



Lusail Real Estate Development Company

Health, Safety, Security, Environment, Logistics & Quality Department

Lusail Construction Safety Management Procedure – Permit to Work Program

Document No	<u>LUS-HSE-WG3-446-042.01</u>	Rev	<u>1</u>
Uncontrolled Copy	<input type="checkbox"/>	Controlled Copy	<input checked="" type="checkbox"/>
		Date	<u>01Apr-2015</u>

COMPANY PROPRIETARY INFORMATION

Prior to use, ensure this document is the most recent revision by checking the Master Document List. To request a change, submit a Document Change Request to the Document Control Representative. Master copy of this document will be maintained by the LREDC QA/QC Manager. Not controlled if printed.

Amendment Record

This document is reviewed to ensure its continuing relevance to the systems and process that it describes. A record of contextual additions or omissions is given below:

Rev.No	Description / Comments	Prepared By	Checked By	Approved By	Issue Date
1	(Pg. 1) Company Propriety Information – Not controlled if printed has been added.	HSE Working Group	Michael Ford	Uwe Krueger	1 st April 2015
1	(Pg. 2) Revised Amendment Table	HSE Working Group	Michael Ford <i>Michael Ford</i>	Uwe Krueger	1 st April 2015

CONTENTS

1.0	DESCRIPTION
2.0	DEFINITIONS
3.0	RESPONSIBILITIES
4.0	PERMIT REQUIRED WORK ACTIVITIES
4.1	EXCAVATION
4.2	LOCKOUT/ TAGOUT
4.3	HOT WORK
4.4	PRESSURIZED LINE TESTS
4.5	CONFINED SPACE ENTRY
4.6	SUSPENDED MAN BASKETS
5.0	PROCEDURAL REFERENCE
6.0	PERMIT PROGRAM SPECIFICS
7.0	PERMIT AUTHORIZATION & TERMINATION
8.0	TRAINING REQUIREMENTS
9.0	RECORDKEEPING
10.0	REFERENCES
11.0	PROCEDURAL ATTACHMENTS

1. Description

This element of the Lusail Construction Safety Management Procedures (LCSMP) provides Contractors and Consultants with an overview of the Lusail Permit to Work (PTW) Program for select work activities identified as being “high hazard.”

Activities referenced in this Procedure require issuance of a Lusail Permit to Work prior to the commencement of that activity. Work shall proceed only upon issuance of an approved permit meeting all requirements of this Procedure and relevant components of the Procedure specific to that work activity.

This Procedure applies to all Lusail personnel, Supervising Consultants, Developers, Contractors, and Subcontractors working on the Lusail Real Estate Development Project. It shall also apply to all phases of the particular activity per specifications described herein.

2. Definitions

Term	Description
Job Hazard Analysis (JHA)	A process used to identify the hazards or potential hazards associated with each step of a job or work plan to uncover hazards and then eliminate, control, or remove them before the work is started.
Excavation	For purposes of this Procedure, Excavation includes any disturbance or removal of soil to a depth of one (1) meter or greater.
Hot Work	Any work activity, equipment, or tool, the use of which produces a flame or spark capable of causing ignition.
HSE	Health Safety & Environment
LCSMP	Lusail Construction Safety Management Procedures
Pressurized	For purposes of this Procedure, Pressurized line tests include any test containing hydraulic pressure greater than or equal to sixty (60) pounds per square inch gauge, and pneumatic tests of ANY pressure.
PTW	Permit to Work
PTW Program	A permit to work program is a system by which high hazard work activities are planned and controlled by use of a pre-planning and authorization document. Under the system, the work activity does not begin until the permit is completed, reviewed, communicated and authorized.

3. Responsibilities

The Contractor is fully responsible for the pre-planning, development of Method Statements, Job Hazard Analysis, and overall safe work planning and implementation. Project Management is responsible for the assurance that all work is planned and conducted according to the pre-planning documents; Contractor and Lusail Health Safety & Environment (HSE) procedures and the Qatar Construction Specifications 2010. Should a conflict occur between procedures/standards or requirements the more stringent shall apply.

4. Permit Required Work Activities

The following work activities are considered by Lusail to contain elevated risk of high loss potential incidents. Due to this, Lusail requires that each activity be permitted per this Program and controlled by the Contractor and Supervising Consultant, with the goal of zero incidents.

Work activities which require a permit at Lusail include:

-
- Excavation
 - Lockout/ Tagout
 - Hot Work
 - Pressurized Line Testing
 - Confined Space Entry
 - Work from Suspended Man Baskets

It should be noted that permit required activities may be added or removed from this PTW Program by Lusail at any time. Lusail will provide Consultants and Contractors notification of additions and deletions to the PTW Program. Lusail will also provide permit forms for any new permit required work activities.

4.1 Excavation

Excavation and trenching to depths greater than 1.5 meters (5') requires a Lusail Excavation Permit (Attachment [LUS-HSE-FM4-446-066](#)). Excavation and trenching shall not begin until the Contractor has applied for and acquired an authorized permit to dig from their Supervising Consultant.

The Contractor shall submit their Method Statement for the work planned and an Job Hazard Analysis (JHA) to the Supervising Consultant for review. Both the Contractor and Consultant shall walk down the proposed excavation area prior to the permit to dig being issued.

Excavation permits shall be valid for one (1) ten hour shift only. Work activities which exceed one shift to complete will require a new permit be issued. Contractors will not be permitted to excavate using expired permits.

The Contractor shall retain the original copy of the permit at the work area for the duration of the work activity and shall present the permit to all Lusail Representatives upon request.

Permits shall be terminated by the Supervising Consultant upon completion of the work or expiration of the shift. The permit shall also be terminated when unforeseen/ unknown hazards are encountered which elevate cave-in potential of excavation walls or otherwise present risks to workers which were not previously identified in the Method Statement or Job Hazard Analysis (JHA).

4.2 Lockout/Tagout

All work activities requiring lockout and/ or tagout of equipment, systems, tools, or vehicles shall require a Lusail Lockout/ Tagout Permit (Attachment [LUS-HSE-FM4-446-048](#)). Activities involving lockout and/ or tagout shall not begin until the Contractor has applied for and acquired an authorized lockout/ tagout permit from their Supervising Consultant.

The Contractor and Supervising Consultant are required to walk down the work area prior to permit issuance. At this time, the Contractor is required to submit their Method Statement and AHA for the work to be performed.

Lockout/ tagout permits shall be valid for one (1) ten hour shift only. Work requiring equipment to be locked/ tagged out for durations exceeding one shift will require a new permit be issued.

The original copy of the lockout/ tagout permit shall be retained at the work area, equipment or tool which is locked/ tagged for the duration of the activity, or until the permit is termination. Permits shall remain in place until the locks/ tags have been removed and the equipment/ tool has been re-energized. Permits should be readily available to Lusail Representatives upon entry into the work area and/ or upon request.

Lockout/ tagout permits shall be terminated at the end of the ten hour shift or at the completion of the lockout/ tagout. A permit will also be terminated where additional sources of hazardous energy, not addressed by the existing permit, are identified, or upon discovery of previously unknown/ unplanned for hazards.

4.3 Hot Work

Hot work includes any work activity containing or producing sparks or open flame which may serve as a source of ignition. Examples of hot work activities include torch cutting, welding, metal grinding, saw cutting on metal, sweating copper pipe, and select use of radiant heat guns/ hot plates.

The Contractor shall apply for and acquire an authorized Lusail Hot Work Permit (Attachment [LUS-HSE-FM4-446-063](#)) prior to starting any hot work activity, of any size, in any location. Hot Work permits shall be issued by the Contractor's Supervising Consultant following submittal of a JHA, Method Statement for the activities planned, and a walk down of the hot work area.

Hot work permits are valid for one (1) ten hour shift, unless approved for extended durations by the Supervising Consultant and Lusail HSE Department. The Contractor is required to provide the Consultant with adequate written justification for requests for hot work permits authorized to exceed one shift. A new permit will be required should the work activity not be completed prior to the end of the shift or permit period.

The original copy of the hot work permit shall be retained at the specific hot work area for the duration of the work activity. For activities permitted beyond one shift, the Contractor must ensure the permit document is protected to avoid loss or damage. Permits must be readily available for Lusail Representative review upon entry into the work area, or upon request.

The Supervising Consultant shall terminate the hot work permit at the conclusion of the work activity, when the permit period has expired, or when previously unknown/ unplanned for hazards have been identified or arisen.

4.5 Pressurized Line Tests

The Lusail PTW Program includes work activities involving the pressurization of system, process, equipment pipe works or lines due to the potential for catastrophic failure of the system resulting in property and personal damage/ injury. Pneumatic tests of any air pressure and hydraulic test of sixty (60) pounds per square inch gauge (psig) or greater require a Lusail Pressurized Line Test Permit (Attachment [LUS-HSE-FM4-446-062](#)).

The Contractor shall apply for and acquire an approved pressurized line test permit prior to pressurizing any individual pipe or pipe system. The Contractor shall provide the Supervising Consultant with the JHA and Method Statement for the Test and both shall walk the area down prior to the permit being issued.

Pressurized line test permits shall be made valid for the planned duration of the test. Typically, this ranges between four (4) hours and seventy-two (72) hours. Should the test require extension, a new permit shall be applied for and acquired from the Supervising Consultant.

The Contractor is required to post copies of the permit at twenty five (25) meter intervals along lines under pressure. The Contractor is also required to clearly sign post the maximum test pressure being implemented on the line at the same interval. Permits shall remain in place until the completion of the test unless terminated prior to test completion due to line failure.

A pressurized line test permit will automatically terminate upon line failure. Where no failure occurs, the Consultant shall terminate the permit at the completion of the test or upon discovery that a line has been over-pressurized.

4.6 Confined Space Entry

All work activities requiring entry into spaces meeting the definition of a “permit required confined space” shall also require a Lusail Confined Space Entry (CSE) Permit (Attachment [LUS-HSE-FM4-446-037](#)). The Contractors internal CSE permit for the specific entry does not negate the requirement for the Lusail permit. Refer to [LUS-HSE-WG3-446-015](#), Confined Spaces, for the definition of a “permit required confined space entry.”

All Contractors shall apply for and acquire an authorized Lusail CSE permit prior to any worker entering a permit required space. The Supervising Consultant is required to walk down the proposed work space prior to permit issuance. The Contractor shall submit an JHA and Method Statement to the Consultant for review prior to issuance of the permit.

The Lusail CSE permit shall be valid for a maximum of one (1) ten hour shift. There are no exceptions to this policy. Contractors will be required to apply for and acquire new permits for work activities inside confined spaces which exceed one shift in duration. Renewal permits will be issued by the Supervising Consultant.

Both the Lusail CSE permit and the Contractors internal CSE permit shall be posted at the entry(s) to the confined space for the duration of the work activity inside the space. It is the Contractors responsibility to ensure that all personnel involved in the confined space entry are aware of the permit specifications, hazardous conditions present or expected inside the space, and are adhering to all confined space entry safety requirements.

The Supervising Consultant is responsible for termination of the Lusail CSE permit upon completion of the work activity and worker egress from the space, or at the end of the shift. Permits shall not be terminated until it has been verified that all entrants have exited the confined space. Permits shall also be terminated when unknown or unplanned for hazards are encountered inside the space.

4.7 Suspended Man Baskets

Work from suspended man baskets generally entails a high level of risk. Given this, Contractors are advised to exhaust all possible options for work platforms prior to resorting to the use of suspended man baskets. However, it is understood by Lusail that in some scenarios, use of such work platforms will be unavoidable.

Activities involving the use of crane or forklift suspended man baskets are required to be permitted using the Lusail Suspended Man Basket Permit (Attachment [LUS-HSE-FM4-446-082](#)). Permits will be issued by the Supervising Consultant following review of the Contractors Method Statement, JHA, and walk down of the work area and equipment.

Permits shall be valid for one (1) ten hour shift. Activities exceeding one shift in duration will require the Contractor to apply for and acquire a new permit from their Consultant.

The original copy of the suspended man basket permit shall be posted on the crane or lift from which the man basket is suspended. The permit shall remain in place for the duration of the work activity while the basket is suspended.

The suspended man basket permit shall be terminated by the Supervising Consultant at the conclusion of the work activity or at the end of the shift. The permit shall also be terminated upon discovery of unknown or unplanned for hazards, defective hoisting equipment, or a change in the crane/ forklift operator.

5. Procedural Reference

Health, safety and environmental policies, procedures and requirements for the six (6) work activities included in this Lusail PTW Program are specifically addressed in the following Lusail Procedures:

- [LUS-HSE-WG3-446-033](#) Excavation
- [LUS-HSE-WG3-446-023](#) Lockout & Tagout
- [LUS-HSE-WG3-446-012](#) Fire Protection
- [LUS-HSE-WG3-446-028](#) Welding Cutting & Brazing
- [LUS-HSE-WG3-446-027](#) Pressurized System
- [LUS-HSE-WG3-446-015](#) Confined Space Entry
- [LUS-HSE-WG3-446-026](#) Cranes Hoists & Lifts

6. Permit Program Specifics

Lusail PTW Program permits consist of three (3) page carbon-copy type forms. The top copy (original) shall be retained by the Contractor and posted in the work area per Section 3 requirements. The second copy is retained by the Supervising Consultant at the time of issuance to the Contractor. The third copy shall be submitted to the Lusail HSE Department by the Supervising Consultant.

Supervising Consultants shall submit permit copies to Lusail HSE on a once weekly basis, at a minimum. Permits should be submitted to the Lusail HSE Representative assigned to the specific work area, if known.

Work activities may, at times, require multiple permits per this PTW Program. Contractors must ensure that a valid permit for all permit required activities is applied for and acquired prior to starting work. Consultants must ensure that the Contractors Method Statement and JHA adequately address all permitted activities and the hazards involved.

All permits shall be written/ completed in the English language. Requirements of the permit shall be interpreted to those workers who are not proficient in the English language. The Supervising Consultant and Contractor HSE Representative shall ensure that permit requirements have been adequately communicated to all participants prior to the start of work activities.

Contractors must plan appropriately to ensure that work activities are not being performed using expired permits. Where a Contractor identifies that the time required to complete a work activity will exceed the permitted shift or duration, the Contractor must contact the Supervising Consultant well enough in advance to ensure a renewal permit is acquired prior to the existing permit expiring.

7. Permit Authorization & Termination

The Supervising Consultant Representative who authorizes a permit is responsible for terminating the same permit. The Consultant Representative is responsible for ensuring that the receiving Contractor strictly adheres to permit validity periods.

The Consultant Representative is responsible for monitoring the permitted activity throughout the permit period to identify deviations from permit requirements and/ or to identify previously unknown or unplanned for hazards.

The Consultant is also responsible for returning to the work area at the conclusion of the permit period to terminate and gather the permit(s). At this time, the Consultant will review the Contractors application for a renewal permit for those work activities which remain incomplete.

Upon review of existing conditions and any new hazards not addressed by the previous permit, the Consultant Representative will issue the Contractor a renewal permit.

8. Training Requirements

The Contractor Project Manager shall ensure that all personnel assigned to his Contract employee/ subcontractor) are made aware of the Lusail PTW Program and the work activities which are included in the Program.

Training shall be provided by the Contractor HSE Representative or Supervising Consultant to those persons (Permit Receivers) responsible for implementing the PTW Program on site. Training shall be documented.

The Supervising Consultant is responsible for ensuring that only trained Contractor “Permit Receivers” are implementing the Contractors PTW Program and being issued permits by the Consultant. Workers who have not been trained as “Permit Receivers” will not be issued permits to work.

“Permit Receivers” training shall be updated as necessary depending upon observation, and annually at a minimum.

9. Recordkeeping

The Contractor HSE Representative shall retain copies of all terminated permits, and “Permit Receivers” training records on file in the site office. Files must be retained until completion of the project and archived for a minimum of 10 years from creation date.

The Supervising Consultant shall retain copies of all terminated permits on file in their site office. The Consultant shall conduct a permit records review at least annually to identify areas for improvement in the PTW Program

10. References

Qatar Construction Specifications 2010 Section 1 Part 10.3 “Special Safety Precautions”

Qatar Construction Specifications 2010 Section 11 Part 2.3.11 “Permit to Work Systems”

11. Attachments

LUS-HSE-FM4-446-066	Excavation Permit
LUS-HSE-FM4-446-048	Lockout/ Tagout Permit
LUS-HSE-FM4-446-063	Hot Work Permit
LUS-HSE-FM4-446-062	Pressurized Line Testing Permit
LUS-HSE-FM4-446-037	Confined Space Entry Permit
LUS-HSE-FM4-446-082	Suspended Man Basket Permit