
5. لا يقوم بالتوقيع على اختبار فحص الغاز إلا الأشخاص المخولون بذلك ، الحاصلون على بطاقة سارية المفعول صادرة من قسم السلامة تفيد بأنهم تلقوا تدريباً على فحص الغاز .
6. لا يقوم مصدر تصريح العمل بالتصريح بأداء العمل إلا إذا كانت نتائج فحص الغاز ضمن المدى المسموح به .
7. يجب إعطاء وصف تفصيلي واضح للعمل . وعلى مصدر التصريح أو منفذه استيفاء بيانات القسم -1 .
8. يجب على مصدر تصريح العمل استيفاء كل البنود ذات العلاقة من القسم 2 إلى 4 ، وتحديد المتطلبات الإضافية بذكرها تحت بند الملاحظات ، على أن يتم إخطار مركز تحكم اتصالات الطوارئ بالأعمال الخطرة وإغلاق الطرق (ويقوم المركز بإخطار قسم السلامة) .
9. يكون مصدر تصريح العمل من العمليات مسئولاً عن تسليم المعدات بصورة مأمونة إلى الصيانة .
10. على مشغل الحقل أن يتفقد الموقع ويوقع على التصريح قبل بدء العمل .
11. على القائم بالتنفيذ عدم مباشرة العمل قبل حصوله على تصريح العمل أو على تصريح عمل غير مكتمل .
12. على القائم بالتنفيذ توفير إشراف مناسب ويجب أن يكون موجوداً طوال فترة تنفيذ أي عمل يتسم بالخطورة .
13. على القائم بالتنفيذ أن يتأكد من توفير كل مستلزمات الوقاية الموصى بها قبل البدء في العمل , والالتزام بجميع الشروط الواردة في التصريح . ويجب عليه أن يتأكد من ارتداء الأشخاص التابعين له معدات الوقاية الشخصية .
14. يجب إيقاف جميع الأعمال في حالة الطوارئ أو عند وقوع حادث .
15. يحق لجهة إصدار تصريح العمل وموظفي السلامة إيقاف العمل في أي وقت عند عدم الالتزام بشروط السلامة .
16. يجب على مشغل الحقل مراقبة الشروط المذكورة في التصريح ومراقبة ظروف الموقع ، وذلك بين فترة وأخرى .
17. يجب على القائم بالتنفيذ تجديد التصريح إذا أوقف العمل أو لم يبدأ بعد انقضاء ساعتين من إصداره .
18. يجب إقفال التصريح بإكمال القسم السادس من النسخة الأصلية ونسخة مشغل الحقل. يحتفظ بنسخة في الملف لمدة شهر واحد .
19. توضع الآلات والمعدات في مكان آمن لحماية الأشخاص من سقوطها عليهم .
20. يجب عدم وضع حمولات أو تعليقها على أنابيب العمليات .
21. تأكد من أن السقالات موافق عليها قبل استخدامها ، وذلك بفحص اكتمال القائمة ووجود البطاقة الخضراء .
22. لا تستخدم الألواح الخشبية في الوحدات العاملة .
23. يجب الحصول على موافقة مسبقة من قسم السلامة بالشركة الكويتية للصناعات البترولية المتكاملة في أية حالة استثنائية.

احتياطات خاصة بتصريح العمل الساخن

1. من الضروري فحص الغاز القابل للاشتعال (الحد الأدنى للانفجار) ضمن دائرة قطرها 15مترًا قبل القيام بأي عمل ساخن . ويتضمن ذلك دخول المركبات واستخدام الأجهزة الدقيقة المحمولة باليد والتي تعمل بالبطاريات .
2. يجب تغطية وعزل البالوعات ومجاري الصرف وفتحات التهوية أو أية مواضع يتسرب منها الغاز ضمن دائرة قطرها 15مترًا . استخدم التربولين المقاوم للاحتراق.
3. على مصدر إذن العمل أن يتأكد من أن نموذج تصريح عمل الوصلات الساخنة قد تمت الموافقة عليه من قبل كل الأطراف المعنية قبل التصريح بعمل الوصلات الساخنة أو ترقيع خطوط الغازات والسوائل القابلة للاشتعال أو العمل على السطوح المتآكلة للخزانات .
4. يجب عزل الخطوط والمعدات عن طريق استخدام سدادات في حالات اللحام أو القطع أو الصقل . ولا يسمح بالاكتفاء بإغلاق صمام واحد بمفرده.
5. يجب تنظيف المنطقة من كل المواد القابلة للاحتراق وبقايا الزيت الثقيل وذلك ضمن دائرة قطرها 8 أمتار .
6. يجب التأكد من توافر مطفئتي حريق (اثنتين) ضمن دائرة قطرها 8 أمتار . لا تستخدم مطفئات الحريق الخاصة بالوحدة . ويجب على الأشخاص المنخرطين في العمل معرفة كيفية استخدام مطفئة الحريق .
7. يجب القيام بجميع عمليات التصنيع واللحام المحتملة خارج الوحدة التي يتم فيها العمل، مع تقليل أعمال اللحام بالموقع إلى أدنى حد ممكن .
8. يجب على اللحام ومساعده ارتداء واقيات العيون . كما يجب على اللحام استخدام قناع الوجه الذي يمكن وصله بالخوذة .

9. يجب على اللحامين استعمال القفازات والأرواب وأحذية السلامة ذات الجودة العالية ، بشرط أن تكون مصنوعة كلها من الجلد أو من مادة مقاومة للحريق
10. للأعمال التي فوق مستوى الرأس يجب على اللحام استخدام ملابس جلدية لحماية الكتفين، وسدادات الأذن
11. يجب فحص ماكينة اللحام والأطراف والكابلات وتمديداتها قبل بدء العمل .
12. يجب توفير تهوية ملائمة أو وقاية للجهاز التنفسي ضد أبخرة اللحام .
13. على مشغل الحقل إرشاد السائقين إلى المسارات التي يجب عليهم السير فيها عند دخول الوحدة .
14. على مصدر تصريح العمل فحص شهادة السلامة الخاصة بالمركبات والمعدات المتحركة لضمان أنها سارية المفعول .
15. يسمح بدخول المركبات لأغراض التحميل والتفريغ فقط وليس للبقاء المنطقة الخطرة أو لنقل الركا

ANNEXURE- G - HOW TO FILL WORK PERMIT FORM

- **CW**- Cold Work; **HW**- Hot Work, **CSE**- Confined Space Entry, **P**- Permit
- Fill carefully and accurately in clear handwriting giving all possible details.
- Permit is not valid unless sections 1 to 5 are filled (or ticked "Not required").
- Continues from Permit: mention the serial number of previous work permit in this space.
- Associated Excavation. / Entry No:..... Mention Excavation Authorization Number and attach a copy of same (and/or) mention Confined Space Entry Permit number and attach it with CWP/HWP. Mention associated CW/HW permit No. on CSEP.

Section – 1:

A. Mention exact location of work (i.e., name of area, unit, and equipment number) E.g., Crude distillation, CDU-1, 01-C-0001

B. Give precise description of work. Mention tools and mobile equipment used. Mention Safety Certificate number for engine driven equipment. Attach sketch/work procedure, if needed, to avoid miscommunication

E.g., Unbolting of bottom man way using Impact Wrench, Air Compressor - SS# 4561

Blinding upstream of valve using hand tools

C. Write Executor's Group, Team, Craft and Contractor company name. Also write the telephone number of the executor. Issue separate permits for different crafts (electricians, scaffolders, fitters, etc.).

E.g. : **KIPIC Employee** : Maintenance / Mech. Maint / Field Maint.

Contractor Employee : Maintenance / Mech. Maint / Field Maint. / Contractor Name (Gulf Spic)

N.B : Section # 1 - Contractor - Main EPC Contractor / Service Contractor

Section # 5 - Contractor - The actual site supervisor of work performed by contractor (contractor or subcontractor person Who completed Work permit Awareness Training from Main Contractor's Engineer Supervisor, Foreman / Sub Contractor Engineer, Supervisor and Foreman).

Section – 2:

- Issuer to inform location, description and commencing time of any critical work and road closures to EDC (Fire Station) who will inform the Shift Fire Officer and Shift Safety Engineer for necessary advice or assistance.
- Critical Work: Defined in the document under Clause 10.2.

SECTION – 3:

A. Tick Y (yes) for the safe conditions that are required and already prepared for the intended job. Tick NR for the rest (means not required or not applicable).

B. Tick Y (yes) for the residual hazards, which might be expected even after above preparation. Tick N (No) for rest.

C. Tick Y (yes) for the appropriate protective measures. Strike off unwanted choices (E.g., dust/~~gas/airline~~ mask). Write the specific type of protective equipment in the blanks, e.g., gloves (rubber.). Get help of executor for precautions on specialized jobs (e.g., hot tapping, radiography, diving). Tick NR for rest.

Fill (or renew) Name & Employee No. of the standby person for Confined Space Entry Write additional remarks or requirements against "Others/ Details".

Section – 4(A) "Gas Test"

- If gas test is "not required" tick the box and leave the rest blank (for hot work in non-hazardous areas only or for cold work).
- For CW or HW associated with Entry, tick the box "Refer Associated Entry Authorization"
- Tick box if continuous monitoring is required.
- Specify period (e.g., every 2 hrs.) when test is to be repeated during permit validity period
- In entry permit tick "pre-entry gas test" when entering for gas testing at 1st entry.
- Values below each gas are limits you can allow people without respiratory protection except in HWP, where LEL limit is a requirement for allowing hot work.
- Issuer (if authorized) or any authorized gas tester under him can sign this section.

Section - 4 (B) "Electrical Isolation"

- If isolation is "Not required" or not applicable tick this box and leave the rest blank. If tagging is adequate tick "Use DO NOT OPERATE Tag". If only electricians are working tick "single lock" and if other crafts are involved tick "multilock"
- Electrical Maintenance Team authorized person to isolate electrical power of circuit/equipment from main Distribution Panel/Substation, fill the relevant boxes and sign.

- If multilock system is used, each concerned person to sign his name and employee number after installing the lock.

Section – 5 "Authorization & Renewal"

Initial issue:

- Maximum validity must be for duration of work or until the end of the shift/ workday whichever is less.
- Issuer signs first followed by executor & contractor (if applicable). Then issuer must drop "Safety Copy" in the box provided. Issuer & executor must check readiness of the site before signing for critical work.
- Executor to take "original" & "Field Operator Copy" with or without "Issuer Copy" to obtain field operator signature (his signature on "Issuer Copy" is optional). Operator must check site, sign the permit, and log it.

All signatories:

- Clearly mention employment number.
- Make sure your authorization / awareness card is valid.
- Do not sign for duration beyond your workhours.
- Counter signature column to be signed by other affected unit issuer if the work in one unit affects other unit; Counter signature column can also be utilized whenever a situation requires counter signature (like Operations issuer counter signature within project controlled fenced area).

Renewal:

- Use the renewal option if the work continues and any of the signatories change shift or handover responsibility.
- In case of turnarounds Major projects, Office buildings (Non - hazardous Area), the number of times a permit can be renewed may exceed two times up to a maximum of 7 days as indicated in clause. # 15.1.3 of the document. For renewing more than two times permit renewal sheet shall be used.
- Also renew if work in hazardous area is not started or is stopped for over 2 hours within the executor's workday.
- Incident Commander /HSE clearance required for renewal after an incident/ stoppage due to safety reasons.
- Recheck site conditions and renew Sections 3 & 4 as applicable before signing this section of two copies original & Field Operator Copy (issuer copy optional) in case of manual work permits and both the copies in case of electronic work permits.

Section – 6 "Permit Closure"

Fill this section both on the original and field operator copies (issuer copy optional).

A. To be filled by the executing authority (of last renewal). Tick appropriate boxes. Permit must be closed in hazardous area even if work is not completed and site must be left in safe condition.
B. To be filled by issuing authority (e.g., Operations Supervisor of last renewal) confirming that area has been cleaned and made safe from any hazard.

CLOSED PERMIT TO BE FILED FOR AT LEAST ONE MONTH FROM DATE OF CLOSURE

تعليمات تعبئة نموذج تصريح العمل

تعليمات تعبئة نموذج تصريح العمل

املأ نموذج تصريح العمل بدقة وبخط واضح، اذكر كل التفاصيل الممكنة.

لا يعد هذا التصريح صالحا ما لم تتم تعبئة المعلومات الخاصة بجميع الأقسام من 1 إلى 5 (أو وضع علامة(√) في خانة "غير مطلوب").

تابع التصريح رقم :..... اذكر الرقم المسلسل للتصريح السابق في هذه الخانة.

رقم تصاريح الحفر والدخول المرفقة : ..... اذكر رقم تصريح الحفر وارفق نسخة منه، و/أو اذكر رقم تصريح دخول وعاء/صهريج وارفق التصريح .

القسم 1 :

اذكر موقع العمل بالتحديد (أي اسم المنطقة والوحدة ورقم المعدة).

على سبيل المثال : مصفاة ميناء الأحمدي ؛ مشروع تحديث المصفاة (RMP)، وحدة تقطير النفط الخام رقم 4 ، الوعاء رقم 40-001 / مصفاة ميناء عبدالله ؛ وحدات إزالة الكبريت بواسطة التقطير الجوي ، الوحدة الثانية ، الوعاء رقم 12-025 / مصفاة الشعيبة : المنطقة رقم 4، وحدة H-Oil، الوعاء 07-01أ.

إعطاء وصف دقيق عن العمل، اذكر الأدوات والمعدات المتنقلة المستخدمة . ارفق مخطط أو إجراءات العمل إذا لزم الأمر ، وذلك لتجنب الأخطاء.

مثال : فك براغي فتحة الدخول السفلية باستخدام مفتاح البراغي وضاغطة هواء .

مثال : وضع صفيحة معدنية للخط الداخل إلى الصمام باستخدام الأدوات اليدوية .

اكتب اسم القسم/الشعبة واسم المقاول الذي صدر له التصريح (جهة التنفيذ). اكتب رقم هاتف طالب التصريح.

يتم إصدار تصاريح مستقلة لكل عمل مختلف (الكهربائيين، مركبي السقالات، مركبي وصلات الأنابيب ...إلخ)

مثال : مصفاة الزور : منطقة الصيانة رقم 1، الخدمات، GULF SPIC / مرفق استيراد الغاز الطبيعي المسال : الصيانة، المحركات الكهربائية، DESFA

القسم 2 :

على جهة إصدار تصريح العمل إبلاغ مركز تحكم اتصالات تحكم الطوارئ (170) باسم الموقع ووصف العمل الذي سيتم فيه ووقت البدء في تنفيذ أي عمل يتسم بالخطورة وإغلاق الطرق على أن يقوم المركز المذكور بإبلاغ كل من ضابط الإطفاء المناوب ومهندس السلامة المناوب لتقديم النصائح الضرورية أو للمساعدة .

العمل المتسم بالخطورة يعني العمل الذي يتضمن خطراً كامناً فيه، مثل : استخدام شعلة مكشوفة (كما في اللحام) في منطقة العمليات، و دخول بعض المناطق الشبه مغلقة/ وعاء، وغير ذلك.

القسم 3 :

ما هي شروط السلامة التي يجب توافرها للعمل المطلوب إنجازه ؟

يجب وضع علامة (√) في خانة نعم أو خانة غير مطلوب (إذا كان العمل غير مطلوب تنفيذه ضع علامة (√) في خانة غير مطلوب).

اختر و ضع علامة (√) في المربع المناسب أمام المخاطر المتوقعة التي قد تكون موجودة أو حتى بعد إعداد التجهيزات السابقة .

ضع علامة (√) فقط على إجراءات الوقاية المناسبة و علامة (x) على كل ما هو غير مطلوب . مثال : قناع غبار/ غاز/متصل بخرطوم هواء. اكتب النوع المحدد من معدات الوقاية في الفراغات المخصصة لذلك. مثلاً : القفازات (مطاطية). اطلب مساعدة القائم بالتنفيذ لمعرفة الاحتياطات المتعلقة ببعض الأعمال الخاصة (مثل عمل لحام على خط تحت التشغيل، التصوير بالأشعة، الغوص).

سجل (أو أعد كتابة) اسم ورقم توظيف الشخص المراقب الموجود على فتحة دخول الوعاء أو الصهريج وفقاً لتصريح دخول مكان شبه مغلق. وقم بكتابة أية ملاحظات إضافية أو احتياجات في المساحة الخالية مقابل : تفاصيل أخرى.

القسم 4 ،(أ) فحص الغاز :

إذا كان فحص الغاز غير مطلوب فضع علامة (√) في المربع الخاص بذلك (وذلك في حالات مثل المناطق الغير الخطرة فقط). أما بالنسبة للأعمال الباردة أو الساخنة المصاحبة لدخول الأوعية و الصهاريج، ضع علامة (√) في المربع الخاص بذلك (انظر تصريح الدخول المرفق) . ضع علامة(√) في المربع الخاص بطلب المراقبة المستمرة. حدد الفترة الزمنية اللازمة (مثلاً: ساعتان) لاعادة تكرار فحص الغاز خلال فترة صلاحية التصريح. ضع علامة (√) في المربع المناسب أمام "فحص الغاز قبل الدخول" عند دخول مكان شبه مغلق / وعاء لأول مرة.

القسم 4، (ب)- العزل الكهربائي :

إذا كان العزل الكهربائي "غير مطلوب" أو غير مطبق فيجب وضع علامة (√) في المربع الخاص بذلك. أما إذا كانت البطاقة (لا تشغل) مناسبة فيجب وضع علامة (√) في المربع الخاص بذلك. إذا كان مطلوب من قسم الكهرباء فقط بالعمل ضع علامة (√) في المربع أمام "القفل الفردي" أما إذا كان العمل جماعيا من عدة أقسام فيجب وضع علامة (√) في المربع أمام "استخدم نظام القفل المتعدد".

يقوم الشخص المخول من قسم الصيانة الكهربائية بفصل التيار الكهربائي للدائرة أو المعدة من لوحة التوزيع الرئيسية في المحطة الفرعية، ويتم ملء المربعات المعنية بذلك ثم يقوم بالتوقيع.

إذا كان نظام القفل المتعدد سوف يستخدم فكل شخص له صلة بذلك سوف يوقع مع ذكر الاسم و الرقم الوظيفي بعد وضع القفل (ضع علامة (√) في المربع المخصص إذا لم يكن نظام القفل غير مطلوب).

القسم 5 : التصريح / التجديد :

يجب تسجيل تاريخ بدء العمل وتوقيت مباشرته و الانتهاء منه. ويمكن إصدار تصريح العمل مبدئياً لمدة أقصاها ثماني ساعات.

ويجب ذكر رقم الموظف إلى جانب توقيعه، سواء أكان تابعاً للمقاول أو للجهة المخولة بالتنفيذ (مراقب الصيانة الذي معه بطاقة تخويل للتوقيع). كما يجب ذكر رقم التوظيف إلى جانب توقيع الشخص المخول بإصدار التصريح (مثل : مراقب العمليات الذي معه بطاقة تخويل للتوقيع). ويؤكد توقيعه على أن المعدات قد تم تجهيزها بشكل مناسب [القسم 3-(أ)]، وأن الأشخاص المعنيين على وعي بالمخاطر التي تحيط بالعمل [القسم 3 (ب)]، وأنه قد تم تجهيز معدات الوقاية الشخصية [القسم 3 (ج)] اللازمة لتنفيذ العمل بطريقة آمنة.

قبل بدء العمل يقوم المنفذ أو الشخص القائم بالتوقيع عن المقاول بإبلاغ مشغل الحقل ويحصل على توقيعه. بعد ذلك يقوم مشغل الحقل بتسجيل بيانات العمل في سجل مشغل الحقل.

وعند انتهاء كل تصريح عمل من الممكن تجديده لوردية واحدة أخرى أو لمدة 8 ساعات عمل في اليوم (على ألا يزيد عدد مرات التجديد عن مرتين) بشرط أن يعاد فحص ظروف العمل والتأكد من إنها آمنة للعمل.

القسم 6 - إغلاق التصريح:

املأ بيانات هذا القسم في النسخة الأصلية ونسخة مشغل الحقل.

يتم ملء البيانات من قبل المنفذ (لآخر تجديد) وضع علامة (√) في المربعات المناسبة. يجب إغلاق التصريح في الأماكن الخطرة حتى إذا كان العمل غير منجز ويجب ترك الموقع بحالة آمنة.

يتم ملء البيانات من قبل المصدر (مثل : مراقب العمليات لآخر تجديد) للتأكيد على أن المنطقة آمنة ونظيفة من أية مخاطر.
من الضروري حفظ جميع التصاريح ا

لكاملة لمدة شهر على الأقل من تاريخ إنجاز العم

ANNEXURE-H- "PERMIT RENEWAL SHEET

Ref.No : KIPIC/ZOR/HSE/SAF/0630- F4

Permit Renewal Sheet

Permit type: HWP / CWP ***Date of first issue:***

Permit #: ***Time of first issue:***

Description of Work:

Authorization/Renewal ***(التصريح / التجديد) الوضع آمن ويمكن البدء في هذا العمل***

- *Scope of the job written in the permit remains unchanged*
- *It is safe to proceed with this job*

الوردية / التاريخ *Date / Shift*	*Time الوقت*		*Name / Emp. No./ Signature.· الاسم / رقم التوظيف /التوقيع*			
	من From	*إلى To*	*المصدر Issuer*	*المنفذ Executor*	*المقاول Contractor*	*مشغل الحقل Field Operator*

☐ Not Required (only outside operation area) غير مطلوب (خارج منطقة العمليات فقط) **فحص الغاز**

☐ Continuous monitoring مراقبة مستمرة ☐ Re-test يعاد الفحص كل ..... ساعة every.....hour(s)

☐ See associated Entry Authorisation انظر تصريح الدخول المرفق

الوردية Shift	الحد الأدنى للاشتعال Comb. LEL <1%	أكسجين O_2 % >19.5	كبريتيد الهيدروجين H_2S PPM <10	أول أكسيد الكربون CO PPM <25	ثاني أكسيد الكبريت SO_2 PPM <2	أخرى Others	درجة الحرارة Temp. °C	نسبة الرطوبة RH %	فاحص الغاز GAS TESTER'S		التاريخ Date	الوقت Time
									التوقيع Name & Signature	رقم التوظيف Emp. No.		

N.B. *Renewal (Only for Low-risk Activities) is only allowed for a maximum of 7 days or less than 7 days as determined by the Asset custodian (from the date of first issue), with the condition that the scope of the works (as specified in section 1 (B) of the permit) is not changed*

ANNEXURE–I- "SAMPLE OF SAFETY AUTHORISATION CARDS"


KIPIC
Kuwait Integrated Petroleum Industries Company
Work Permit Authorization - Issuer

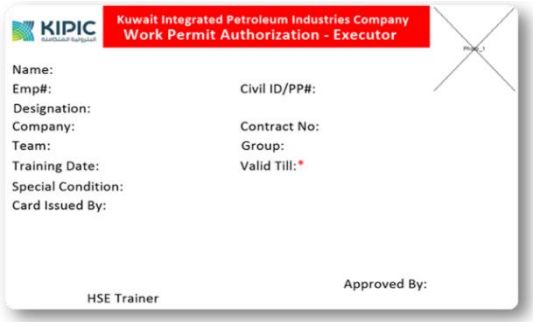
Name:
Emp#: Civil ID #:
Designation:
Company: Contract No:
Team: Group:
Traning Date: Valid Till:
Special Condition:
Card Issued By:

HSE Trainer Approved By:


Instructions

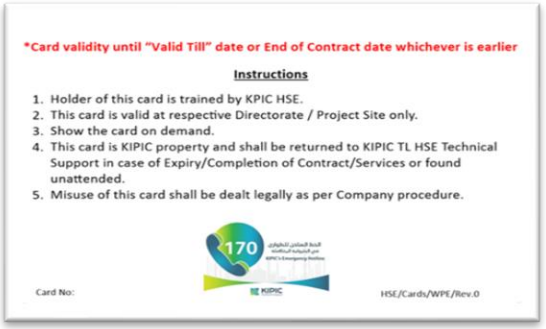
1. Holder of this card is trained by KIPIC safety and is responsible for
2. compliance with all KIPIC Safe Work Practices.
3. Show the card on demand.
4. This card is valid at respective Area / Unit.
5. Refer all KIPIC Safe Work Practices for more details.
6. Issuer is responsible to ensure compliance of safety requirements as mentioned in the work permit system.

Card no: HSE/Cards/WPI/Rev.0


KIPIC
Kuwait Integrated Petroleum Industries Company
Work Permit Authorization - Executor

Name:
Emp#: Civil ID/PP#:
Designation:
Company: Contract No:
Team: Group:
Training Date: Valid Till:*
Special Condition:
Card Issued By:

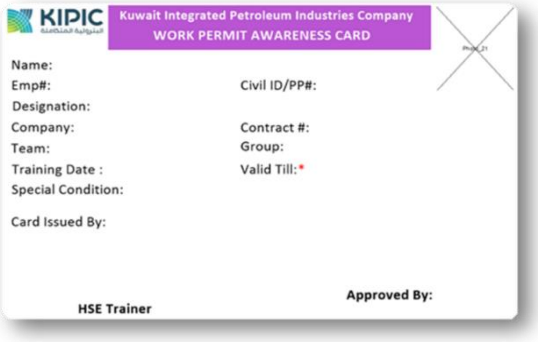
HSE Trainer Approved By:


*Card validity until "Valid Till" date or End of Contract date whichever is earlier

Instructions

1. Holder of this card is trained by KPIC HSE.
2. This card is valid at respective Directorate / Project Site only.
3. Show the card on demand.
4. This card is KIPIC property and shall be returned to KIPIC TL HSE Technical Support in case of Expiry/Completion of Contract/Services or found unattended.
5. Misuse of this card shall be dealt legally as per Company procedure.

Card No: HSE/Cards/WPE/Rev.0


KIPIC
Kuwait Integrated Petroleum Industries Company
WORK PERMIT AWARENESS CARD

Name:
Emp#: Civil ID/PP#:
Designation:
Company: Contract #:
Team: Group:
Training Date : Valid Till:*
Special Condition:
Card Issued By:

HSE Trainer Approved By:


*Card validity until "Valid Till" date or End of Contract date whichever is earlier

Instructions

1. Holder of this card is trained by KPIC HSE.
2. This card is valid at respective Directorate / Project Site only.
3. Show the card on demand.
4. This card is KIPIC property and shall be returned to KIPIC TL HSE Technical Support in case of Expiry/Completion of Contract/Services or found unattended.
5. Misuse of this card shall be dealt legally as per Company procedure.

Card no: HSE/Cards/WPA/Rev.0


KIPIC
Kuwait Integrated Petroleum Industries Company
AUTHORIZED GAS TESTER

Name:
Emp#: Civil ID/PP#:
Designation:
Company: Contract #:
Team: 8 Group:
Training Date : Valid Till:*
Special Condition:
Card Issued By:

HSE Trainer Approved By:

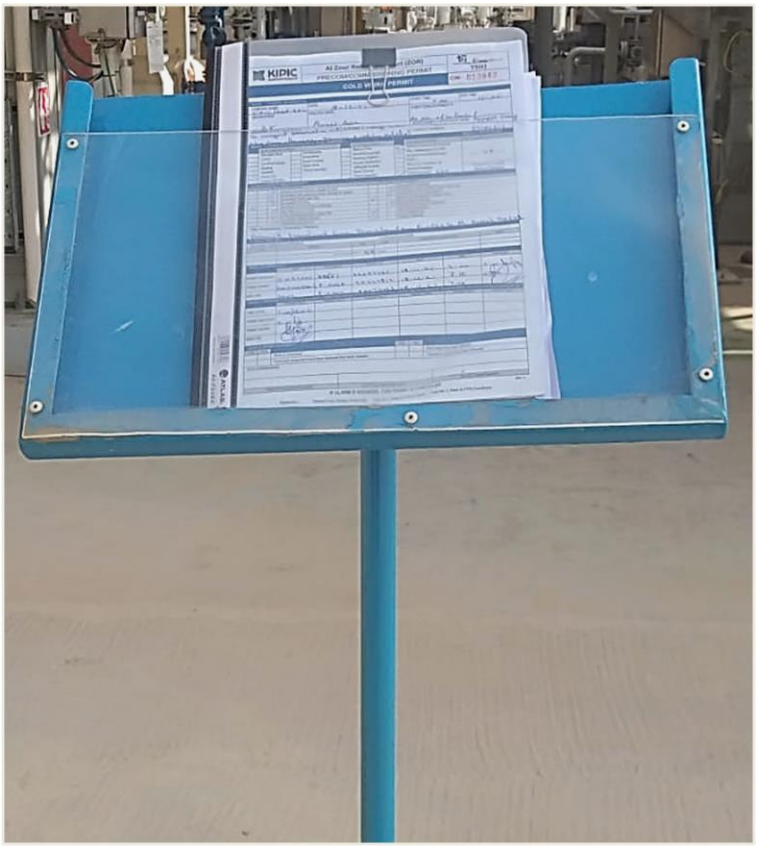

*Card validity until "Valid Till" date or End of Contract date whichever is earlier

Instructions

1. Holder of this card is trained by KPIC HSE.
2. This card is valid at respective Directorate / Project Site only.
3. Show the card on demand.
4. This card is KIPIC property and shall be returned to KIPIC TL HSE Technical Support in case of Expiry/Completion of Contract/Services or found unattended.
5. Misuse of this card shall be dealt legally as per Company procedure.

Card no: HSE/Cards/GTA/Rev.0

ANNEXURE-J- "SAMPLE WORK PERMIT DISPLAY STAND"



i. The work permits and associated attachments such as excavation authorization should be displayed in the stand.

ii. The stand should protect the permits & other documents kept inside from the extreme weather conditions.

ANNEXURE-K- "WPRA FORMAT"

Ref.No : KIPIC/ZOR/HSE/SAF/0630- F5

Kuwait Integrated Petroleum Industries Company **Part A**

☐ COLD ☐ HOT ☐ *CS ENTRY* ☐ *EXCAVATION*

Location	*☐ Al Zour ☐ LNGI ☐ PRIZe ☐ Other (……)*	*Ref No:*	
Group / Team		*Issued Date*	
AREA / (UNIT / BUILDING)		*Reviewed Date*	
		Next Review Date	
Description of Activity		*Review Frequency :*	
Estimated No. of Persons Likely to be exposed	*KIPIC- xx, Contractor -xx, HSE - xx*	*WPRA Checklist Required : Yes / No*	

S.NO	*Activity and Hazard*	*Likelihood*	*Severity*	*Risk*	*Mitigations Measures (precaution Taken) Consider KIPIC Procedure/ Standard/Codes etc.*	*Likelihood*	*Severity*	*Residual Risk*

*Designation**	*WPRA Team Lead (Actual Designation)*	*Issuer (Actual Designation)*	*Maintenance / Construction Engineer -KIPIC*	*Contractor Maintenance / Construction Engineer (Contractor Name)*	*Executor (Actual Designation)*	*Safety Engineer (Contractor Name)*	*Safety Engineer KIPIC (Respective Site Team & Area)*	*Others (Actual Designation)- incase Required*
Name								
Signature								
Emp. No #								

** WPRA team Members & other personal - Actual designation with team's title shall be mentioned properly under signatory section.*

Note:

1. Master Copy (original) shall be retained in file for record and future reference

2. Photocopy shall be attached with work permit

3. Ref. no. guidance: - Example LOCATION – GROUP/TEAM RISK ASSESSMENT – YEAR – SERIAL No. e.g. 1. OPS – XXXXRA – 22-1001, 2.MP - XXXXRA – 22-0001

4. Issued Date: First Issue Date (Shall remain same for all revisions), Review Date: Shall be changed on each revision.

Annexure-K- "WPRA Format"

Ref.No : KIPIC/ZOR/HSE/SAF/0630-F6

Part B

Description of activity									
WPRA Ref. # & WPRA Date									
Exact Location (Area / Unit or Building / Site)									
Permit issuing team									
Work Executing team									
Sr.#	*Hazards*	*Mitigation measures mentioned in WPRA*	*Compliance Status Yes / No*	***Signature of Work Permit Executor* / Issuer****					
				Date		*Date*		*Date*	

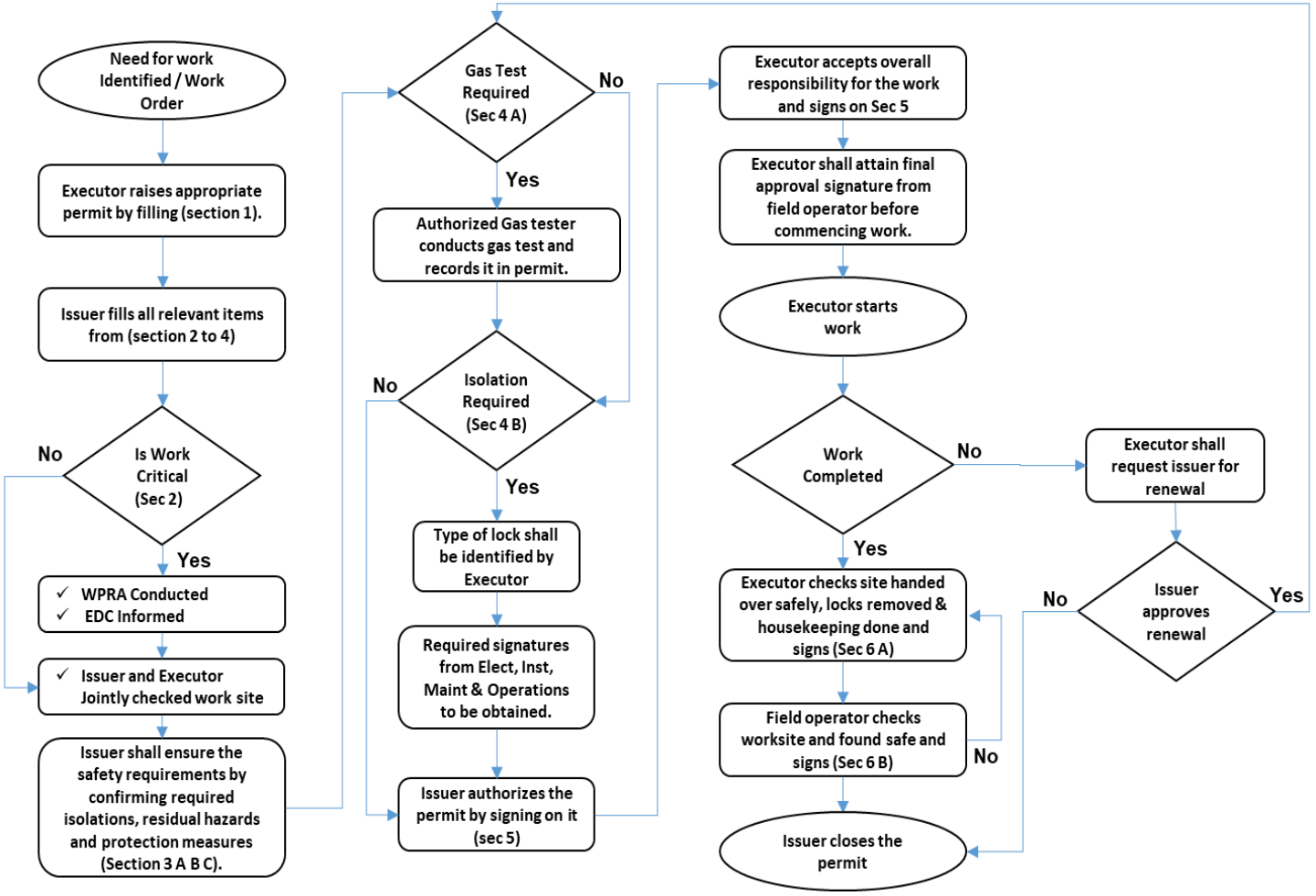
**** Issuer & Executor shall sign the checklist at least once in 7 days or as per the frequency decide by WPRA team, whichever is less***

ANNEXURE-L- "WORK PERMIT ISSUING / EXECUTING AUTHORITY & PERMIT SYSTEM

(Table # 3)

Sr #	Area	Issuing Authority	Executing Authority		Counter Signature	Work Permit System
			Service Team	Projects		
1.	Operation Units	Operations	Execution team (KIPIC / Contractors)	EPC Contractor Supervisor or Above	As Applicable	KIPIC
2.	Buildings / Open Area	Asset Custodian	Execution team (KIPIC / Contractors)	EPC Contractor Supervisor or Above		
3.	Project Controlled Fenced Area	Asset Custodian Team / PMC	EPC Contractor		Operations Team (for Critical Activities)	KIPIC
4	Brown Field (Green field Contractors)	Operations / Respective Custodians	EPC Contractor Supervisor or Above		Major Projects Team	KIPIC
5.	Green Field	EPC Main Contractor	EPC Sub Contractors / As per Contractor Work Permit Procedure		If Applicable as per Contractor Work Permit Procedure	EPC Contractors Permit

ANNEXURE-M- "PERMIT TO WORK FLOWDIAGARM"



ANNEXURE-N- "TOOLBOX TALK ATTENDANCE FORMAT"

Ref.No : KIPIC/ZOR/HSE/SAF/0630- F7

Contractor's Company logo	Contractor's Company Name	KIPIC البترولية المتكاملة

TOOLBOX TALK ATTENDANCE SHEET

Permit No :	**Location :**	**Date:**
Topic (Task Specific):		

Sl. No	Name	Emp. No	Company	Craft	Signature

Site Supervisor Name : Craft :

Signature :