

TECHNICAL CLARIFICATION NOTE

Applicability of NFPA 37:2024 clause 6.5.4 to a Diesel Generator Day Tank Refilled by Mobile Fuel Truck

1. Purpose

This note clarifies the intended application of clause 6.5.4 to the subject diesel generator day tank arrangement. The specific review issue is whether the word *pumps* in Clause 6.5.4 includes the onboard delivery pump of a mobile fuel truck, or whether it refers to pumps forming part of an installed fuel-transfer system supplying a fuel tank.

2. Executive Summary

NFPA 37:2024 clause 6.5.4 is best interpreted as applying to fuel tanks supplied by pumps that form part of the installed stationary liquid-fuel supply or transfer system, such as a fixed main storage tank-to-day tank transfer pump arrangement.

It should not be applied to the subject arrangement where the diesel day tank is refilled intermittently (once every 6 months) by a mobile fuel truck using the truck's onboard delivery pump under an attended filling operation with minimum two men, one from the fuel truck and the other from asset maintenance.

The mobile truck's pump is a temporary delivery accessory of the tanker vehicle. It is not installed at the facility, is not part of the stationary combustion engine installation, is not connected during normal generator operation, and is not associated with a fixed source tank or permanent overflow return path. Accordingly, the applicable NFPA 37 provisions for this arrangement are the filling, containment, venting, and piping provisions of chapter 6, particularly clause 6.6, not clause 6.5.4 as a fixed pump-supply arrangement.

Important safety note: The above does not remove the requirement to prevent overfilling and fuel spillage. It means that the specific 6.5.4 requirement package for pump-supplied tanks is not triggered merely because the temporary delivery truck uses its own onboard pump.

3. Project-Specific Design Basis

- Fuel: Diesel fuel, treated by NFPA 37 as a liquid fuel other than Class I.
- Tank: A diesel day tank serving the stationary on-site generator.
- Refilling method: Intermittent delivery by mobile fuel truck through the approved fill connection.
- Installed refill pump system: No fixed transfer pump, no pump skid, no automatic day-tank refill pump, or permanently connected bulk-storage-to-day-tank pump is installed for refilling the day tank.
- Truck pump status: The truck's pump is present only during fuel delivery and leaves the site with the vehicle after refilling is completed.

4. NFPA 37:2024 Textual and Contextual Analysis

4.1. NFPA 37 applies to stationary combustion engine installations

NFPA 37 establishes fire safety criteria for the installation and operation of stationary combustion engines and gas turbines. The subject generator installation is within that scope while the mobile diesel delivery truck is not itself a stationary combustion engine installation. This is the first distinction between the installed fuel system and the temporary fuel delivery operation.

4.2. The term 'pump' is not independently defined

Chapter 3 does not provide a special definition of *pump*. NFPA 37 clause 3.1 directs undefined terms to be read according to their ordinarily accepted meaning within the context in which they are used. The governing context is therefore chapter 6, Fuel Supply - Liquid, and specifically clause 6.5, Fuel Flow Control.

4.3. Clause 6.5.4 follows the fixed pump-control requirement in Clause 6.5.3

Clause 6.5.3 immediately preceding 6.5.4 refers to stationary-powered fuel pumps supplying fuel tanks. Clause 6.5.4 then addresses fuel tanks supplied by pumps and requires overfill protection measures. Read together, the two clauses describe a tank supplied by an installed pump within the fuel system, not a temporary pump mounted on a mobile delivery vehicle.

4.4. The required overflow arrangement assumes a permanent source/return path

Clauses 6.5.4.1 and 6.5.4.2 require the overflow arrangement to return continuously to a source tank or collection system and to have capacity greater than the fuel supply delivery capacity. This logic is consistent with a fixed source tank, fixed supply piping, and installed transfer pump. It is not consistent with a mobile truck hose operation where the truck is temporarily connected and no permanent return path to the vehicle exists.

4.5. Filling is dealt with separately under clause 6.6

Clause 6.6 is the clause specifically titled *Filling*. It addresses fill piping and tank filling arrangements. For tanks other than engine-mounted tanks, clause 6.6.3 directs the applicable piping and filling provisions, and clause 6.6.3.4 recognizes an attended filling operation at the tank fill connection where the stated containment and attendance conditions are met. This supports treating mobile truck refilling as a filling operation, not as a clause 6.5.4 installed pump-supply system.

4.6. NFPA 37 expressly mentions tank vehicles when it intends to address them

Clause 6.8.4 expressly refers to aboveground supply tanks filled from tank cars or tank vehicles by centrifugal pumps. This is significant. NFPA 37 has specific language for tank vehicles when that is the intended subject. Clause 6.5.4 does not use that tank-vehicle language, which supports reading 6.5.4 as a fixed-system overfill-control provision.

5. Meaning of 'Pumps' in Clause 6.5.4

For the purpose of clause 6.5.4, *pumps* should be understood as pumps supplying the fuel tank as part of the installed liquid-fuel transfer system. This includes, for example, a fixed day-tank refill pump, duplex transfer pump set, pump skid, submersible pump, or package-mounted transfer pump that moves fuel from a fixed source/bulk tank to the day tank.

The term should not be extended to the onboard delivery pump of a mobile fuel truck in the subject case, because that pump is not part of the installed stationary fuel supply system. The relevant regulatory distinction is not whether the pump is physically freestanding. The correct distinction is:

- Installed stationary fuel-transfer pump supplying a tank - clause 6.5.4 applies, versus
- Temporary mobile truck delivery pump used during an attended filling operation which therefore clause 6.5.4 does not apply merely by reason of that truck pump.

6. Comparison of Fixed Pump-Supplied Day Tank vs Subject Mobile Truck Refilling

Review item	Fixed pump-supplied day tank	Subject mobile truck refilling	Remarks
Fuel source	Fixed main/bulk storage tank or fixed source tank	Mobile tanker truck, present only during delivery	Two distinct scenarios
Pump	Installed transfer pump, pump skid, or package pump	Truck-mounted delivery pump owned/operated as part of delivery vehicle	
Connection	Permanent piping between source tank, pump, and day tank	Temporary hose/fill connection during attended delivery	
Operation	Automatic or semi-automatic day tank refill	Attended fuel delivery operation	

Overflow logic	Overflow returns to fixed source tank or collection system	No permanent return path to mobile truck; spill prevention by fill controls/containment	
Applicable NFPA 37 route	6.5.3 and 6.5.4 fuel flow control	6.6 filling, plus containment, venting and piping clauses	

7. Engineering Practice and Reference Support

Engineering references for generator day tanks use the same fixed-system logic as NFPA 37 clause 6.5.4. They describe overfill protection in relation to day tanks refilled from main storage tanks by transfer pumps. They also distinguish those plant transfer pumps from pumps mounted on delivery trucks.

Reference	Relevant engineering content	Relevance to this review
UFGS 26 32 15, Engine-Generator Set Stationary 15-2500 kW	Specifies day-tank level controls that start/stop fuel supply, activate an overfill alarm, close an automatic fill-line shutoff valve, and stop the pump supplying the day tank. The same clause describes supply from main fuel storage to the day tank. ¹	Confirms the fixed main-tank-to-day-tank transfer pump model.
UFGS 41 65 10, Diesel/Natural Gas Fueled Engine Pump Drives	Requires day-tank level devices, an automatic fill-line shutoff valve, and a safety device to stop the pump supplying fuel to the day tank at overfill level. It then describes diesel fuel supply from main storage to the day tank. ²	Same fixed-system control philosophy as NFPA 37 6.5.4.
U.S. Army TM 5-811-6, Electric Power Plant Design	In the fuel storage and handling clause, the manual recognizes that fuel tank trucks are normally equipped with pumps, then separately calls for plant transfer pumps for filling day tanks. ³	Directly supports the distinction between truck delivery pumps and installed day-tank transfer pumps.

8. Recommended Compliance Position

Clause 6.5.4 of NFPA 37: 2024 should not be applied to the subject generator day tank on the sole basis that the mobile diesel delivery truck has an onboard pump. The day tank is not supplied by an installed stationary pump system, but it is intermittently refilled by attended mobile truck delivery.

The installation should instead be reviewed under NFPA 37 chapter 6 provisions for diesel fuel storage, containment, filling, venting, fuel piping, valves, and fittings, including NFPA 30 requirements where referenced by NFPA 37.

9. Safeguards to be maintained

To avoid any misunderstanding, the non-application of clause 6.5.4 does not imply an uncontrolled filling arrangement. The following safeguards should be maintained or shown on the submitted drawings and O&M manual as applicable:

- The filling operation is constantly attended by the fuel delivery operator and/or trained site personnel.
- The day tank and fill connection are located within the applicable spill containment arrangement required by NFPA 37 for the tank location.

¹ UFGS 26 32 15: ss 2.6.1, 2.6.4.1, 2.6.4.4-2.6.4.5, 2.6.5.5 and 2.6.6, section pp 50, 52-57.

² UFGS 41 65 10: ss 2.1.3 and 2.5.6-2.5.8, section pp 13-14, 19-20.

³ TM 5-811-6: ch 7, s 7-6, printed p 7-2 (PDF p 126).

- The day tank has suitable level indication visible to the operator, or an equivalent operational method to stop filling before overfill.
- The fill pipe/fill connection, vent piping, and fuel piping are arranged in accordance with NFPA 37 clause 6.6, clause 6.7, clause 6.8, and NFPA 30 where referenced.
- The mobile delivery hose is disconnected after filling; there is no permanent truck connection and no installed pump-based automatic refill arrangement.

10. Conclusion

The technically correct interpretation is that clause 6.5.4 is a fixed fuel-transfer system requirement for pump-supplied tanks. It is not intended to convert every attended mobile truck delivery operation into a clause 6.5.4 pump-supplied tank arrangement merely because the delivery vehicle includes an onboard pump. For the subject project, clause 6.5.4 is therefore not applicable.

11. References

- [1] NFPA 37:2018, *Standard for the Installation and Use of Stationary Combustion Engines and Gas Turbines*.
- [2] U.S. DoD, UFGS 26 32 15, *Engine-Generator Set Stationary 15-2500 kW*, WBDG, 01 Feb 2026. [Source link](#)
- [3] U.S. DoD, UFGS 41 65 10, *Diesel/Natural Gas Fueled Engine Pump Drives*, WBDG, 01 Nov 2025. [Source link](#)
- [4] U.S. Army, TM 5-811-6, *Electric Power Plant Design*, 20 Jan 1984, WBDG archive. [Source link](#)