



Raising the Bar for Safety in Industry!

P.O. BOX 173 ROANOKE RAPIDS, NC · (252)673-8960 · HUXSAFETYSOLUTIONS@GMAIL.COM

Toolbox Talk: Unreported Chemical Use Triggered an Explosive Atmosphere

Job Type: Confined Space Welding **Meter Used:** 4-Gas (Calibrated to Pentane) **Hazard Introduced:** Crack 1/2 Spray (C12–C15 Alkanes)

Incident Recap:

Mid-job, the contractor began using **Crack 1/2 spray**—without updating the permit or informing the safety team. Seconds later, the atmospheric meter hit **50% LEL**, triggering alarms. The VOC level (calculated post-incident): **120ppm**—well into explosive territory.


The space was permitted **only for welding**, and the meter didn't display VOCs. Only through correction factor logic did the true risk emerge.

Key Lessons for Your Crew:

- Never change scope without permit revalidation
- Always disclose chemical products to the safety team
- Know your meter's limits—VOC readings may require calculation
- Alarms are your last line of defense, not your first

This was a real incident. Use it. Learn from it. Keep crews safe by strengthening your permit logic and hazard workflows.

A full size picture is attached so you can see the Alkanes listed

 For a deeper breakdown of the incident and the logic behind VOC correction, **download the full blog post and toolbox materials at [insert blog URL].**

Take note in the picture below of the Crack1 can. **Danger: Contains Alkanes C12 C15.** To correctly monitor for this hazard we must use a correction factor for LEL or a PID set for the specific Alkanes.



