



HSE ALERT

STAGE 2 VAPOUR RECOVERY

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Following the previous PEIMF meeting, this safety alert is being issued to bring awareness to all members, of a safety critical aspect of work being carried out on stage 2 systems:

The advent of Stage 2 Vapour Recovery in the UK has introduced a new hazard that maintenance contractors need to be aware of when carrying out maintenance to the underground storage tanks and associated pipe work. **This will also include anyone opening a fill point, such as a Site Operator, Petroleum Officer, Weights and Measures Inspector or Approved Verifier etc.**

Active Stage 2 PVR sites pose a risk of venting vapour at low level when fill caps are removed, as the system may be under pressure - where orifice plates have been used to replace P/V valves, this problem should not exist.

The problem is caused by a number of factors; natural vapour pressure, the volume of vapour returned being slightly greater than the petrol dispensed, and the temperature of the returned vapour being significantly lower than the temperature in the storage tank. As storage tank temperatures range from +10°C to +20°C, the problem is particularly acute in the winter months, when returned vapour might be as low as 0°. Cold vapour and air entering the ullage space of a storage tank, where the temperature is significantly higher, causes the air/vapour mixture to expand and a significant increase in pressure to occur.

Where this does occur staff may be subject to additional and unacceptable physical and health risks.

By the end of 2009, the number of sites with Stage 2 systems will increase to include all those with an annual turnover of petroleum spirit of 3.5 Million litres.

In view of the increased risk that this will pose around the industry, a safe working procedure has been developed by the PEIMF and is attached to this alert.

Please distribute this alert around your workforces and communicate to all who will be affected

STAGE 2 SAFE WORKING PROCEDURE

1. Confirm that the site has a Stage 2 vapour Recovery system in place and operating (This can be done by reference to the site operator, or checking the type of dispenser nozzle used.)
2. Examine the site register / maintenance log to see if faults have been recorded or reported by Tanker drivers
3. Check to see how recent the last delivery of petroleum spirit was.
4. Use the personal protection equipment provided as appropriate to the task. (Anti-static clothing, eye protection etc)
5. Ensure that all dispensers connected to the vapour recovery system have been closed, secured and appropriately labelled.
6. Ensure that control measures are in place to prevent sources of ignition entering the Hazard Zone. (Use cones or protective barriers and appropriate warning signs)
7. Connect a suitable means of releasing the pressure at high level, to the vapour recovery manifolded venting system. (See note below)
8. Wait sufficient time for pressure to subside. (10 minutes)
9. Record the vapour release in the site register.
10. After work is finished, remove pressure device and replace cam cover.
11. Re-instate dispensers and remove protective barriers, cones, etc.
12. Where pipe work has been disconnected, check after reconnection, for the presence of vapour leaks.
13. Record work activity in the site register.
14. Complete any documentation, clearance certificate etc.

N.B. PEIMF member, Retail and Forecourt Solutions (RFS), have designed and constructed a suitable vapour pressure release device, which snaps on to the vapour collection point and releases vapour at high level through collapsible aluminium tubing, extending to five metres. The device has an end of line flame arrester and folds neatly away for transportation. RFS are prepared to produce this kit to sell to other contractors and for further details, phone Mike Hollier on 01455 828558