May 9, 2025

Office of Pipeline Safety, PHMSA
U.S. Department of Transportation
1200 New Jersey Avenue SE.,
Washington, DC 20590-0001

Re: Interpretation Request for 49 CFR § 192.167(a)(3)

To Whom it May Concern,

I am writing on behalf of Ruiz, a consulting firm working on the design and construction of natural gas compressor stations in compliance with applicable federal pipeline safety regulations. We are seeking PHMSA's formal interpretation of 49 CFR § 192.167(a)(3), pertaining to the emergency shutdown (ESD) systems at compressor stations, including the intended scope of these requirements in the context of various shutdown initiators and hazardous area classifications. Specifically:

1. Definition and Scope of "Emergency Shutdown"

The term "emergency shutdown" could encompass a range of scenarios. For example:

- A compressor unit trip due to abnormal process conditions (e.g., high temperature or pressure)
- Station-wide shutdown due to gas detection
- Station-wide shutdown due to fire detection
- Manual shutdown initiated by an ESD pushbutton or SCADA remote signal

Question:

Does §192.167(a)(3) require shutdown of gas compressing equipment, gas fires, and electrical facilities in all of these cases, or is the requirement specific to certain ESD initiators, such as fire or gas detection? In other words, is it acceptable for the owner and engineering team to define different shutdown actions depending on the initiator type, based on a risk-based safety analysis?

2. Hazardous Area Classification and Electrical De-energization

We understand that de-energization of electrical equipment during hazardous events is typically aimed at minimizing ignition sources. However:

- In our case, the compressor building is normally classified as Class 1 Division 2 due to adequate ventilation design.
- All installed electrical equipment within the compressor building will be rated for Class 1, Division 1 except for one panel which will be rated for Division 2.
- During a gas detection event, we question whether it is necessary to de-energize Division 1 rated equipment since these are designed for environments where gas may be present under normal operation. A Division 2 rated equipment, however, would be de-energized during a gas detection event.

Question:

Does PHMSA intend §192.167(a)(3) to require de-energization of electrical equipment even when all such equipment is rated for Division 1? If the electrical equipment and installation meet Division 1 requirements, is de-energization of such equipment still required during a gas detection event?

We would also like to refer to ASME B31.8, para. 843.2, which states that electrical installations located in hazardous areas that are to remain in operation during a compressor station emergency shutdown shall be designed to meet NFPA 70 Class 1, Division 1 requirements. This provision implies that such equipment may remain energized if it is appropriately rated and installed in accordance with Class 1, Division 1 standards.

3. Clarification on Exceptions

§192.167(a)(3) provides two exceptions:

1. Emergency lighting to aid evacuation
2. Electrical circuits needed to protect equipment from damage

We seek clarification on what is encompassed under the second exception.

Questions:

- Is there a formal definition for electrical circuits mentioned in exception # 2?
- Can equipment such as fire detectors, gas detectors, ESD alarms (beacons and horns), and PLC control systems be considered as circuits "needed to protect equipment from damage" or necessary for safety response?
- Similarly, is it acceptable to keep ventilation systems energized during a gas event under this exception, given their essential role in mitigating gas accumulation? Conversely, we understand that turning off ventilation systems during a fire event may be advisable to prevent feeding the fire. This distinction highlights why different shutdown actions may be appropriate depending on the nature of the ESD event (a reason why the first clarification regarding scope of emergency shutdown is also necessary).
- Is it acceptable to de-energize electrical equipment only during a fire event, while allowing it to remain energized during other events, provided this approach is supported by a safety-based assessment by the owner and engineering team?

We would greatly appreciate PHMSA's interpretation on these matters so we can ensure full compliance while also maintaining a functionally and operationally safe design.

Please let us know if any additional information or documentation is needed from our side. We would be happy to provide more context.

Thank you in advance for your time and support.

Sincerely,

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