



FUELS INDUSTRY
Association of South Africa

LEARNING FROM INCIDENT (LFI)

LOPC AT A RETAIL SITE



INCIDENT DESCRIPTION

- An ULP93 LOPC incident occurred due to tank overfilling at a Retail site at around 01h38 am.
- Upon arrival, the BVO met with the site representative and informed him that he was delivering ULP93.
- Manual dips were taken, showing sufficient ullage for both Tank 1 and Tank 2. The site's ATG system on the other hand displayed much lower ullages for the tanks, in both instances, almost 70% less than the manual dips (the tanks were in fact almost full).
- Even though the discrepancy was noted, both the BVO and the Site representative relied on the manual dip readings and proceeded to offload into Tank 1 then Tank 2, resulting in overfilling of both tanks.
- There site had no active report of any faults on the ATG



Tank 1&2 manholes filled with ULP93 and water



INCIDENT ROOT CAUSE

Human Factor

- Delivery procedure not adhered in that:
 - manual dips were incorrectly taken and not verified (incorrect dip stick used)
 - discrepancy between manual dip and ATG was not flagged and reported
 - Tank manhole and dip hatch not closed after dipping and during delivery (which allowed product to escape containment into the manhole)

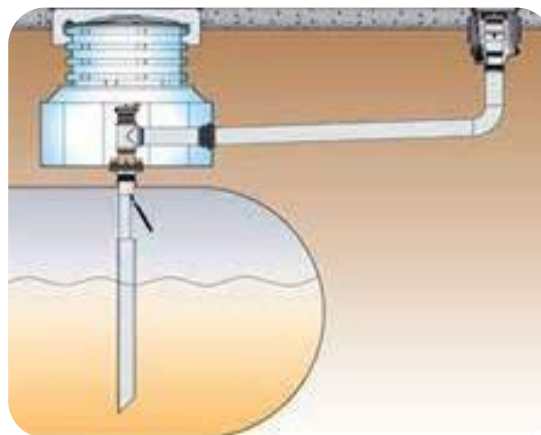
Workplace Factor

- Inadequate system design where internal system is designed to show interlinked tanks as one tank (overstating the ullage available).
- Inadequate Management of Change between Dispatchers (regular dispatcher was on leave and the replacement dispatcher did not know that the site had a specific ullage determination process before scheduling a truck to go and deliver – Interlinked tanks)
- Inadequate training of the Fuel Attendant (Offloading Marshal) on the offloading procedure and emergency response.
- Inadequate procedure. Although Delivery procedure mentions that ATG dips must be compared with manual dips, it was not clear what should be done in case of a significant misalignment between the dips.
- Inadequate execution of preventative maintenance by the contractor (site overfill prevention was not in place, it had been removed earlier and never replaced).
- Insufficient oversight by TMSA with regards to quality of preventative maintenance (no follow-up on the reinstatement of the overfill prevention device).



INCIDENT LEARNINGS

- Conduct safety standdown with all Transporters to refresh on the offloading procedure requirements and the functionality of the overfill prevention systems.
- Develop a communication memo to all Retail sites to refresh on the offloading procedure requirements.
- Design specific training for Offloading Marshals and Territory Managers (beyond just the procedure).
- Train the Territory Managers as trainers on the training specifically designed for Offloading Marshals (practical, on-site).
- Reinforce random checks for preventative maintenance by the Technical teams.
- Contractor to revisit all sites and ensure inspection and maintenance of overfill systems is done correctly.
- Consider linking overfill prevention to an audible alarm.





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Thank You

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