

Requirements for Generator and External Fuel Tank Set-Up

A recent incident involving the spill of approx. 150 litres of diesel from a standard generator set-up has highlighted the importance of proper planning, procurement, siting and bunding of temporary generator/fuel tank set ups.

There have been a number of significant fuel spill incidents across the Group arising from the standard generator and external fuel tank set-up. The causes have related to: incorrectly orientated valves; failure of fuel hoses and fittings; lack of auto switch-off alarms; fuel theft; insufficient bunding. All incidents would have been contained if the entire tank/generator set up had been placed inside a simple bund even where only temporarily required.



What needs to be done?

- **Plan the location.** Consider site specific environmental sensitivities and locate at least 10m from a watercourse or surface water drain and at least 50m away from a well or a borehole.
- **Prepare a bund of sufficient capacity to site the generator and fuel tank** e.g. a visqueen lined excavation or a concrete plinth with block surround and impermeable liner to create a containment area (see example below) with a sump or shallow fall to allow *clean* rainwater to be pumped out.
- **Site the generator, fuel tank and all connecting hoses within the bund.**
- **Ensure the generator is fitted with a bund alarm** which will automatically cut-off the engine before the bund overfills. Should a hose fail within the generator, fuel continues to be drawn from the external fuel tank as the bund fills. Bund alarms are present in most new generators, but these alarms can also be retrofitted by a competent engineer.
- **Ensure the separate fuel tank is integrally bundled with minimum bund size of 110%** of the fuel tank capacity. Not all double skinned tanks meet this 110% requirement.
- **Fit an overfill prevention valve** to the fuel tank.
- **Ensure correct fuel valve alignment** at installation, checked and signed off by competent engineer.
- **Provide suitable and sufficient spill kit(s)** adjacent to the generator/fuel tank set-up.
- **Provide designated trained spill responder(s)** on site at any time with only trained persons undertaking refuelling activities as per method statements.
- **Carry out regular inspections** of internal and external bunds for early identification of problems.
- **Ensure routine maintenance is carried out** by the hire company.

Minor costs to implement the above significantly outweigh fuel spill incident clean-up costs and vastly reduce the environmental risk e.g., a failed washer in a hose connector valve of an unbundled set-up on a GT project caused a spill that incurred £11,000 of direct and indirect clean-up costs.



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