

# Methanol Tank Overfill

EPSC Learning Sheet March 2021



## What Happened:

During a methanol transfer to a tank the high level switch tripped the pump. The level transmitter indicated that the tank was only half full. The interlock was bypassed and the pump was restarted, resulting in overfilling the tank and a large methanol spill.



Relevant  
Process Safety  
Fundamental:

SYSTEM OVERRIDE



Interlock Bypass

## Aspects:

- The bad level transmitter was trusted while the good Level Switch was concluded to give a false signal. The shift therefore incorrectly bypassed the automatic overfill protection.
- Bypassing a Safety Interlock should not be possible by shift personnel but could involve e.g. an electrical engineer.
- Authorization from at least a day supervisor is required, based on an appropriate analysis and temporary measures.
- Define the SIL rating of safety interlocks using IEC 61511
- Make sure bypasses are well documented and communicated from shift to shift.
- With two level transmitters, failure modes are easy to detect.

**Manage Overrides of Safety Interlocks!**