
Question 1: When preparing reformer or isomerization vessels for maintenance, do you measure the benzene content of the unit? If so, what methods and locations are monitored and what criteria are used to establish safe levels for work to begin?

FRY (Delek Refining Ltd)

The corresponding OSHA regulation 1910.1082 states that the actionable limit for contact with the airborne benzene is 0.5 ppm (parts per million) on an eight-hour time-weighted average (TWA) and 5 ppm for a 15-minute TWA basis. In our facility, we have set our practices to meet that standard. We have found that the normal actions we take to prepare a vessel for entry are normally sufficient for benzene mitigation. For example, we have a UOP platform reactor; if we go into our reactor, we initially enter under full-body cover in order to clear out any pyrophoric material. The PPE (personal protective equipment) is sufficient to protect anyone entering the reactor in those circumstances. Once the pyrophoric material has been removed, the benzene is at a safe level. In other vessels, such as our stabilizer or separator, washing them with water and steam is sufficient to mitigate any benzene in those as well.

There are a number of different detectors on the market. We will check for benzene before we enter any vessels, but we have never had a problem with high or unacceptable benzene levels when we have followed those procedures.

BURTON (Motiva Enterprises LLC)

For vessel entry, Motiva sites have to meet the same OSHA regulatory limits. We generally cut that in half to be conservative. If you are not going on a vessel, then there are local environmental limits that have to be met. Initial sampling and analysis are done via Dräger tubes and with final confirmation with lab results. Once we have gotten entry in the vessel, there will then be continuous monitoring.

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Year

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