



Lusail Real Estate Development Company

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

Lusail Construction Safety Procedural Forms/Checklists – Mobile Equipment Specifications

Document No LUS-HSE-FM4-446-051.01 Rev 1
Uncontrolled Copy Controlled Copy Date 01-Apr-2015

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.

1. HEAVY EQUIPMENT

Off-highway wheel-type construction machines, including loaders and tractors, scrapers, dumpers, graders, rollers, and compactors of mass greater than 5,952 pounds, water wagons, and similar type equipment, must conform with the following provisions:

- ◆ All equipment/plants shall be registered and operator shall be licensed with a valid Qatar license for the equipment they are authorized to operate.
- ◆ All equipment must be equipped with rollover protective structures and falling object protective structures when used in machine loading operations or other operations that expose the operator to falling objects.
- ◆ All equipment must have lights and markings when used on the construction site. Equipment used on public roads or in public accessible areas will be equipped for highway operation.
- ◆ Slow-moving vehicles, such as motor graders, end loaders, agricultural and industrial equipment operating on public or haul roads, in borrow areas or fill areas, must also be equipped with a slow-moving machine sign and a rotating amber light (or equivalent) that is visible in all directions.

The rules below apply to the following types of earth-moving equipment: scrapers, loaders, crawler or wheel tractors, bulldozers, off-highway trucks, graders, agricultural and industrial tractors, and similar equipment.

- ◆ Waterproof and comfortable seat cushions must be provided on tractors at all times when working.
- ◆ Riders, except mechanics and persons in training to operate equipment, are not allowed on equipment unless a seat with a seat belt is provided and used. Seat belts need not be provided for equipment that does not have a rollover protective structure (ROPS) or adequate canopy protection.
- ◆ Pneumatic-tired earth-moving haulage equipment (trucks, scrapers, tractors, and trailing units) whose maximum speed exceeds 15 miles per hour must be equipped with fenders on all wheels or demonstrate that the uncovered wheels present no hazard to personnel from flying materials.
- ◆ Scissor points on all front-end loaders, which constitute a hazard to the operator during normal operation, must be guarded.
- ◆ Winch lines must be maintained in good condition and provided with a spliced eye, knob, or hook in the working end, except under conditions where un-spliced end is required.
- ◆ No repairs on blade or dozer equipment will be initiated unless motor has been stopped and dozer blade is resting on the ground or securely blocked. The same applies to carry-all gates.
- ◆ Bulldozer blades and carryall gates must rest on the ground or on blocking when machines are not in operation.
- ◆ The operator must not leave the controls of the tractor with the master clutch engaged.
- ◆ Personnel must not get on or off the machine while the machine is in motion.
- ◆ Where excessive dust is created, such areas must be sprinkled with water to keep dust at a minimum.

2. POWERED INDUSTRIAL TRUCKS (FORKLIFTS)

When using powered industrial trucks inside a facility, the preferred operating system is ES or EE (electric). When an electric truck is not feasible, an approved LPS or LP (liquefied propane) unit is used. When the LPS or LP trucks are in use, sample air monitoring is conducted to ensure adequate air quality, in accordance with LCSMP 09-00, Exposure Identification & Controls.

If the truck is equipped with front-end attachment(s), including fork extensions, the employer must ensure that truck is marked to identify the attachment(s), show the approximate weight of the truck and attachment combination, and show the maximum capacity of the truck with attachment(s) at the maximum elevation with load laterally centered.

Before determining which industrial truck is appropriate for use, the atmosphere or location must be classified as hazardous or nonhazardous.

Employers must not allow anyone to ride on powered industrial trucks unless a safe place to ride is provided.

Employers must not allow anyone under the elevated portion of any powered industrial truck, whether loaded or empty.

The employer must prohibit any body part from being placed between the uprights of the mast or outside the running lines of the truck.

When leaving a powered industrial truck unattended, load engaging means must be fully lowered, controls must be neutralized, power must be shut off, and brakes set. Wheels must be blocked if the truck is parked on an incline.

- ◆ A powered industrial truck is unattended when the operator is 7.6 meters (25') or more away from the vehicle (which remains in view), or whenever the operator leaves the vehicle and it is not in view.
- ◆ When the operator of a powered industrial truck is dismounted and within 7.6 meters (25') of the truck (still in view), the load engaging means must be fully lowered, controls neutralized, and the brakes set to prevent movement.
- ◆ Brakes must be set and wheel blocks must be in place to prevent movement of trucks, trailers, or railroad cars while loading or unloading. Fixed jacks may be necessary to support a semitrailer during loading or unloading when the trailer is not coupled to a tractor. Before driving onto trucks, trailers, and railroad cars, check the flooring for breaks and weakness. In lieu of wheel chocks, mechanical means may be used to secure trucks/trailers to loading docks to prevent movement.

High lift rider trucks must be fitted with an overhead guard, unless operating conditions do not permit.

An overhead guard must be used as protection against falling objects. Note that an overhead guard is intended to protect against the impact of small packages, boxes, bagged material, etc., representative of the job application, but not to withstand the impact of a falling capacity load.

A load backrest extension must be used to prevent any part of the load from falling rearward.

When using powered industrial trucks (forklifts) as elevated work platforms, a platform or structure built specifically for hoisting persons may be used if the following requirements are met:

- ◆ The structure must be securely attached to the forks and must have standard guardrails and toeboards installed on all sides.
- ◆ The hydraulic system must be so designed that the lift mechanism will not drop faster than 135 feet per minute if any part of the system fails. Forklifts used for elevating work platforms must be identified as being designed for that purpose.
- ◆ A safety strap must be installed or the control lever must be locked to prevent the boom from tilting.
- ◆ An operator must attend the lift equipment while workers are on the platform.
- ◆ The operator must be in the normal operating position while raising or lowering the platform.
- ◆ Except when inching or maneuvering the powered industrial truck at a very low speed, the vehicle must not be moved from point to point while workers are on the platform.
- ◆ The area between workers on the platform and the mast must be guarded to prevent contact with chains or other shear points.
- ◆ An active operator protection restraint device (such as a seat belt or lap-bar) or system must be used, when provided.

3. TRAVELING

- ◆ All traffic regulations must be observed, including authorized plant speed limits. A distance of approximately three truck lengths from the truck ahead must be maintained. The powered industrial truck must be kept under control at all times.
- ◆ The right of way must be yielded to ambulances, fire trucks, or other vehicles in emergency situations.
- ◆ Employers must not allow other powered industrial trucks traveling in the same direction to be passed at intersections, blind spots, or other dangerous locations.
- ◆ Railroad tracks must be crossed diagonally wherever possible. Parking closer than 8 feet from the center of railroad tracks is prohibited.
- ◆ The driver must look in the direction of, and keep a clear view of, the path of travel.
- ◆ Grades must be ascended or descended slowly.
- ◆ When ascending or descending grades in excess of 10%, loaded powered industrial trucks must be driven with the load upgrade.
- ◆ Unloaded powered industrial trucks must be operated on all grades with the load engaging means downgrade.
- ◆ On all grades the load and load engaging means must be tilted back, if applicable, and raised only as far as necessary to clear the road surface.
- ◆ Powered industrial trucks must be operated at a speed that will permit it to be brought to a stop in a safe manner.
- ◆ Powered industrial truck operators must avoid driving over loose objects on the roadway surface.
- ◆ While negotiating turns, speed must be reduced to a safe level.
- ◆ Powered industrial trucks must not be driven up to anyone in front of a bench or other fixed object.

3.1 LOADING

- ◆ Only stable or safely arranged loads must be handled.
- ◆ Powered industrial trucks must only be operated if the load is within the rated capacity including long, high, or multiple-tiered loads.
- ◆ Powered industrial trucks equipped with attachments must be operated as partially loaded trucks when not handling a load.
- ◆ A load engaging means must be placed under the load as far as possible; the mast must be carefully tilted backward to stabilize the load.
- ◆ Tilting forward with load engaging means elevated must be prohibited except to pick up a load. An elevated load must not be tilted forward except when the load is in a deposit position over a rack or stack. When stacking or tiering, only enough backward tilt to stabilize the load must be used.

3.2 VENDOR'S TRUCKS

- ◆ Vendor's trucks must be loaded and unloaded either entirely by the vendor's employees, or entirely by construction personnel.
- ◆ Construction personnel must not attempt to unload any vendor's truck until the vendor's employees have opened and secured the truck doors or tailgates.
- ◆ If it is the vendor's responsibility to load or unload, construction personnel must remain clear to avoid exposure to injury in the event of an incident. If it is contractor's responsibility to load or unload, the vendor's employees must be instructed to remain clear.

4. DUMP TRUCKS

Dump trucks of all descriptions must be equipped with the following safety devices:

- ◆ Trip Handles: Trip handles or dump body operating levers that control hoisting or dumping must be equipped with a latch or similar device that prevents accidental starting or tripping of mechanism. The trip handle must be located so the operator remains clear of the load or dumping device.
- ◆ Holding Device: A manually operated device must be permanently attached to the truck body for use in preventing accidental lowering of the dump body or bed during inspection and/or maintenance operations.
- ◆ Cab Protection: Trucks loaded or unloaded by means of crane, power shovels, loaders, or similar equipment must have a cab shield and/or a protective steel canopy adequate to protect the operator from falling or shifting material. When such protection is not installed, the operator must leave the cab during loading or unloading operations.

4.1 OPERATING DUMP TRUCKS IN REVERSE

- ◆ Before backing a dump truck the driver must determine that no one is in the backing zone and it is reasonable to expect that no employee(s) will enter the backing zone while operating the dump truck in reverse.
 - ◆ Exemption: Employees are considered protected when they are on the opposite side of a fixed barrier such as:
 - A jersey barrier
 - Heavy equipment (such as a paving machine), OR
-

- A 6-inch concrete curb

5. MOTOR VEHICLES

The driver must comply with safety regulations and safe practices and obey all traffic rules. All drivers must comply with construction site speed limits and posted traffic signs.

- ◆ All roads, including haul roads, will be posted with curve signs and maximum speed limits, in accordance with LCSMP 16-00, Signs, Barricades, and Traffic Control.
- ◆ Vehicle speeds on curves must be limited to speeds that permit the vehicle to be stopped within one-half the minimum sight distance.
- ◆ All vehicles transporting material must comply with city, county, or state laws pertaining to weight, height, length, and width. Permits are mandatory if required by city, county, or state.

5.1 AUTHORIZED VEHICLE OPERATORS

- ◆ No one under 18 years of age must be assigned or allowed to drive a company vehicle. Anyone driving a vehicle larger than one (1) ton must have a commercial license and must also pass a required driver's test to ensure that he is capable of operating the vehicle before driving on public roads. No one under 21 years of age is allowed to drive over-the-road trucks.
- ◆ All drivers must have a valid driver's license checked by their superintendent or supervisor for:
 - Expiration date
 - Restrictions
 - Type of license (operator, commercial, or chauffeur)
- ◆ Periodic driving record checks are conducted; employees with poor driving records will not be allowed to drive company vehicles.
- ◆ Lusail Construction HSE-owned or -leased vehicles are not to be used off the project except for company business. However, certain individuals may be assigned a vehicle and permitted to drive the vehicle between the project and their residence.
- ◆ Persons not employed by Lusail Construction HSE cannot operate or ride as passengers in company-owned, -leased, or -rented vehicles unless authorized by the project manager.

Park vehicles in approved locations only. Leave the keys in the ignition of any vehicle in the working areas of the site (do not leave keys in vehicles in the parking lot).

Do not stop in traffic lanes to hold discussions with others.

Ensure that tailgates are in the closed position except when loading or unloading or when the length of the load requires otherwise. The load must be properly flagged.

The driver and all passengers, including those in back seats, must wear seat belts at all times.

Do not ride on running boards or tailgates or allow parts of the body to protrude from the vehicle.

Passengers are not allowed to ride on/in truck beds unless they are seated and proper seat belts are provided and used.

All drivers must use turn signals. Approaching traffic must know your intentions.

Do not drive a vehicle into an unsafe area of construction where unnecessary tire, steering, or body damage could result.

Vehicles used to transport explosives, gasoline, fuel oils, or other flammable or combustible material cannot haul passengers.

Do not smoke on, in, or within 15 meters (50') of vehicles hauling fuel oils, gasoline, diesel fuel, or explosives.

In accordance with LCSMP 38-00, Substance Abuse, use of alcoholic beverages, drugs, (including No-Doz and No-Sleep tablets) will not be tolerated while operating vehicles.