



# Arkansas Department of Health

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## Arkansas Department of Health Public Health Air Evaluation Summary for the Eco Vista Landfill Perimeter (April 28-May 1 Investigation Period)

The Arkansas Department of Health's (ADH) Environmental Epidemiology Section has evaluated air sampling and monitoring data collected for the Eco Vista Landfill perimeter in Tontitown, AR, by an environmental consultant firm, CTEH. **The key findings for each detected contaminant are stated below.** Once finalized, additional detailed information on risk assessment calculations, including potential lifetime cancer risks will be sent as a follow-up Letter Health Consultation to the Arkansas Department of Energy and Environment (ADEE).

For this public health assessment, an adjusted exposure point concentration (EPC) was calculated using the maximum concentrations at the sampling locations (Areas 1-14) to assess ambient air inhalation exposure risks. The maximum concentration was chosen to be used as the EPC out of extreme caution to provide a worst-case scenario for overall public health assessment. **Based on the data evaluated, there is a complete pathway for inhalation exposure for residents living near and further away from the landfill.**

The data collected near the Eco Vista Landfill perimeter did identify levels of acrolein, benzene, carbon tetrachloride, and chloroform in the air that exceed health comparison values (CVs). However, reported benzene levels are in the ranges that would be expected for rural subdivisions. The air data results near the site perimeter did indicate that acrolein exceeds the chronic (exposure over 1 year) environmental media evaluation guide (EMEG), 0.40 parts per billion (ppb); intermediate (exposure 15 – 365 days) EMEG, 0.40 ppb; and reference dose media evaluation guide (RMEG)/minimal risk level (MRL), 0.009 ppb. Additional public health risk calculations are warranted and will be in the follow-up letter.

The off-site data collected at locations further from the site did identify levels of acrolein, benzene, carbon tetrachloride, and naphthalene that exceed health CVs. However, reported benzene levels are in the ranges that would be expected for rural subdivisions. The data further away from the Eco Vista Landfill perimeter did indicate that naphthalene exceeds the acute (exposure 1-14 days) EMEG, 0.060 ppb; and cancer risk evaluation guides (CREG)/MRL, 0.0056 ppb. Additional public health risk calculations are warranted and will be in the follow-up letter.

**Currently, ADH cannot conclusively determine the source of these contaminants. However, it is possible that local businesses are contributing to these levels. As a result, we recommend obtaining more comprehensive air quality data.**

**Recommendations:**

For prudent public health safety, ADH recommends the following:

- If resources are available, additional VOC air sampling and monitoring should be conducted:
  - Near Area 2 and the four selected background sampling locations (Areas 11-14) on CTEH's Analytical Air Sampling Location map.
  - On the Eco Vista Landfill site to better determine if it is contributing to the elevated contaminants levels.
  - In a comparison community that does not have a landfill nearby.
- ADEE continues to provide any air monitoring and/or air sampling results to ADH for evaluation of public health exposures.
- Community members contact a physician or health care professional if they feel they are experiencing possible health effects related to strong odors.

Resources:

Agency for Toxic Substances and Disease Registry's (ATSDR) Acrolein ToxFAQs.

Agency for Toxic Substances and Disease Registry's (ATSDR) Benzene ToxFAQs.

Agency for Toxic Substances and Disease Registry's (ATSDR) Carbon Tetrachloride ToxFAQs.

Agency for Toxic Substances and Disease Registry's (ATSDR) Chloroform ToxFAQs.

Agency for Toxic Substances and Disease Registry's (ATSDR) Naphthalene ToxFAQs.