CORDOVA METHANE CONTROLS

A GUIDE TO

New Process Controllers

(FORMERLY "PNEUMATIC CONTROLLERS")

40 CRF Part 60 Subparts (0000b) and (0000c) Signed 11/30/23 and Released 12/2/23

Standards of Performance for New, Reconstructed, and Modified Sources and Emissions Guidelines for Existing Sources: Oil and Natural Gas Sector Climate Review

Key Definitions

Zero-emitting process controller means a process controller that does not emit GHG (methane) or VOC to the atmosphere.

Closed vent system means a system that is not open to the atmosphere and that is composed of hard-piping, ductwork, connections, and, if necessary, flow-inducing devices that transport gas or vapor from a piece or pieces of equipment to a control device or back to a process.

Routed to a process or route to a process means the emissions are conveyed via a closed vent system to any enclosed portion of a process that is operational where the emissions are predominantly recycled and/or consumed in the same manner as a material that fulfills the same function in the process and/or transformed by chemical reaction into materials that are not regulated materials and/or incorporated into a product; and/or recovered.

Key Statements

- For affected facilities that are not located in Alaska, the EPA proposed a zero-emissions standard and explained that it could be achieved with any one of several available technology options that many owners and operators are already deploying to varying degrees, including the use of electric controllers or compressed air systems (powered by the grid or by an onsite generator), solar-powered controllers, and natural gas-driven controllers that are self-contained or **that are routed to a process.**
- When developing state plans for the implementation of the EG for **existing** sources, states have the ability through RULOF to apply a less stringent standard with an appropriate demonstration in accordance with the requirements of 40 CFR part 60, subpart Ba.
- States have 2 years to develop and submit rules that adhere to 40 CFR part 60, subpart Ba, then operators have 3 years past when states plans are approved by EPA to get all required existing process controllers in compliance.
- In conclusion, based on comments received, the EPA refreshed the BSER analysis with respect to costs and the associated emissions reductions. The EPA also considered other comments on the BSER analysis and the proposed zero-emissions standard for process controllers. After this consideration, the EPA continued to conclude that BSER for **new process controllers is the use of zero-emissions process controllers that do not emit GHG (methane) or VOC to the atmosphere.** Therefore, the final rule maintains the proposed zero-emissions standard.

Technology Requirements Regarding Process Controllers

(Formerly "Pneumatic Controllers")

- For both the NSPS and EG, process controllers are required to meet a methane and VOC emission rate of zero.
- For affected facilities that are not located in Alaska, the EPA proposed a zero-emissions standard and explained that it could be achieved with any one of several available technology options that many owners and operators are already deploying to varying degrees, including the use of electric controllers or compressed air systems (powered by the grid or by an onsite generator), solar-powered controllers, and natural gas-driven controllers that are self-contained or that are **routed to a process.**

VentHawk & VentHawk CH4

Patented Pneumatic Vent Gas Capture and Utilization System

Route exhaust gases from a level controller/dump valve, high/low controller/dump valve or pneumatic temperature controller to VentHawk and it directs the gas to the pilot line of the separator's burner system for clean utilization.

*Information obtained from ruling prepublication version, signed by EPA Administrator, Michael S. Regan on 11/30/2023.

Summary of Process Controllers Emission Standards

Location of Site	Site Has Access to Electrical Power	Emissions Standard	Emissions Standard Compliance Method
Outside Alaska	Yes or No	Zero GHG and VOC Emissions	Use process controllers not driven by natural gas **OR** Route natural gas-driven process controller emissions through a closed vent system to a process **OR** Use self-contained natural gas-driven process controllers **OR** Other means to achieve zero-emissions standard

Questions Addressed

Comment: Several commenters are concerned about the secondary emissions that will be created if natural gas-fired generators are used to power process controllers. The commenters are concerned that the operation of generators could result in increased cumulative nitrogen oxide (NOx) and VOC emissions as well as criteria pollutants and hazardous air pollutants (HAP). The commenters indicated that these emissions could potentially offset the emissions reductions from the methane and VOC, and these emissions from sites in ozone non-attainment areas could prevent those areas from gaining ozone attainment status.

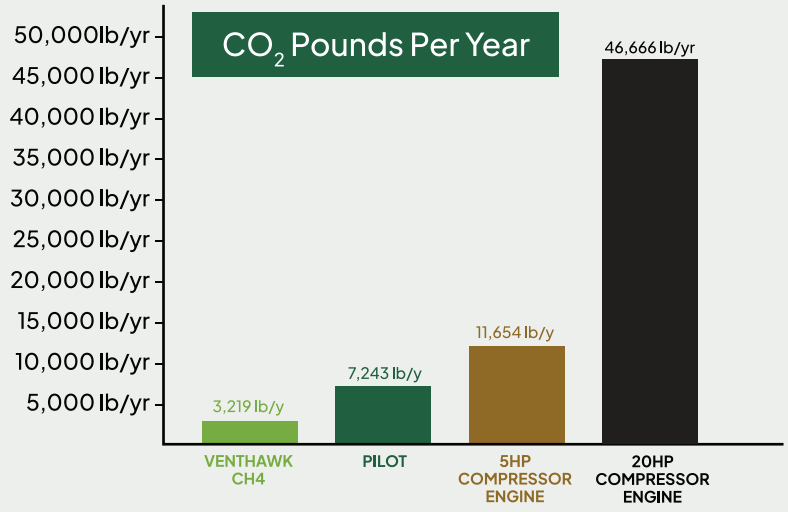
Response: The EPA recognizes that if owners and operators elect to comply by installing and operating a generator, there will be secondary emissions generated from the fuel combustion; however, we have estimated the emissions that would be created by generators and found that they are far outweighed by the VOC and GHG (methane) emissions reduction that would be achieved by using process controllers that are not driven by natural gas. For the December 2022 Supplemental Proposal, while we did recognize that a commenter had provided estimates of these emissions, we did not separately analyze the secondary emissions that would be created if a generator was used to power this equipment.

We have now conducted that analysis and estimate that for a natural gas-fired generator to power this equipment, the secondary criteria pollutant emissions would be 43 pounds per year (lb/yr) CO, 306 lb/yr NO2, 6 lb/yr PM, and 3 lb/yr PM2.5 for a 5 HP compressor and 172 lb/yr CO, 1,222 lb/yr NO2, 26 lb/yr PM, and 13 lb/yr PM2.5, for a 20 HP compressor. The secondary GHG emissions generated as a result of this electricity generation are estimated to be 11,654 lb/yr CO2, 0.2 lb/yr methane, and 0.02 lb/yr N2O for a 5 HP compressor and 46,618 lb/ yr CO2, 0.9 lb/yr methane, and 0.09 lb/yr N2O for a 20 HP compressor. Considering the global warming potential of these GHGs, the total CO2 Eq. emissions would be 11,667 lb/yr CO2 Eq. from a 5 HP compressor and 46,666 lb/yr CO2 Eq. from a 20 HP compressor. With the total CO2 Eq. emissions from process controllers at a small site estimated to be 303,000 lb/yr and 7.5 million lb/yr for a large site, the total CO2 Eq. reduction from the use of zero-emissions process controllers powered by a generator running a compressed air system would be more than 95 percent when compared to the uncontrolled methane emissions from natural gas-driven controllers. No other secondary impacts are expected. Considering this information regarding secondary emissions, we continue to find that the BSER for reducing methane and VOC emissions from natural gas-driven controllers in the production and the transmission and storage segments of the industry to be the use of controllers that have methane and VOC emission rates of zero.

However, this analysis shows that there are other demonstrated options available for all model plant sizes at sites without electricity with costs that are considered reasonable given the resulting methane and VOC emission reductions. **In addition, while information was not available to fully analyze the costs, the option of collecting the emissions from natural gas-driven pneumatic controllers and routing them to a process and the option of self-contained natural gas-driven pneumatic controllers also achieve 100 percent emission reductions. Therefore, they are considered equivalent to the use of controllers not driven by natural gas.**

Secondary CO_2 Emissions from VentHawk Systems

*calculations based on EPA emissions data



*Information obtained from ruling prepublication version, signed by EPA Administrator, Michael S. Regan on 11/30/2023.