GUIDANCE NOTE No. 43

PORTABLE TANKS FOR USED FOR STORAGE OF FLAMMABLE SOLVENTS

Introduction

The Solvents Industry Association has decided to issue this Guidance Note because the use of Portable Tanks for the temporary or permanent storage of flammable solvents has become more prevalent and, as such use inherently changes the original purpose of the Portable Tank, further consideration of safety, health and environmental concerns should be taken. For the purpose of this Guidance Note a Portable Tank is a Road Tanker or Tank Container rather than an IBC or a drum.

There is very little Guidance to the use of Portable Tanks in the public domain and this Guidance Note should assist the Solvents Industry to assess the risks of carrying out this operation. There have been a number of incidents concerning the use of Portable Tanks and so systematic and thorough Risk assessments are essential.

Use of Portable Tanks in the Solvents Industry

Portable Tanks can be used for storage in a variety of ways and for a number of reasons:

- Delivery of pre-filled tank containers which are used in the process and returned to the supplier when empty.
- Use as temporary storage on a short term basis when a fixed storage tank is taken out of service for maintenance.
- Used as permanent storage as part of the operation where the portability of the container is still required.
- Portable tank containers are converted into permanent storage in a fixed location.
- Filled tanker barrels on member sites pending despatch for routine deliveries overnight or over the weekend (with or without a tractor unit /shunter attached). More and more customers are requiring our members to store the product on our sites rather than their own.

Risk Assessment

The following general approach should be taken to the use of a Portable Tank for the storage of flammable solvents:

Carry out a Risk Assessment using the 5 steps outlined in the HSE Guidance:

- Identify the hazards
- Decide who might be harmed and how
- Evaluate the risks and decide on precaution
- Record your findings and inplement them
- Review your assessment and implement if necessary

Where the use of a Portable Tank for storage purposes involves change to procedures (e.g. used instead of an 'out of service bulk tank') go through change management procedures to identify risks. For example consider a HAZOP (Hazard and Operability Study) approach to be more encompassing.

Primary hazards linked to product, flammability and danger to the environment should also be considered by review of the effects from the use of the Portable Tank on various hazard analysis requirements such as: Hazardous Area Classification / DSEAR / Fire Risk Assessment and Containment studies using the Environment Agency guidance on overfilling risks, ullage checks, level indication, level alarms etc.

Other general risks should be considered: work at height, transport safety issues, blocked roadways, security, emergency procedures and communication with stakeholders (Fire and Rescue Service, Insurers, Health and Safety Executive, Environment Agency, COMAH, and Pollution Prevention Control.

Compare and contrast against 'in transit' movement of vehicles under CDG/ADR regulations.

Consider security risks as well as storage risks e.g. don't park by the fence next to ignition sources.

Use of Checklist

A Checklist for assessing the use of a Portable Tank for the storage of flammable solvents can be seen in Appendix 1. The data collected during the Audit can then be used in the various risk assessments described.

References

The following references will be useful in carrying the full Risk assessment:

- DSEAR ACOPs.
- HSG51: The Storage of Flammable Liquids in Containers.
- HSG176: The Storage of Flammable Liquids in Tanks.
- PPG18: Safety and Environmental Standards for Fuel Storage Sites.
- ADR: International Carriage of Dangerous Goods by Road.
- HSE Inspector Guidance: there is little specific guidance to Inspectors on this operation.
- EA Inspector Guidance: there is little specific guidance to Inspectors on this operation.
- SIA Guidance Notes
- Water Resources Act.
- ADR/VOSA transport security plans.
- CEFIC Behaviour Based Loading Unloading Document for Road Freight
- SIA DVDs
- Work at Height Regulations (WAHR) Schedules 2 and 6

Appendix 1. Portable Tanks Used for Storage of Flamable Liquids. Audit Form for Risk Assessment

Company:
Site:
Location of Tank: **Tank identification:**
Storage Capacity: **Function:**
Reason For Change:

Tank	Yes	No	Comments
Is tank situated well away from site boundary? (Refer HSG176)			
Is the tank in a bund?			
Is the bund of suitable construction?			
Is the bund capable of holding 110% of tank maximum contents?			
Is there adequate separation from other tanks in the bund? (Refer HSG176)			
Is the tank situated well away from ignition sources?			
Is the tank stable and locked in position? (See Note 1)			
Has the tank been checked for leaks?			
If multi-compartment, has tank been checked for inter-compartmental leaks?			
Is the tank and ancillary equipment compatible with the product to be stored?			
Has the tank been coated to reduce corrosion?			
Is the tank clearly marked for identification purposes?			
Has any fire protection been installed?			

Is there a routine tank inspection (testing and maintenance) in place?

Ancillaries	Yes	No	Comments
Has the tank been earthed at minimum 2 points?			
Has the tank been fitted with a P/V valve sized for a bund fire scenario?			
Is the P/V valve fitted with a fire trap?			
Is there a safe access system to the top of the tank?			
Is there guard rail on the tank top?			
Is there a tank gauging system in place?			
Is there a spill prevention system in place?			
Has the outlet been connected to a pump?			
If yes is the pump flame proof and earth bonded to the tank?			
Is there an outlet valve?			
Is outlet valve an ROV with fail shut system?			
Is there adequate lighting to ensure safe operation in the dark?			

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Safety	Yes	No	Comments
Is there a fire alarm point close to the bund?			
Is there fire fighting equipment available by the bund?			
Is there a spill kit available?			
Is there any receptacle to catch minor spills available?			
Is there a Permit to Work System in force?			
Is there safe access to the top of the tank? (Refer WAHR Schedule 6)			
Is there adequate fall prevention from the top? (Refer WAHR Schedule 2)			

Audit Carried out by (print name):

Signed: **Date:**

Note.1 If a trailer is being used for long term storage it should removed from the chassis and attached to suitable plinths. Use of the landing leg for short term storage should be subject to a risk assessment.

Note.2 If a trailer is being used for long term storage there should be a written scheme of examination.

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