



Ambient air monitoring data summary report

Hayesmount Ridge Estates Executive Summary

Air Toxics and Ozone Precursor Program
[ATOPs]



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1. Executive Summary

1.1. Report Purpose

The purpose of this report is to summarize the air data observed by the Colorado Department of Public Health and Environment (CDPHE) from 11/6/2025 through 12/12/2025 in the Hayesmout Ridge Estate neighborhood in Lochbuie, CO that is located near several oil and gas facilities.

1.2. Background Information

- The Hayesmout Ridge Estates neighborhood in Lochbuie, CO is near several oil and gas facilities in Weld and Adams Counties.
- CDPHE was informed of resident health concerns and suspected elevated formaldehyde measurements, leading to further investigation.
- CDPHE conducted continuous monitoring of formaldehyde (HCHO), benzene, and toluene from 11/6/2025 through 12/12/2025 at a residence within Hayesmout Ridge Estates.
- An Aeris Ultra MIRA HCHO/H₂O analyzer and an Entanglement Technologies AROMA-VOC, deployed within the Examiner of Atmospheric Gases from Localized Emissions (EAGLE) as a portable stationary air quality monitor, was positioned approximately 60 feet east of a residence within Hayesmout Ridge Estates.

1.3. Air Monitoring Objective

- The Air Toxics and Ozone Precursors Program (ATOPs) within the Air Pollution Control Division (APCD) of the CDPHE deployed a portable stationary air monitoring asset in response to the request of the Oil & Gas Health Information and Response (OGHIR) program.

1.4. Key Findings

- The maximum hourly-averaged formaldehyde (HCHO) measurement was observed to be 4.9 ppbV at 3:00 PM on 11/14/2025. This maximum hourly-average observed is well below the acute health guideline value of 40 ppbV.
- Of the 687 valid sampling hours of formaldehyde measurements, 26 (3.8%) were above the method detection limit of 2.4 ppbV.
- The maximum benzene 10-minute measurement was observed to be 2.0 ppbV at 4:00 PM on 12/4/25 with a maximum rolling one hour average of 1.1 ppbV. The maximum 1-hour rolling average observed for benzene is well below the acute health guideline value of 9 ppbV.

- The average benzene concentration measured during the deployment was 0.15 ppbV, typical of the background for the region.
- The maximum toluene 10-minute measurement was observed to be 1.4 ppbV at 1:22 AM on 11/13/25 with a maximum rolling one hour average of 1.2 ppbV. The maximum 1-hour rolling average observed for toluene is well below the acute health guideline value of 2000 ppbV.
- The time series of formaldehyde, benzene, and toluene are shown in the Appendix in Figure A1.

Appendix A

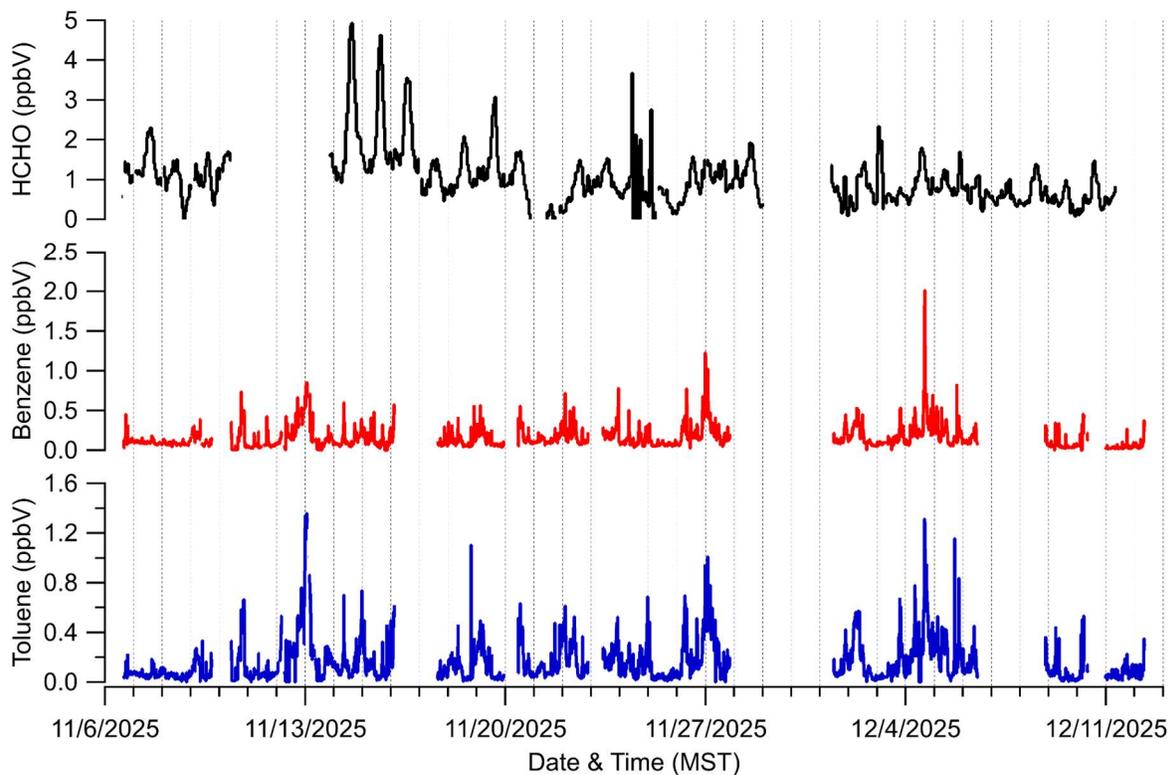


Figure A1: Three panel figure showing time series of measurements at Hayesmount Ridge Estates. Hourly-averaged formaldehyde (HCHO) levels (top panel, black line) were measured by the Aeris Ultra MIRA HCHO/H₂O analyzer. Benzene levels (middle panel, red line), and toluene levels (bottom panel, blue line) were measured by the AROMA-VOC analyzer.