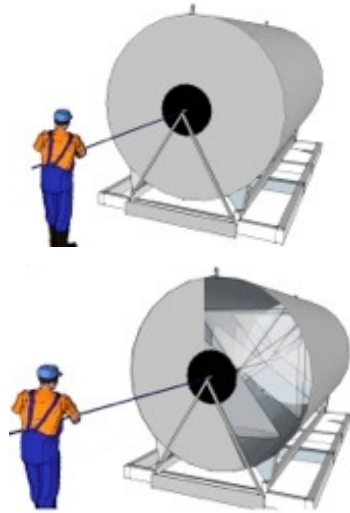
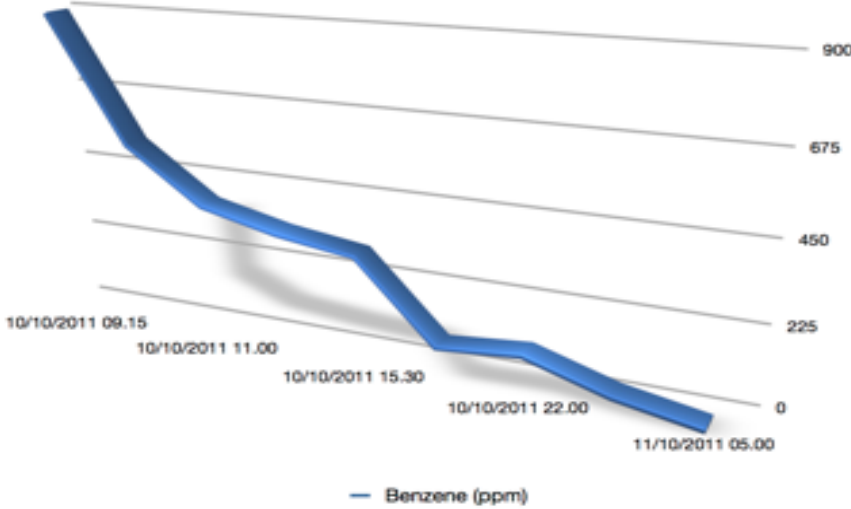


BENZENE VAPOUR DECONTAMINATION MANUAL SPRAY TECHNIQUE

TOTAL HAZARDOUS AND INTEGRATED SOLUTIONS

HYDROCARBON DECONTAMINATION - HYDEX



‘Manual’ HP Lance 360° Spray Application

Using a High Pressure (HP) Lance system, designed in-house, it was possible to achieve a full 360° spray atomisation of the Hydrocarbon Decontamination chemical HyDeX to improve its dispersal, while increasing the chemical’s ‘linger’ time.



Vessel: SWS-2 Feed Surge Drum
Vessel ID: D-3501
Length: 8370mm
Diameter: 4520mm
Volume: 137.62m³
Elevation: approx. 6m
Access: #1 Man-way 24", Side
Access #2: Man-way 24", Top

**Hydrocarbon
Decontamination
Chemical : HyDeX**

Contact Us
 Total Hazardous and Integrated
 Solutions
 81/64 M.10 T. Nongprue,
 Chonburi, Thailand 20150
this@isthesolution.com
www.isthesolution.com

Work was carried out on a Sour Water Stripper Feed Surge Drum that, even after Steam De-coking, was experiencing excessive levels of both Benzene and Ammonia.

Initial Ammonia levels were in excess of 3,000ppm and Benzene was just over 900ppm before we were contacted to decontaminate the vessel as required.

While the client’s procedures didn’t allow for a vessel with Benzene >1ppm to be opened they agreed to momentarily open the man-way and install an artificial barrier seal (under sealed conditions). This would allow a spray lance to be inserted through the barrier into the vessel while maintaining a sealed environment.

Using a HP steel lance fitted with atomising nozzles we were able to provide a 360° spray application without excess movement along the length of the lance.

Using a pneumatic diaphragm pump the Hydrocarbon Decontamination chemical HyDeX was injected at a steady rate (as dictated by the client) to observe the

reduction of contaminant levels. A total of 6 drums (6 x 200 litre) was used over a period of 20 hours before the client stopped the process (budgetary limitations) and the vessel was force ventilated by their own teams.

A total reduction in Benzene levels from 900ppm to 8.7ppm was easily achieved, while Ammonia levels were also recorded being reduced from 3,000+ppm to 87ppm (as a result of the vessel being decontaminated and the toxin source being vacuumed out).

Monitoring Equipment Used:

