

# National Manual for Assets and Facilities Management Volume 10, Chapter 3

## Hazardous Work Permit Procedure

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## Hazardous Work Permit Procedure

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## Hazardous Work Permit Procedure

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# Hazardous Work Permit Procedure

## Table of Contents

<b>1.0</b>	<b>PURPOSE</b>	<b>5</b>
<b>2.0</b>	<b>SCOPE</b>	<b>5</b>
<b>3.0</b>	<b>DEFINITIONS</b>	<b>5</b>
<b>4.0</b>	<b>REFERENCES</b>	<b>5</b>
<b>5.0</b>	<b>RESPONSIBILITIES</b>	<b>5</b>
5.1	The Facility Manager or Contractor Responsible	5
5.2	HSE Responsible	6
5.3	Contractor Responsible personnel supervisors	6
5.4	Facility Supervisors	6
5.5	Facility and Contractor Responsible Personnel	6
<b>6.0</b>	<b>REQUIREMENTS</b>	<b>7</b>
6.1	Other Procedural Controls and Permit Requirements	8
6.2	HWP Issue and Control	8
6.3	Distribution	9
6.4	Termination	9
6.5	HWP Changes	9
6.6	Facility Briefings	9
<b>7.0</b>	<b>USE OF THE HAZARDOUS WORK PERMIT</b>	<b>9</b>
<b>8.0</b>	<b>ATTACHMENTS</b>	<b>10</b>
	Attachment 1 - EOM-KSS-TP-000006 - Hazardous Work Permit Template	11
	Attachment 2 - EOM-KSS-TP-000007 - Hazardous Work Permit Register Template	12
	Attachment 3 - Hazardous Work Permit Instructions	13



# Hazardous Work Permit Procedure

## 1.0 PURPOSE

The purpose of this Procedure is to establish the requirements of using a Hazardous Work Permit (HWP) to plan, control, and document hazardous work. This procedure applies to all Project work in areas or for activities for which an HWP is deemed necessary.

## 2.0 SCOPE

The scope of this procedure is to provide means to the user to create a custom procedure outlining and detailing the requirements and responsibilities for Work Permit. This procedure applies throughout the Kingdom of Saudi Arabia to Operations and Maintenance functions and activities on government owned facilities and projects when the use of Work Permit Work is required.

## 3.0 DEFINITIONS

Definitions	Description
HSSE	Health, Safety, Security and Environment
HWP	Hazardous Work Permit
JHA	Job Hazard Analysis
OSHA	Occupational Safety and Health Administration
PPE	Personal Protective Equipment
PTW	Permit To Work
SCBA	Self-Contained Breathing Apparatus
WBS	Work Breakdown Structure

## 4.0 REFERENCES

- EOM-KSS-PR-000001 - A&FM General Safe Working Requirements Procedure.
- EOM-KSS-PR-000003 - Personal Protective Equipment Procedure.
- EOM-KSS-PR-000007 - Confined Space Entry Procedure.
- EOM-KSS-PR-000028 - Lockout/Tagout Procedure
- EOM-KSH-PR-000009 - Asbestos Management Procedure.
- EOM-KSS-PR-000033 - Job Hazards Analysis & Pre-Start Briefing Procedure
- Working at height procedure

## 5.0 RESPONSIBILITIES

Leadership is the single largest factor for success in the establishment of an illness and injury-free workplace. By their actions, leaders cascade, manage and drive execution and, instill operational discipline, and work to ensure that the entire workforce complies with Safety and Health requirements.

The risk of serious injury or death resulting from an accident requires to be minimized, and where possible eliminated. This procedure has been produced to reduce the danger and control of residual risks arising from work.

All activities undertaken by staff are to be undertaken in accordance with the requirements of this procedure. It will be necessary to determine who will be responsible for issuing the permit, who will be responsible for putting in place the relevant precautions (if not the person issuing the permit) and who will be the person responsible for the work that is to be carried out.

### 5.1 The Facility Manager or Contractor Responsible.

- Ensuring adequate resources, people, equipment, and training are made available to facilitate compliance with the requirements of this Procedure.



## Hazardous Work Permit Procedure

- Communicating with management concerning Facility HSE expectations related to Hazardous work permit procedure
- Ensuring that the requirements of this Procedure are effectively implemented. Ensure the resources and arrangements are available for the implementation and management of this procedure.
- Ensure that this procedure is implemented as adhered to.

### 5.2 HSE Responsible

- Providing technical advice and guidance.
- Reviewing Hazardous Work procedures for Facility maintenance and operations activities.
- Verifying that potential worker health exposures are identified and evaluated, and appropriate mitigations are implemented to eliminate hazards and protect workers.
- Maintaining and controlling monitoring equipment to be used by the HSE Department.
- Evaluating work areas for effective controls and protection.
- Assessing the Facility compliance with the requirements of this procedure.

### 5.3 Contractor Responsible personnel supervisors

- Confirming that Contractor Responsible Job Hazards Analysis & Pre-Start Briefing Procedure
- Address potential worker exposure to risks are identified, that procedures and job hazard analyses (JHAs) are developed correctly.
- Coordinating site activities to minimize exposure and control work areas that require special controls or protective measures to protect worker health.
- Coordinating with any Subcontractors to plan the work to limit the need for special controls or special health protection.
- Confirming that adequate signs, barriers, adequate lighting are provided around areas where hazards may exist.
- Confirming that safety related information regarding health hazards is communicated to affected personnel.
- Participate in random Job Hazards Analysis & Pre-Start Briefing.
- Shall provide and maintain equipment required to implement controls and protect workers.

### 5.4 Facility Supervisors

- Coordinating site activities to minimize the amount of potential exposure and reduce the number of personnel involved in such activities.
- Planning the work as far as practicable to limit the need for special controls and protective measures.
- Coordinating specific work activities to avoid other activities occurring in an area requiring specific health controls; ensure that signs, barriers, adequate lighting are provided; verify that other superintendents and other subcontractors have been informed when and where activities with special health controls will occur.
- Ensuring that adequate barriers, signs, and adequate lighting are provided around areas where Hazardous substances may present health hazards.
- Ensuring that Job Hazards Analysis & Pre-Start Briefing address any hazards posed by potential exposure to hazardous substances and /or related to the nature of the work.
- Providing safety related information regarding occupational health hazards relating to specific work activities to affected personnel.
- Verifying the implementation of requirements for a task as identified in the Job Hazards Analysis & Pre-Start Briefing, permit-to-work (PTW), etc.

### 5.5 Facility and Contractor Responsible Personnel

- All Facility and Contractor Responsible Personnel are responsible and accountable for complying with the requirements set forth in this Procedure.



## Hazardous Work Permit Procedure

- Accepting individual responsibility for their own safe behavior, as well as the safety and security of others around them, and executing their work in an environmentally responsible manner.
- Immediately reporting incidents, injuries, illness, and near-misses to their Supervisor.

### 6.0 REQUIREMENTS

#### Job Safety Analysis (JSA)

A Job Safety Analysis must be conducted at the Planning Stage to identify the hazard risks and determine control measures. These are used as part of the Work Permit Process to ensure that all controls are in place prior to commencing the task. Refer to EOM-KSS-PR-000033 Job Hazards Analysis & Pre-Start Briefing Procedure for further details.

Examples of activities that have been designated as requiring a permit include:

- Chemical, biological, or radiological exposure of significant risk.
- Physical hazards, such as work near or over deep water.
- Electrical hazards, such as high voltage.
- Fire/explosion hazards, such as welding (or other hot work) near flammable containers.
- Confined space entry.
- Working at height
- Electrical or energy isolation
- Hot work to include welding, burning, cutting, thermal imaging camera use.
- Man basket work
- Tank Cleaning and entry
- Asbestos work.
- Work in remote areas.

In addition, the HWP is also required for any work determined by the HSSE Representative to be significantly hazardous.

A HWP is required where the results of a Job Hazard Analysis indicate that the work contains significant hazards which cannot be easily eliminated or reduced to an acceptable level, therefore a high degree of supervision and control is required. Some activities specifically require a permit due to the regulatory controls relating the work activities or materials being handled. These will require a specific risk assessment.

#### Risk Assessments (RA)

The Competent Person is to ensure that a suitable risk assessment and safety method statement has been completed for the contractor's work and that all required control measures are implemented prior to and during the work. The risk assessment must be reviewed to determine the impact, if any; the work or contractor's method of operation will have on other activities. This risk assessment is to form the basis from which the contractor produces the works method statement.

The following further controls should be considered whilst completing the risk assessment and prior to commencement of work. This list is not exhaustive and should be referred to as guidance only:

- Operations Manager, in conjunction with the HSE if required, is to determine the most suitable type of controls necessary;
  - Contractors must be aware of all emergency procedures, escape routes and site first aid provisions;
  - All equipment is to be tested, inspected and maintained in accordance with statutory requirements;
- and
- Access equipment is to be designed and erected only by competent trained persons.

#### Competency Checking

Competency checking of staff and contractors who are to undertake work on behalf of the project is to take the form of reviewing documented proof of training by the Competent Person.



## Hazardous Work Permit Procedure

Staff Employed to Undertake the Works

Before a permit can be issued, each requester must supply the following:

- Name of the supervisor; and
- Names of all staff employed to undertake the works.

### **6.1 Each member of staff employed must have undertaken a Health and Safety induction and be in possession of appropriate certification, passes and authority Training**

Staff Working under PTW System

Training for this group should involve the following:

- A basic understanding of permit-to-work systems;
- Specific briefing on areas to which access is permitted;
- Briefing on emergency evacuation routes, procedures and emergency contacts;
- What tasks can only be carried out under a further permit; and
- What to do in emergency.

All persons working under the Serco permit-to-work procedure shall be provided with training in respect of the safety precautions before work commences.

The training can be relatively simple, such as a briefing or as part of the induction process.

Staff Responsible for Issuing Permits (Competent Person)

Training for this group should involve the following:

- Principles and administration of permit-to-work systems;
- Assessment of hazards involved in the type of work to be undertaken;
- Use and inspection of work equipment and PPE;
- Implementation of the necessary precautions and other PTW systems in place;
- How to test to ensure it is safe for work to commence, e.g. local knowledge of premises and working conditions; and
- What to do in an emergency e.g. evacuation, routes procedures and emergency contacts.

### **6.2 Other Procedural Controls and Permit Requirements**

Some hazardous activities are controlled by specific Procedures. These include but are not necessarily limited to:

- EOM-KSH-PR-000009 - Asbestos Management Procedure.
- EOM-KSS-PR-000007 - Confined Space Entry Procedure.
- EOM-KSS-PR-000028 - Lockout/ Tagout Procedure
- Working at height

In such cases where the subject hazardous activity is controlled by a procedure that requires the use of a permit system, the specific procedure relating to the hazardous activity/material requiring a permit, must take precedent over this procedure, as those procedures will have specific template which must be followed.

### **6.3 HWP Issue and Control**

Issue and Completion of Work Permit

Receivers of the HWP are to be clearly instructed that until they have received a correctly authorized permit no work whatsoever may proceed.

The following procedure is to be employed when completing a permit to work:

- Competent Person to receive and approve contractor's risk assessment and JSA;
- Competent Person to check if any plant, equipment or systems are to be isolated
- Competent Person to check that any other safety Permits are required or in place
- Upon satisfactory completion of HWP, the competent person may sign off the permit allowing work to proceed.

The following must be indicated on the form:

- Unique reference Number,
- Location and description of the works,
- Commencement time and date of the permit,
- Expiry time and date of the permit,





## Hazardous Work Permit Procedure

- The nominated skilled person in charge of the work should then countersign for acceptance of the permit conditions;
- 

- The HWP requestor will complete the work description information section (see **Attachment 1 - EOM-KSS-TP-000006 - Hazardous Work Permit Template**)
- The operations team will complete the sections for hazardous conditions, work site surveys, required PPE, monitoring, and special instructions.
- The operations team will retain the HWP until the facility is ready for work and any required permits, clearances, or other items are complete.
- Area supervisor Responsible will approve the HWP.

### 6.4 Distribution

- A Facility logbook will be used to number all issued HWPs in sequential order (see **Attachment 2 - EOM-KSS-TP-000007 - Hazardous Work Permit Register Template**).
- A copy will be available for each subcontractor and work crew.
- The operations team will retain the hard copy of the HWP in the Facility files.
- 

One copy of the document should be retained by the Competent Person.

One copy of the permit should be retained by the he nominated person in charge of the work and returned for sign off on completion.

After sign off both copies of the completed permit should be retained for audit purposes; and

Extension of time – a single extension of time may be authorized providing all safety controls remain in place. If the work conditions change or further extensions are required a new permit must be issued.

### 6.5 Termination

The operations team will terminate the HWP (re-evaluate JHA) when any of the following occurs:

- Work task is complete.
- HWP expiration date has been reached.
- Requirements set forth in the HWP or JHA are not effective.
- Back to back permits conflict
- Working conditions change.
- Scope of work is changed.

At termination, the HWP and all personnel entry logs will be retained for Project records.

### 6.6 HWP Changes

- For minor field changes, the supervisor can alter/line-out the item to be deleted and initial and date the change with the approval from the Operations manager
- For significant changes, the HWP will be terminated and a new one will be issued.
- 
- 

### 6.7 Facility Briefings

The HWP will be reviewed with personnel allocated to carry out the works prior to work and periodically thereafter by the immediate supervisor. A toolbox talk shall be conducted to identify the risks and controls to all those involved

## 7.0 USE OF THE HAZARDOUS WORK PERMIT

The HWP is a document that describes Safety and Health requirements. The HWP may be used to:



## Hazardous Work Permit Procedure

- Define the steps required to render equipment, task, plant safe, before work commences.
- Specify the stepped sequence of requirements for a single task at a Facility.
- Prescribe various levels of personal protection equipment (PPE).
- Serve as an abbreviated form of an HSE Execution Plan for limited, one-time, or short-duration activities.
- Supplement the HSE Execution Plan for initial Facility visits.
- Supplement instruction guides/work instructions (see **Attachment 3 - Hazardous Work Permit Instructions**).

HWPs are used to control work that has several steps with prerequisites such as utility clearances or hot work permit requirements. The HSE Representative will not release the HWP until the required clearances are received and prerequisites complete. These require to be verified by the Supervisor in charge of the task.

An additional specific risk assessment and permit to work maybe required and allocated back to back with this permit.

### 8.0 ATTACHMENTS

1. Attachment 1 - EOM-KSS-TP-000006 - Hazardous Work Permit Form Template
2. Attachment 2 - EOM-KSS-TP-000007 - Project Hazardous Work Permit Register Template
3. Attachment 3 - Hazardous Work Permit Instructions



## Hazardous Work Permit Procedure

### Attachment 1 - EOM-KSS-TP-000006 - Hazardous Work Permit Form Template

WORK DESCRIPTION  RISK ASSESSMENT VERIFIED    YES/NO ISOLATIONS VERIFIED    YES/NO		WORK LOCATION			
		EST. START DATE			
		REQUESTED BY			
		BACK TO BACK PERMIT NO:			
		REQUEST DATE			
HAZARDOUS CONDITIONS		SITE SURVEYS			
		TYPE	NUMBER	DATE	BY
REQUIRED PERSONNEL PROTECTIVE CLOTHING AND EQUIPMENT					
HEAD/EYES	FEET	HANDS	BODY	RESPIRATORY	
SAFETY GLASSES <input type="checkbox"/> GOGGLES <input type="checkbox"/> FACE SHIELD <input type="checkbox"/> HARD HAT <input type="checkbox"/>	RUBBER BOOTS <input type="checkbox"/> PLASTIC BOOTS <input type="checkbox"/> HIP WADERS <input type="checkbox"/> STEEL-TOED SHOES <input type="checkbox"/> DISPOSABLE SHOE COVERS <input type="checkbox"/>	COTTON GLOVES <input type="checkbox"/> LATEX GLOVES <input type="checkbox"/> RUBBER GLOVES <input type="checkbox"/> NEOPRENE GLOVES <input type="checkbox"/> SURGICAL GLOVES <input type="checkbox"/> POLYVINYL ALCOHOL <input type="checkbox"/> LEATHER GLOVES <input type="checkbox"/>	COVERALL/COTTON <input type="checkbox"/> COVERALLS/TYVEK <input type="checkbox"/> (REGULAR) COVERALLS/TYVEK <input type="checkbox"/> (SPECIAL: STATE TYPE)  <u>TYPE</u> RUBBER SUIT <input type="checkbox"/> ACID SUIT <input type="checkbox"/> RAIN SUIT <input type="checkbox"/> MOON SUIT <input type="checkbox"/>	HALF-FACE <input type="checkbox"/> (NEGATIVE PRESSURE)* FULL-FACE <input type="checkbox"/> (NEGATIVE PRESSURE)* POWERED AIR PURIFYING* <input type="checkbox"/>  <u>SPECIFY CARTRIDGE/ CANISTER TYPE:</u>  SUPPLIED AIR HOOD <input type="checkbox"/> SANDBLAST HOOD <input type="checkbox"/> SELF CONTAINED (SCBA) <input type="checkbox"/>	
SPECIAL INSTRUCTIONS			MISCELLANEOUS		
WATCHMAN <input type="checkbox"/> ELECTRICAL/ ENERGY LOCKOUT <input type="checkbox"/> PRE-ENTRY MONITORING <input type="checkbox"/> EMERGENCY EQUIPMENT <input type="checkbox"/>  HAZARDOUS MATERIALS <input type="checkbox"/> FIRE ISOLATION <input type="checkbox"/> INFECTION CONTROL <input type="checkbox"/> HOT WORK <input type="checkbox"/>  MECHANICAL ISOLATION <input type="checkbox"/> CONFINED SPACE <input type="checkbox"/> WORKING AT HEIGHT RISK <input type="checkbox"/> ENERGY RISK <input type="checkbox"/> MEWP USAGE <input type="checkbox"/>			"BUDDY SYSTEM" IN EFFECT <input type="checkbox"/> SAFETY PROFESSIONAL <input type="checkbox"/> SPECIAL TRAINING REQUIRED <input type="checkbox"/> NOISE MONITORING <input type="checkbox"/>  TAPE GLOVES AND BOOTS TO COVERALLS <input type="checkbox"/> LIFE LINE <input type="checkbox"/> SAFETY HARNESS <input type="checkbox"/>  RADIATION DOSIMETRY    INDV.    GROUP  TLD BADGE EXTREMITY TLD SRD 0-200 mR SRD (HIGH) DIGITAL ALARMING DOSIMETER  I.H. MONITORING    INV.D.    GROUP  EXPIRATION DATE		
APPROVALS		DATES	TERMINATION		DATES
HSSE Representative			HSSE Representative		
SITE MANAGER			SITE MANAGER		
			REASON		





## Hazardous Work Permit Procedure

### Attachment 3 - Hazardous Work Permit Instructions

#### **HWP Completion Instructions**

Work Description	Identify the task or tasks to be performed under the HWP (e.g., install monitoring well, collect samples at well site 3x, 34, 32)
Work Location	Identify the site or sites for this work
CTO No.	Identify the CTO (contract task order)
HWP No.	Sequence number for this CTO
Requested by	The individual in charge of these tasks
Request Date	Date the HWP is requested
WBS	The WBS for the tasks
Chemicals Present	List the principal chemical hazards
Radiation	Identify any radionuclide or radiation hazard information known
Other (Safety)	Identify any unique safety hazards (e.g., open trench, work over water, biological hazards)
Site Surveys	Identify expected air concentrations, radiation levels, and prior monitoring results
Required PPE	Indicate the general PPE levels A, B, C, Mod D or D; complete the PPE ensemble required for the work

#### **Hazardous Conditions - HWP Special Instructions**

Mobile Phone	Check if hard line phones are not available within 5 minutes
Remote Site	Check if first aid/medical transport is greater than 30 minutes away
Standard First Aid	Check for all other field activity
Engineering Controls	List Engineering Control required to conduct work
Emergency Plan Req.	Check if an emergency plan is required. A minimal emergency plan is prepared by completing sections D and E.
Access Log	Check to denote that a record of each site entry is required; otherwise, a one-time record of personnel entering the site will suffice
Medical Surveillance	Check if the government medical surveillance requirements apply
HAZWOPER Training Req.	Check if the government HAZWOPER Training is required for facility entry
Special Training	Check if any special training is required
Standby SCBA	Check if SCBA equipment is necessary as an emergency measure
Spill Control Kit	Check if activity could result in spill of any, significant quantities of hazardous materials
Contact SHM Prior to Work	Check if the work requires SHM involvement, pre-project briefing, or SHM awareness immediately prior to start of activity
Site Control (3 zone)	Check if the standard 3-zone site control system is to be used
Site Control (1 zone)	Check if a one-zone site control system is to be used
Emergency Decon Kit	Check if personnel could be subject to contamination with product, fuels, acids caustics, or corrosives in high concentrations
Minimum Decon	Check to denote a simple washing of equipment and exposed skin
Standard Decon	Check to denote a standard decontamination area and three-station wash
Vehicle Decon	Check if vehicle decontamination is required
Fencing	Check if barrier fencing is required
Barricade Tape	Check if barricade tape is required
Contain Decon Solution	Check if decontamination solution is to be drummed on facility
Shower Required	Check if a shower facility or use of a shower is required as part of decontamination protocol
Pre-existing Monitoring	Check if monitoring is required before personnel begin work or enter an area
Buddy System Required	Check for work in levels A, B, or C, confined space entry or other higher hazard tasks



## Hazardous Work Permit Procedure

Portable Radio	Check if workers will be dispersed beyond voice or audible signaling
Eyewash Station	Check if a pressurized (15-minute duration) eyewash is required due to potential for free product, caustics, acids or corrosives in hazardous concentrations
Hot Work Permit	Check if a permit is required for welding, entry to classified spaces, tank farms or similar areas
Excavation Permit	Check if personnel may enter excavations greater than 4 feet deep
Confined Space Permit	Check if personnel may enter sewers, tanks, or excavations greater than 4 feet deep or other confined spaces
Tagging Lockout	Check if personnel enter equipment or machinery areas where they may be exposed to accidental release of energy, or work under power lines where clearance cannot be maintained
Fire Extinguisher	Check for all work involving vehicles, fuel, off-road work, etc.
Standby Observer	Check for confined space work, supplied air work, etc.
Utility Clearance	Check for all subsurface work
Monitoring	Indicate the type of monitoring required and indicate if individual (personnel) or group (area) monitoring, or both are required
Radiation (a)	Indicate if a radiation dose rate or scintillation scan is necessary
Contamination (b-a)	Indicate if beta-gamma contamination surveys are required
Contamination (a)	Indicate if alpha contamination surveys are required
Dosimeter (b-a)	Indicate if a film or TLD-type radiation badge is required