



Lusail Real Estate Development Company

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

Lusail Construction Safety Management Procedure – Control of Substances Hazardous to Health

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COMPANY PROPRIETARY INFORMATION

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1. Description

This element of the LCSMP provides guidelines to inform employees of potentially hazardous chemicals used on Lusail Construction Projects. This element applies to all Lusail personnel, Contractors, Developers, Consultants and Subcontractors working on the Lusail Project.

This element does not address the hazards of exposure to exhaust by-products from diesel engines, or materials designated as waste or emissions from waste. These hazards are regulated by other standards. Further, this element does not apply to the following substances:

- ◆ Agricultural products or vegetable seed treated with pesticides
- ◆ Articles not modified (whole components, such as screws to be plated)
- ◆ Biological hazards (first aid waste)
- ◆ Consumer products (e.g., “white-out,” spray paint)
- ◆ Consumer products used at work where exposure is no more than consumer use (spray paint used only as much and as long as a person would at home)
- ◆ Cosmetics
- ◆ Drugs in retail packaging and in packaging designed for personal consumption
- ◆ Dust, if not hazardous
- ◆ Food and food ingredients
- ◆ Hazardous wastes
- ◆ Personal food consumed at work
- ◆ Pesticides
- ◆ Radiation
- ◆ Retail food or alcohol
- ◆ Tobacco or tobacco products
- ◆ Wood or wood products (unless treated and/or sawed or cut, creating dust)

2. Definitions

Term	Description
Job Hazards 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.
Carcinogen	A chemical known or believed to cause cancer in humans.
CAS Number	The identification number assigned by the Chemical Abstracts Service (CAS) to specific chemical substances.
Chemical Name	The scientific designation of a substance in accordance with the nomenclature system developed by the International Union of Pure and Applied Chemistry or the system developed by the CAS.
Common Name	Any designation or identification, such as code name, code number, trade name, or brand name, used to identify a substance other than by its chemical name.
Expose or Exposure	In the course of employment, an employee is subject to a hazardous chemical through any route of entry, including inhalation, ingestion, skin contact, or absorption, and includes potential, possible, or accidental exposure
Hazardous Substance	Any element, chemical, compound or mixture of elements or compounds that is a physical hazard or health hazard, excluding those exempted by other regulations.

Term	Description
Hazardous Materials Identification System (HMIS)	Hazard labeling system developed by the National Paint and Coatings Association (NPCA)
Label	Any written, printed, or graphic material displayed on or affixed to containers of hazardous chemicals.
Material Safety data sheet (MSDS)	The written document that sets forth the specific information about a toxic or hazardous substance.
National Fire Protection Association (NFPA) 704	Diamond-shaped hazard labeling system meant primarily for fire fighters and other emergency responders.
COSHH	Control Of Substances Hazardous To Health
COSHH Coordinator	Project Manager will assign a competent employee to oversee COSHH program and fulfill duties as prescribed in QCS 2010
Workplace Exposure Limits (WEL)	Regulatory limits on the amount or concentration of a substance to which a person may be safely exposed without adverse health effects.
Hazardous Substance	A "substance hazardous to health" is one which, because of the way it is made, stored, transported, used or disposed of, presents a risk to health in the workplace. The definition of a hazardous substance is comprehensive. All supplied substances which are classified as hazardous must be labeled correctly. Substances will be labeled as Very Toxic, Toxic, Harmful, Corrosive or Irritant. However, some hazardous substances can be created during processes, and these are also covered by the Qatar Regulatory Document (Construction), for example dusts of any kind in specified concentrations.

3. Responsibilities

The Contractor is fully responsible for the pre-planning, development of Method Statements, Job Hazard Analysis, overall safe work planning and implementation. The Contractor's Project Management is responsible for the assurance that all work is planned and conducted according to the pre-planning document, 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 will apply.

4. Project COSHH Plan

The HSE Representative leads the development and implementation of a project-specific COSHH plan in accordance with local regulations and this LCSMP element. The Project Manager reviews and approves the plan. The Project Manager facilitates implementation and compliance with the program, designating a COSHH Coordinator to conduct the inventory and maintain Material Safety Data Sheet (MSDS) and labels.

The project COSHH Plan is included in the project safety plan.

A sample COSHH plan is provided as (Attachment [LUS-HSE-FM4-446-030](#)). The attachment is a template only; it must be modified to address specific project sites.

The HSE Representative audits the activities of Lusail employees, Contractors, Developers, Consultants, and Subcontractors to ensure compliance with the Plan. At a minimum, the project COSHH plan must include the following information:

- ◆ Name of the person responsible for maintaining the program, and communicating program requirements to employees
- ◆ Name(s) of the personnel assigned responsibility for conducting activities within the program (e.g., training employees, conducting an inventory, labeling containers, and maintaining MSDSs)
- ◆ Inventory of hazardous substances located on the project site with COSHH assessments for each
- ◆ Locations of, and access to, MSDSs

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- ◆ Outline of methods to be used for:
 - Labeling and other forms of warning
 - MSDSs
 - Training employees and visitors
 - Subcontractor COSHH
 - Nonroutine tasks

5. Multi-Employer Job Sites

For worksites occupied by employees of more than one employer, the requirement for the exchange of information is limited to those situations in which other Contractors' employees may be exposed. It does not relieve Contractors from maintaining their own COSHH programs. This effort helps to ensure that all employees have sufficient information to protect themselves in the workplace, regardless of which Contractor uses the hazardous chemical.

During the pre-job safety orientation, the HSE Representative and COSHH Coordinator review the project COSHH plan with each Subcontractor HSE Representative. A copy of the chemical inventory must be furnished to the Subcontractors HSE Representative upon request.

The Subcontractor submits to the HSE Representative copies of its COSHH program and any MSDSs for chemicals to be brought onto the project site. The project subcontract manager provides comments to the Subcontractor.

6. Hazardous Substance Inventory

Construction personnel, Contractors, Developers, and Subcontractors operating on the Lusail Project will provide to the Supervising Consultants copies of their hazardous substance inventory, the new Contractor may request a copy of the hazardous substance inventory from the client.

If a current hazardous substance inventory is not available, the designated person will conduct a complete physical inventory at the beginning of the project, and quarterly thereafter, of all products (liquids, solids, powders, pastes, gases).

The Contractor COSHH Coordinator records each product on the Hazardous Substance Inventory Sheet ([LUS-HSE-FM4-446-031](#)), forwards copies of all completed inventory sheets for current and future products to the Supervising Consultant for review, and maintains the sheets on file until completion of the project.

Contractors shall conduct the inventory using a wall-to-wall system for collecting all products for inclusion on the list. Foremen assist the designated person by submitting a list of hazardous substances used by their employees. Review process flow diagrams, if necessary. Unless all materials are included in this list, some hazardous substances might be overlooked.

- ◆ Include products in small quantities or in small containers. Small quantities of materials are frequently more hazardous than larger quantities because of the risk of their being overlooked and their potential hazards thus being disregarded.
- ◆ Include welding rods, grinding wheels, compressed gases, paints, epoxies, glues, and mixtures.
- ◆ Do not include exempt materials identified in Section 1 above.

Include the approximate quantities (e.g., liters, kilograms, gallons, pounds) for each product that will be on site at any given time.

Attach a site map to the inventory showing where inventoried hazardous substances are stored.

Include a list of all products from the inventory at the front of the MSDS binder as an index for locating an MSDS. The list must include the MSDS number assigned for location in the binder, the product name, manufacturer, and status of the MSDS on file. The list must also include any common name that employees use for the product.

In accordance with QCS 2010, each COSHH coordinator shall ensure their respective Company has undertaken a Control of Substances Hazardous to Health (COSHH) assessment for all hazardous substances used and/or created by work activities.

7. Material Safety Data Sheets

7.1 Compile and Update MSDS

The COSHH Coordinator ensures that a MSDS and risk assessment is available for each hazardous substance on the inventory. The designated personnel compile and update the MSDSs.

- ◆ COSHH Coordinator: Request MSDSs for products on the hazardous substance inventory for which no MSDS is on hand. Fax or email a Manufacturer MSDS Request Letter (Attachment [LUS-HSE-FM4-446-032](#)) to the manufacturer/supplier. Keep a dated copy of this request in the project file. If a project employee has a telephone conversation with a manufacturer or supplier, he must record the conversation as a dated memo and include it in the memo in the project file.
- ◆ Personnel purchasing or receiving products: Submit MSDSs to the COSHH Coordinator.
- ◆ HSE Representative: Review each MSDS to ensure that all information is provided. The names of substances listed on the MSDS must be the same as those printed on container labels and on the hazardous substance inventory. The MSDS must be specific to the substances provided by suppliers rather than representative or generic.

Evaluate MSDS

The HSE Representative evaluates each new MSDS to ascertain whether products present an acceptable hazard, unacceptable hazard, or need further assessment. This assessment includes the following tasks:

- ◆ Identify the chemical components, potential hazards, and recommended controls.
- ◆ Evaluate any carcinogens or chemicals warranting further assessment.
- ◆ Identify recommended controls and consider their inclusion in an JHA.
- ◆ Investigate equivalent substitute materials with fewer or less serious hazards.

If the hazard is unacceptable, the HSE Representative works with the requestor to find an alternative, less hazardous chemical product.

MSDS Employee Access

An employee may view the MSDS at any time. Therefore, the project must adopt a reasonable method for allowing any project associated personnel (or their designee) to access the MSDS without interruption of normal work operations. Such methods could include:

- ◆ Electronic system: Internet or intranet
- ◆ MSDS binder: Locate hard copies of updated, applicable MSDSs in employee-accessible areas
- ◆ MSDS request system: The HSE Representative provides a copy of the MSDS for each product requested on the Employee MSDS Request Form (Attachment [LUS-HSE-FM4-446-033](#))

8. Non-Routine Tasks

Priority is given to conducting JHAs for nonroutine tasks. Examples of non-routine tasks are cleaning reactor vessels, performing maintenance, and working on unlabeled piping systems. JHAs identify and address chemical safety issues, including employee exposure, storage, and use. The HSE Representative ensures that an MSDS is available for all products identified in JHAs.

9. Labeling

The project COSHH plan defines the method for labeling each container of hazardous material on the project. The plan designates an employee responsible for labeling all containers as detailed below.

Review all containers of products on the hazardous substance inventory to ensure that the containers are properly labeled in accordance with Section 9.1 below. If a container is not properly labeled, obtain a label from the supplier or create one from the information on the MSDS. Local safety equipment vendors may supply labels.

If hazardous materials are received at the project without proper labels, set them aside; do not distribute them for use until they are properly labeled. If an unlabeled container is found in the workplace, test and label it accordingly or dispose of it properly.

9.1 General Labeling Requirements

Labels must be legible and accessible to all employees:

- ◆ Locate labels prominently on the container so that the label can be read when the container is in its usual upright position for use.
- ◆ If labels on containers are exposed to the weather, the label information must be clear and conspicuous at all times. The label must be of a material that cannot be defaced or obliterated by rain, snow, or other adverse elements of the weather.
- ◆ For non-English speaking employees, information written on labels must be provided in an indigenous language.

Containers of mixed products are labeled with the chemical name listed on the MSDS for each toxic or hazardous substance in the mixture. It is recommended that containers of mixtures also be labeled with the common name of the mixture.

Rather than labeling individual process containers or vessels, signs, placards, process sheets, batch tickets, operating procedures, or other such written materials may be used. Each alternative method must identify the container or containers to which it applies, identify the hazardous substance(s) in the container, and show appropriate hazard warnings. These written materials must be readily accessible to employees in the work area during each shift.

Pipelines containing hazardous substances are not considered containers and need not be labeled. However, JHAs will address how employees working on unlabeled pipelines are protected from chemical hazards.

If a substance-specific standard is adopted for a chemical in a workplace, the labeling requirements of that standard supersede the requirements of the COSHH standard.

9.2 Primary Container Labeling Requirements

Labels on primary containers must include the following information:

- ◆ Chemical name of the product.
- ◆ Hazard warning about physical safety hazards (e.g., fire, explosion) and health hazards (e.g., exposure), such as the Hazardous Materials Identification System (HMIS) labeling systems. A description of industry standard labeling systems is included as (Attachment [LUS-HSE-FM4-446-034](#)).
- ◆ Name and address of the manufacturer, importer, or other responsible party.

9.3 Secondary Container Labeling Requirements

A secondary label is not required on a container that an employee fills and immediately uses if the container remains under his/her direct control until it is empty.

Labels on secondary containers that do not meet the exclusion above must include the following information:

- ◆ Chemical name of the product.
- ◆ Hazard warning about physical safety hazards (e.g., fire, explosion) and health hazards (e.g., exposure), such as the HMIS labeling systems.

If a labeled container is covered by a secondary container or a covering that remains in place while the contents of the container are withdrawn or used, the required labels must also appear on the secondary container or covering.

10. Training

Contractors shall notify all employees of the hazards of chemicals to be used on the worksite.

The HSE Representative arranges employee training at the time of the employee's initial assignment, annually, and when a new hazard is introduced to the jobsite. This training can be organized and presented to groups or on a work area by work area basis, depending on the operation.

The HSE Representative discusses the project COSHH plan during the initial orientation of occasional and business visitors, as well as contractors, who are subject to exposure to hazardous substances.

Specific training for non-routine tasks and the hazards associated with chemicals contained in unlabeled pipes in the employees' immediate work area is provided to affected employees. Supervisors are responsible for identifying training needs during risk mitigation planning (2-week look-ahead).

Employees are advised of their rights to chemical hazard information and to specific training with respect to hazardous substances in the workplace. At a minimum, the information and training includes the following topics:

- ◆ Details of the project COSHH Plan.
- ◆ Who to contact for questions regarding chemicals.
- ◆ How to obtain a copy of an MSDS.
- ◆ How to read MSDSs, labels, and hazard classifications (Attachment [LUS-HSE-FM4-446-034](#)).
- ◆ Details on specific chemicals present at the workplace.
 - Identity and location of hazardous substances in the workplace.
 - Physical and health hazards of hazardous substances and potential exposure routes.
 - Methods and observations available for detecting the presence or release of a hazardous chemical in the workplace. Methods can include monitoring conducted by a designated employee. Observations may include the appearance of or the detection of odors of substances.
 - Symptoms of overexposure.
 - Procedures to follow if employees are overexposed to hazardous chemicals.
 - How to handle substances safely.
 - Steps employees must take to protect themselves from hazards, including control procedures, work practices, and PPE.
 - Steps the employer has taken to reduce or prevent exposure to hazardous chemicals.
 - Emergency response procedures.

11. Documentation

The records custodian maintains a record of all training or instruction given to employees, using an acceptable training form. Each employee must sign the Employee Acknowledgment Form (Attachment [LUS-HSE-FM4-446-035](#)). This form is also maintained as a record of training. The Contractor maintains project records at the site for the duration of the project and archives them for a minimum retention time of 10 years from creation date.

12. References

Qatar Construction Specifications 2010 Section 1 Part 10.5.3 "Hazardous Substances"

Qatar Construction Specifications 2010 Section 11 Part 2.3.2 COSHH

EH/40 Workplace Exposure Limits

13. ATTACHMENTS

LUS-HSE-FM4-446-030	Sample Project COSHH Plan
LUS-HSE-FM4-446-031	Hazardous Substance Inventory Sheet
LUS-HSE-FM4-446-032	Manufacturer's MSDS Request Letter
LUS-HSE-FM4-446-033	Employee MSDS Request Form
LUS-HSE-FM4-446-034	HMIS Health Hazard Rating Chart
LUS-HSE-FM4-446-035	Employee Acknowledgment Form