

Permit: KP3734SH

Vopak Terminal Windmill Ltd

Annual Review of Fugitive Emission Testing.

Date: March 2015

Objective

To review the fugitive emission testing at the Windmill Site, with regard to the application of Best Available Techniques. Permit Condition 4.1.4

Scope

All equipment utilised in the storage and handling of methanol on the Vopak Site, inclusive but not limited to: tank vents, pipelines, pumps, filters, flanges, seals and glands.

Exceptions

The ship unloading system is only full during ship off loading operations (less than 7%) and as such does not form part of every quarterly programmed fugitive test. Visual checks on the shipping pipelines and fitments are carried out at the commencement of every shipping operation and logged.

Test Methods Adopted

US EPA "Method 21" using a flame ionisation detector (Foxboro TVA 1000B)

Monitoring

LDAR ENVOLVE continued to carry out the testing on a quarterly basis with no changes to established procedures.

During the year there were no abnormally high readings recorded. Readings >500ppm, (self-imposed limit) were highlighted for further investigation, a total of five out of 214 monitored positions. These five positions were investigated, none of them showed any visible sign of a leakage but were tightened up where possible.

Valves (glands) in the methanol system continue to perform well with no readings recorded over the action threshold.

Transfer pump P102 double seal was changed out in November last year, this was not due to leakage but carried out under planned maintenance during a pump bearing change. The report on the old seal showed it to be still in a serviceable condition.

Readings from the roof vents around the peripheral of the geodesic domes did not give any inflated readings from previous years providing reassurance that the tank internal floating roofs are still performing well.

All readings acquired over the calendar year were used to calculate a total release, this was averaged out to be 121 kgs for 2014.

Conclusions & Comments

Testing methods employed still regarded as best available.

No noticeable deterioration of the plant observed.

Site will continue to perform the monitoring on a quarterly basis.

Methanol pipelines are due to be ultrasonically scanned in April and will be fully repainted in July/August taking an opportunity afforded by the erection of scaffolding to carry out a change of trace heating tape on the D4 Cyclics pipelines.

D Pratt