MINIMUM STANDARD

SHEMS-MST-DPS-0045 Oil & Fuel Storage – Above Ground

The following Minimum Standard is applicable on all projects

This minimum standard provides information about how oil must be stored on Unitas temporary and permanent sites to comply with relevant legislation and Unitas standards.

The term oil covers:

- Petrol
- Diesel
- Biofuels
- Kerosene
- Synthetic oils (normally lubricating oils, e.g. motor oil)
- Oils used as solvents
- Biodegradable oils (usually lubricating or hydraulic oils)
- Liquid bitumen-based products, e.g. waterproofing or damp proofing products, or coatings for a road surface

Storage containers include cans, oil drums, fixed tanks, intermediate bulk containers (IBCs) and mobile bowsers

General

- The container must be strong enough, and have enough structural integrity, to not burst or leak in ordinary use.
- The container must be positioned away from vehicular traffic to avoid damage from collision
- If this is not feasible barriers or bollards should be placed around the container

Fixed Tanks

Tanks with a volume of more than 200 litres that are fixed in place must be bunded. A bund (also known as secondary containment) can either be an integral part of the tank or constructed from concrete or masonry and:

- The bund must be impermeable to water and oil
- Any valve, gauge, pipework or ancillary equipment must be within the bund
- No drainage valve may be fitted to the bund
- Above ground pipework should be adequately supported
- Pipework should be protected from physical damage and have adequate leakage detection
- The bund must be capable of storing 110% of the capacity of a single tank
- Where there is more than one tank the bund or secondary containment should be capable of storing 110% capacity of the largest tank/container or 25% of the total storage capacity, whichever is greater
- If the tanks are hydraulically linked, they should be treated as a single tank, so the secondary containment must have a capacity of 110% of the combined capacity.
- If the tank has a flexible pipe permanently attached to it to dispense oil, the pipe must be in a secure cabinet that is locked shut when not in use or
- The pipe must be kept within the bund and there must be a lockable valve at the point where the pipe leaves the tank, which must be locked shut when the tank isn't in use
- If the tank has a pump it must have a valve in its feed line that prevents the tank contents emptying if there's damage to the pump or feed line
- If the vent pipe of a fixed tank, and the tank itself, can't be seen from where the tank is filled an automatic overfill prevention device

Storage drums

- The secondary containment for a drum (which is generally a proprietary drip tray) must have a capacity equal to at least 25% of the capacity of the drum it's providing containment for. This applies even if you only use the tray to hold a single drum (e.g. a drip tray which can hold 4 separate 205 litre drums must have a capacity of 205 litres, even if you're only using it to hold a single 205 litre drum).
- Where practicable drums should not be stored in the open where drip trays can fill with rain water and overflow

Intermediate bulk containers (IBCs)

- For a single IBC the bund or secondary containment must have a capacity equal to 110% of the capacity of the IBC.
- Secondary containment that contains multiple IBCs, must have a capacity that is equal to whichever is the greater of 25% of the combined capacity of all the containers or 110% of the capacity of the largest container

- If the containers are hydraulically linked, they should be treated as a single container, so the secondary containment must have a capacity of 110% of the combined capacity.

Mobile Bowsers

- A mobile bowser with a capacity of more than 200 litres must have a secondary containment system with a capacity of 110% of the storage capacity of the bowser.
- The secondary containment system should not be fitted with a drainage point
- Any tap or valve through which oil can leave the bowser must have a lock, which must be locked shut when the bowser is not in use
- Any flexible delivery hose connected to the bowser must be capable of being locked within the bowser's secondary containment system when not in use
- Any hand pump used to dispense oil must be physically locked shut when the bowser is not in use

Generators

- A generator with an integral fuel tank with a capacity greater than 200 litres must have a secondary containment system with a capacity of 110% of the storage capacity of the fuel tank.
- The secondary containment system should not be fitted with a drainage point
- Pipework delivering oil from a tank to a generator is particularly vulnerable and it is good practice to provide secondary containment for the whole installation – storage tank and generator

Fuel/Jerry Cans

- Oil for small plant/equipment must be stored in proprietary containers that are fit for purpose
- All containers should be stored in secondary containment when not in use and on plant nappies/pads when in use
- After use, containers must be returned to secondary containment areas

Planning

An oil storage area should not be located

- within 50m of a spring, well or borehole or 10m of a watercourse, ditch or drainage channel
- where spilt oil could enter drains, loose fitting manhole covers or soak into unmade ground where it could pollute groundwater
- where a spill could run over hard ground to enter a watercourse or soak into unmade ground where it could pollute groundwater
- where a tank vent pipe outlet can't be seen from its filling point
- on a roof, as spilt oil can run down guttering which is connected to surface water systems
- in an area that is at risk of flooding
- where it poses a fire risk
- where access is difficult
- in highly trafficked areas

Procurement

- Approved oil storage containers appropriate for the task or situation
- Appropriate plant nappies or equivalent pads for placement under hoses / refuelling points
- Correct spill kits with oil resistant gloves to be included as a minimum in case of a spill. The size of the spill kit should be based on the quantity of oil/fuel stored and the potential volume that could be spilled.
- Hazardous / special waste container for clean-up materials / cloths etc.

Competence / Training

- Spill Response Training (via relevant Toolbox Talk or formal training)

Documentation

- COSHH Register / Assessments (SHEMS-FOR-GR-027)
- Toolbox Talk records

Further Guidance / Reference

Pollution Prevention Standard (SHEMS-STD-GR-064)
Working at Construction and Demolition Sites PPG6: Pollution Prevention Guidance
Pollution Prevention Guidelines: Above Ground Oil Storage Tanks PPG2
Minimum Standard for Refuelling

OPERATION –OIL STORAGE TANK (ABOVE GROUND) CHECKLIST

Project:

Contract No: Date:

Tank Location Tank Reference if applicable:

Name of Person Undertaking check or monitoring:

The checklist for mobile & static oil* storage tanks, is to be completed as soon as the tank is **set up,** but before **first use**, and thereafter at **monthly intervals,** or following a **significant change to the tank set up**. Comments are to be recorded and closed out /signed off. **One sheet required per tank**.

*The term oil covers petrol, diesel, biofuels, kerosene, lubricating oils, biodegradable oil, liquid base bitumen products and oils used as solvents,

Check	Set up	After 1st fill	Monthly or sig change
Is tank > 10m from a watercourse and prudently sited so spills, leaks etc. can't / will not get to gullies, watercourses?			
Are tanks and external pipes, sited so they cannot be damaged by impact, i.e. vehicles?			
Is tank fit for purpose & in good condition i.e. no damage and no leaks?			
Are notices legibly displayed i.e. contents, max quantity, statutory warning signs such as no smoking etc?			
For a single tank is the storage capacity of the secondary containment (bund) 110% of the volume of the tank?			
For multiple tanks is the storage capacity of the secondary containment (bund) 110% of the volume of the largest tank or 25% of the total storage capacity, whichever is the greater?			
Does bund / drip tray need emptying (rainwater, debris, litter, etc.)?			
If fitted, has bund alarm been tested?			
Are the hoses etc. kept securely within the containment area, vandal proof, and locked at the tank?			
Is the tank locked when not in use?			
Where fitted, are sight gauges in working order and legible?			
Is there safe access for refuelling of the tank / storage unit?			
Are refuelling requirements defined & being followed?			
Is the tank fitted with an automatic over-fill prevention device (where filling can't be observed)?			
If underground pipework is present, when was it last tested? Is the route marked and protected?			
Is an emergency spill kit located nearby, well stocked and are personnel trained in how to use it and dispose of it?			
Is a fire point located at the fuel storage area?			
*numbered comments to action / close from above			