



EPA Inspections Find Landfill Methane 10 to more than 100 Times Clean Air Act Limits

Inspection reports available through Eyes on Environmental Enforcement show that emission rates can be much higher than industry discloses. For example, large solid waste landfills emitting more than 34 metric tons of smog-forming volatile organic pollutants (VOC's) per year must install a gas collection and control system if their methane levels exceed 500 parts per million (ppm). Once installed, landfills are required to report and clean up any methane leaks that exceed that threshold, and if the higher levels persist, to significantly improve the management of waste and the collection and control of landfill gas. The rule relies on methane monitoring because it is easier and cheaper than monitoring volatile chemical compounds, and because EPA determined that a 500 ppm methane limit would keep VOC emissions acceptably low.

But EPA inspectors have found landfill methane emissions, which are released as waste decomposes, to be much higher than the Clean Air Act limit. Inspections between 2023 and 2026 measured methane above 500 ppm at 677 locations among the twelve landfills identified in the attached table. At more than 200 of those sites, methane levels were from ten to more than four hundred times or more higher, ranging from 5,000 to more than 200,000 parts per million. In some cases, methane levels were so high they snuffed out monitors that do not operate at low oxygen levels. [Click here to see the inspection reports for each one.](#)

These samples were collected above or near the wells, sumps or other areas that drain landfills or are sometimes used to blanket methane emissions, near landfill gas pipes or flares, or areas where the landfill surface had eroded. Although EPA found these astronomically high levels in just a few hours, some reports note that landfill operators rarely report methane levels above 500 ppm over several months or even a year. For example, inspectors found more than 30 exceedances of the methane limit at Fort Worth's Southeast Landfill in two hours on April 16, 2026 (including 9 more than ten times the limit, while the landfill had reported only 25 since December 2024). The largest leaks at eight of the twelve landfills in the table exceed 50,000 ppm, the lower explosive limit (LEL) for methane. At those concentrations, a spark can ignite a fire or explosion.

The methane limits were adopted as a low-cost, alternative way to control VOC emissions. Regardless, methane is a potent greenhouse gas, with a global warming potential more than 80 times that of carbon dioxide over a 20-year period, and already account for more

than 14% of total U.S. manmade emissions of this pollutant. The data in the attached table – identifying leak rates ten to more than a hundred times the 500 ppm limit – indicate that landfills are an even larger methane source. Because EPA assumes that VOC emissions from landfills increase as methane concentrations rise, these waste disposal sites likely emit more VOC's than is reported. That matters because VOC emissions increase ozone (smog) levels and some of these dumps, like the one in Fort Worth, are located in areas that continue to violate air quality standards established in 2008.

Based on inspection reports and two different “Enforcement Alerts” issued by the Office of Enforcement and Compliance Assurance in 2024, the high emission levels persist because landfill operators do not monitor frequently enough, do not monitor in large areas, fail to maintain landfill covers, repair leaks, or assure that landfill gas control and collections systems are well operated. Also, operators sometimes do not measure or report emissions from industrial wastes, which can include contaminated soils and liquids and other debris that account for as much as half the waste in “municipal” landfills. **For more data from EPA's landfill inspections, enter “landfill” or “disposal” in the search box in Eyes on Enforcement. You can search by region or within all regions.**