

vessel or its interfaces from the point of design, through manufacture, during installation and thereafter.³⁸

Indeed, contrary to the statement in its response to comments, the Agency has not required such a level of invulnerability even in recent regulations governing closed vent systems. For example, in its recent final rule amending new source performance standards for volatile organic liquid storage vessels,³⁹ EPA requires a first repair attempt of leaks above 500 ppm within five days, but recognizes that the time to repair requirements may need to be moderated due to technical infeasibility or safety:

(i) Except as allowed by paragraph (c)(3)(ii) of this section, a first attempt at repair shall be made no later than 5 days after the leak is detected. Repairs shall be completed no later than 15 days after the leak is detected or at the beginning of the next introduction of vapors to the system, whichever is later.

(ii) Delay of repair of a closed vent system for which leaks have been detected is allowed if repair within 15 days after a leak is detected is technically infeasible or unsafe or if the owner or operator determines that emissions resulting from immediate repair would be greater than the emissions likely to result from delay of repair. Repair of such equipment shall be completed as soon as practical.⁴⁰

In contrast, by treating a leak as a violation, the HON rule provides no time to repair or replace a leaking component. As VI noted:

It may not be possible to immediately stop a leak from a closure device without emptying the vessel. Typical VCM spheres at PVC facilities range from 5,000 to 10,000 barrels in capacity, and generally take approximately three to four weeks to evacuate before personnel can safely enter and effect repairs.⁴¹

If a pressure vessel needs to be deinventoried or fully emptied to safely repair a fugitive leak, then the affected HON unit will need to consider immediately shutting down operations. The shut down process will add to the repair delay. This is a major concern for our members as the Agency has not explained how the time to repair works in such an instance.

Under EPA's leak detection and repair (LDAR) penalty policy, failure to make a first attempt at repairs within a specified time incurs a violation each day a facility fails to make the attempt. This approach would be patently unfair for pressure vessels, where it may take several weeks to deinventory the vessel before a repair can be attempted. Thus, VI submits that at a minimum,

³⁸ See e.g. Nkosi, M.F., *Analyzing Human Errors Responsible for a Pressure Vessel Failure*, Proceedings of the 2nd African International Conference on Industrial Engineering and Operations Management Harare, Zimbabwe, December 7-10, 2020, available at <https://www.ieomsociety.org/harare2020/papers/333.pdf>.

³⁹ *New Source Performance Standards Review for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels)*, 89 Fed. Reg. 83,296 (October 15, 2024).

⁴⁰ 89 Fed. Reg. 83,330 (to be codified at 40 C.F.R. § 60.113c(c)(3)).

⁴¹ *Supra* n. 34.