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## 1. PURPOSE

The PTW system is a formalized process to control work and access to identified areas designed to prevent incidents in the workplace. This process authorizes work only after safe procedures have been defined and they provide a clear record that all foreseeable hazards have been considered.

## 2. SCOPE

These guidelines outline the Sesa Goa's PTW system, aimed at reducing the risk of incidents related to potentially hazardous activities or work areas. These guidelines are applicable to all staff and contractors working at all Sesa locations.

## 3. OBJECTIVE

The objective of the PTW system is to provide a mechanism to assist in the protection of personnel, equipment by managing the activities to ensure that identified controls and procedures are adequate and implemented in a consistent manner.

## 4. DEFINITIONS

### Confined space

An enclosed or partially enclosed space that: is not intended or designed primarily as a place of work, and is at atmospheric pressure while persons are in it, and may have an atmosphere with potentially harmful contaminants, an unsafe level of oxygen or stored substances that may cause engulfment, and may (but need not) have restricted means of entry and exit.

### Contractor:

Any person working on behalf of Sesa & who is not an employee of Sesa.

### Excavation:

Any digging or penetration of soil/ground deeper than 150mm in operational areas and 300mm, at any facility or easement under

### CO Gas Detector:

An instrument capable of detecting Carbon Monoxide.

### HIRA:

A formal safety assessment methodology utilised for identification of hazards and assessment of their risks using an approved risk matrix for implementation of risk control measures.

The study is undertaken by a team of relevant and competent personnel, and carried out for construction phase, and for commissioning and operational phases prior to commissioning


### Hot Work

Work that can produce a source of ignition within a Hazardous Area, e.g. grinding, welding, thermal or oxygen cutting or heating, and other related heat-producing or spark-producing operations.

### PIO Permit Issuing Officer

A person who is authorised to complete and issue a permit to the requesting engineer & is basically from the user department/an area owner. The Permit Issuing Officer is a Sesa Employee who is

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required for authorising Permits associated with tasks such as Confined Space Entry, Working at Heights, Hot Work, and Excavation Entry as a area owner.

#### **Permit Holder / Requesting Engineer**

A person who receives a permit from a permit issues. The Permit Holder/Requesting Engineer is a person who is competent to assist in the preparation of the Permit and the supervision of work under an authorised Permit.

#### **Permit Acceptor**

A Permit Acceptor is any person who will be involved in work under the Permit to Work System. They work under a Permit Holder/requesting engineer for the purposes of permit taken and are located on site (i.e. on the job). He can be either the contractor or the company workman.

#### **Responsible Manager**

The manager who has direct responsibility for the activity being undertaken or the area the activity is occurring in.

#### **Site Coordinator**

The Site Coordinator is a person appointed, by agreement at the site when a PIO has two or more Permits at the site and is unable to effectively monitor all Work Parties. The Site Coordinator must be a Permit Issuing Officer.

#### **Supervisor**

Person responsible for assigning and authorising employees to a task involving work, covered by the relevant **Permit**

Work Permit is a document authorising a person to undertake specific work in a designated area and is being used to effectively communicate the information to all personnel involved in that task.

#### **Working at Heights**

Work carried out at elevations where a rescue plan, restraint or fall arrest is required or elevated work platforms are used.

#### **Work Instruction**

A document that clearly instructs in the steps required to complete an activity or task.

## **5. RESPONSIBILITY/AUTHORITY**

### **5.1 Authority:**

#### **Issuing Authority:**

##### **Routine jobs:**

For 01 day till 03 days : Area In-charge/Area Owner  
For more than 3 days till 7 days : Shift Superintendent

##### **For non-routine jobs:**


For more than 7 days till 15 days : HOD of issuing department

#### **Requesting Engineer:**

Engineer/officer from the requesting department

### **5.2 Roles & Responsibilities:**

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To ensure the permit to work system is effective all individuals involved must clearly understand and take an active role in meeting their responsibilities. Due to the potential hazards associated with permit to work, the specific responsibilities outlined below must be followed.

#### **Permit issuer**

- Ensure all hazards associated with the proposed job have been identified, assessed and controlled
- Be familiar with the intended task(s)
- Ensure that the area and equipment are made safe before hand over
- Outline how the work is to be undertaken (e.g. procedures, precautions, equipment, location, start time, duration) - verbally and where necessary in writing
- Maintain records of work permits
- Authorised permit issuers are to be competent with the implementation of the requirements of these guidelines. This may be attained by reading and familiarising themselves with the requirements of these guidelines.

#### **Permit receiver**

- Satisfy themselves that they understand the requirements of the permit
- Be skilled, qualified trained and competent to perform the work, including the use of any personal protective equipment
- All aspects on the permit must be completed and documented
- Adhere to the PTW requirements
- Ensure the job is performed in a safe manner
- Be aware of the hazards that could exist and have the necessary controls in place
- Make equipment and area safe on completion of the task
- Make the work area safe and seek immediate advice if a doubt or if circumstances or conditions change
- Ensure that all tags and signs are prominently displayed so that personnel are aware that the equipment etc is isolated/not to be operated.


#### **Managers and supervisors**

- Supervisors must understand the work for which a permit has been sought and understand isolation and tagging procedures:
- Ensure that a permit is granted before work commences
- Ensure that the person(s) doing the work are appropriately qualified to do the work
- Ensure that all checks are undertaken to ensure that the permit was used correctly
- Ensure appropriate persons are informed when a job is completed or suspended and that the permit is cancelled.

#### **Safety Dept:**

- Provide technical guidance on the application of the permit to work system
- Evaluate and update the permit to work guidelines at the review period or as procedures change

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## 6. WORK PERMIT PROCEDURE

6.1 The work permits shall be issued from the following user department locations:

- a. Plant – Production Department
- b. Stores
- c. Workshop
- d. Projects
- e. HR Department
- f. IT
- g. Electrical
- h. Despatch Office
- i. RM Office
- j. Boiler Control Room

6.2 Safety department shall issue work permit book to the user department on request.

6.3 Permit is to be taken where two or more departments/agencies are involved and control is to be exercised by one department when other department is working.

6.4 The requesting engineer has to contact the issuing authority for obtaining the work permit.

### 6.5 Permit issue

Sesa has determined through legislation, standards, industry practice and via a risk assessment that the following work activities require a permit in order to gain approval for the work to commence.

- ✓ Gas prone areas
- ✓ Hot work by contractor at site.
- ✓ Roof access / working on height
- ✓ Confined space access
- ✓ Excavation work for laying cables/pipeline etc.


Permits are nominally issued by user department to permit receivers which may include employees or contractors. The principal employer will not issue permits to the contractors. The permit issuer shall discuss the requirements and details of the work activity with the permit receiver.

6.6 Work permit book shall be filled in triplicate. The first copy (white) will be retained in the book. The second copy (pink) will be issued to the requesting engineer, which will be maintained till the work permit is in force at the requesting engineer's department. The third copy (yellow) will be issued to the requesting engineer, which he is responsible to handover to the permit acceptor i.e., contractor/workmen.

6.7 Applicable System Procedures or Work Instruction pertaining to the work should be mentioned in work permit and requesting Engineer should give the reference of WI to the issuing authority & explain the same Work Instruction to the concerned workmen carrying out the work.

### 6.8 Authorisation

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Work may only commence after the appropriate permit has been completed and issued by the permit issuer. A list of permit issuers who may issue and cancel permits are listed in Appendix 1.

All parties must sign off before any work commences.

- 6.9 For the new projects wherein the work is expected to proceed for more than 30 days, a joint site inspection by HOD-Production, HOD-Electrical, HOD-Mechanical, HOD-Projects along with Manager-Safety and the Area In-charge is required to be carried out before issuing the work permit. In such cases the validity of work permit is 15 days.
- 6.10 Work permit for routine jobs is to be issued for maximum 7 days.
- 6.11 Timing of working hours should be mentioned on permit. If no such timing is mentioned it is valid only between 7AM to 7 PM.
- 6.12 However for any work expected to be carried out for more than seven days work permit should be issued by HOD only.
- 6.13 As far as is reasonably practicable, the requesting engineer/ permit holder shall be responsible for monitoring the work at regular intervals, to ensure that the operatives are adhering to the conditions of the permit.
- 6.14 **Work completion and commissioning**  
Prior to leaving the site the employee/contractor is to clean up the workplace to ensure it is tidy and left in a safe condition, guards are put back in place and perform a final inspection of the workplace to ensure no hazards remain.


Once the work activity is complete, the permit receiver is required to return the permit to the permit issuer. When the permit issuer is satisfied that work has been completed to job specifications and safety requirements they may sign off the permit.

On the completion of work and before the work area or plant is returned to service, a check shall be conducted to ensure:

- the work has been completed
- any temporary arrangements/installation such as temporary barricades, excavation holes etc have been removed
- all personnel and equipment are accounted for
- the work permit has been cancelled or signed-off as being completed, and
- all related equipment and facilities and fire systems are operational and have been inspected and tested appropriately.

- 6.15 The work permit shall be cleared on the original copy by the requesting engineer / any other engineer of the requesting department and the issuing dept. engineer jointly after handing over the second and third copy to the issuing department.
- 6.16 Once the work permit is cleared on first copy, the user department must tear off the second and third copies of said work permit.
- 6.17 The practice should be made to have a joint site inspection, wherever possible, by requesting engineer and issuing Authority so as to ensure that the site is safe and proper housekeeping (such as scrap is shifted, etc.) is done; before clearing the permit.
- 6.18 **Out of Working Hours:** Whenever possible, work that requires a Permit-to-Work should be carried out only during normal working hours. However, there will be occasions when this is not possible and the requesting engineer has to leave the site for any reason, it shall be handed over to the relieving engineer. He must ensure that his relieving engineer is available

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to monitor contractor compliance throughout the duration of the permit irrespective of when it takes places.

- 6.19 **Shift Changes and Permits:** During changeover of shifts there is an increased potential for a breakdown in communication. The following procedures will assist in eliminating this.

**Permit Issuing Officer:**

During shift changes, the oncoming Permit Issuing Officer shall be familiar with all Permits for work in progress.

**Change of Permit Holder**

Where there needs to be a change of Permit Holder, the current Permit Holder shall ensure that the work site is left in a clean, safe and orderly condition. A departing Permit Holder shall advise the Permit Issuing Officer of the job status and return the Permit to the Permit Issuing Officer.

- 6.20 If any job is not completed within the time mentioned on the work permit, requesting engineer/ any other engineer of respective department has to revalidate the work permit from the user department at least 2 hrs before the expiry of Work Permit validity.

- 6.21 Work permit can be renewed only once.

- 6.22 Validity of the renewal

- For routine jobs : 3 days
- For non-routine jobs : 15 days.

- 6.23 If the job is not completed within the renewed date fresh work permit should be obtained.

- 6.24 Authority for the renewal of permit

For the permit taken for 01- 03 days & issued by the area in-charge: relieving engineer from issuing dept.

For the permit taken for 03-07 days & issued by Shift Superintendent: Shift Superintendent

For permit taken for 07 – 15 days: HOD of issuing dept.

- 6.25 In case the requesting engineer has not handed over work permit copy to the relieving Engineer, and the requesting department wants to clear the work permit, following procedure to be followed

- Shift Superintendent and the relieving engineer of the concerned department shall make a joint inspection at site and ensure that the equipment can be taken into operation. They should combinely clear the work permit only after declaring the workplace is safe for further operations.
- Advisory Letter to be issued to engineer who misplaced work permit for first time. If it is repeated a stern action may be initiated.
- Henceforth, no other work permit /protocol should be used other than this.


- 6.26 **Permit to Work System Performance Monitoring:**

In order to ensure that the PTW System is able to provide the maximum benefit in controlling hazards, the performance of those working within it shall be measured periodically.

**Permit Monitoring:**

A register for the status of work permit shall be maintained at the user department. Pending work permits will be entered and updated at 19 hours on everyday by B Shift engineer. The concerned shift superintendent / shift in charge of the user department should check the register at the beginning of the shift to know which work permits have been issued & where the jobs are going on. As a random spot check, the inspection can be carried out to check cover correctness of the Permit and compliance with precautions and conditions defined by the Permit.

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#### Periodic Internal Review

In addition to the regular inspections and audits, a more formal review is to be performed by the Safety dept. once in a month to check the effectiveness in implementation of work permit system.

- 6.27 In case of any doubts regarding work permit for a particular job Safety Dept. is to be contacted.

#### Annexure I - Conditions for a Permit : AREAS/ACTIVITIES THAT NEED /DO NOT NEED WORK PERMIT

##### A. Work permit **must be obtained** for all the activities

- ✓ where user department have to exercise control measures from safety point of view
- ✓ where co-ordination between different agencies is very important.
- ✓ where lots of machines are at work and different people are working at a time.

##### A.1 To elaborate further following activities are listed where work permit must be taken

- a. Any job on gas lines and gas prone areas, slag granulation and GCS two ponds.
- b. Any excavation work inside the Premises for laying of cables, pipelines etc.
- c. Entering into the confined space such as Thickener slurry pump, inside the bells, in the GCS or slag granulation tunnel, dust catcher, saturator, etc. but does not include coke tunnels.
- d. Any Equipment which is driven pneumatically.
- e. Any cutting, welding jobs in the running plant, other than designated areas of hot work (e.g. Workshop/Contractor shed).
- f. Any sheeting job on roof/ working on heights.
- g. Cleaning of underground tunnel, opening of manhole, etc.
- h. Painting work where in scaffolding is used.

##### B. Work permit **may not be required to obtain** where


- ✓ Job is of routine nature and skilled people are going to carry out the job.
- ✓ User department doesn't have any control on activity or on surrounding environment like HEMM Repairs
- ✓ User department can't start the process or equipment independently.

##### B.1 To elaborate further following activities are listed where work permit may not be taken.

- a. On planned shutdown day, for all electrical driven equipment, except activities mentioned under item A.1 above.
- b. Jobs which are of small nature, one time and short duration. (Typically less than an hour)
- c. Break down job (under close coordination with operation)
- d. Electrically driven standby equipment for routine maintenance
- e. In case of any ambiguity, or non clarity, Manager Safety should be consulted.
- f. Jobs at Admin bldg., Canteen, Project bldg., Security barrack. (Except for the activities mentioned in A.1). However for such activities, permission/information must be obtained from concerned user representative preferably by sending an-email)

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- g. Miscellaneous jobs such as door, window repairs, plumbing, and painting. Only the care has to be taken that hot work is not simultaneously in progress along with painting/varnishing jobs & no working on heights.

**Note: In case of any ambiguity, or non clarity, Manager Safety should be consulted.**

## 7. General Safety Instructions

Persons executing the job shall fully understand the safety rules & regulations of the plant. Following are general safety instructions other than applicable System procedures/Work Instructions which have to be followed without fail throughout the work being carried out as per the work permit.

- 1) Requirement of the work permit system should be checked with concerned dept. head / supervisor before filling of the work permit form.
- 2) Job site conditions should be personally checked by the user.
- 3) Electrical shutdown is mandatory while working on electrical driven equipment which are the part of work for which permit is taken.
- 4) All electrical tools used should be certified by the electrical dept.
- 5) Mandatory Safety PPE shall be used while carrying the work.
- 6) Full body harness shall be used for all the jobs at height & it should be certified.
- 7) When work is being carried out at elevation area below should be barricaded or person is to be posted.
- 8) Precaution should be taken to avoid falling of material when working at elevation.
- 9) Lifting tackles should be tested & approved.
- 10) No person should work under suspended areas.
- 11) Work area should be free from CO gas which has to be monitored at regular intervals where jobs are undertaken.
- 12) "Work in progress" sign board / tape have to be displayed at strategic locations. Area should be cordoned whenever required.
- 13) While working in areas like Jetties where there is a danger from large water bodies, Life buoys should made available a the work-site.
- 14) Guards should be put back before surrendering the permit.
- 15) Work area should be cleaned up.
- 16) While working in the vicinity at ladle movement areal crane operator should be informed above the job ad ladled movement is to b restricted.
- 17) Smoking in the work premises is strictly prohibited.

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