**Longmont Residential Community README**

**Overview**

The Longmont residential community deployment was led by the Air Toxics and Ozone Precursors Program (ATOPs) within the Air Pollution Control Division (APCD) of the Colorado Department of Public Health and Environment (CDPHE). The deployment was initiated to respond to health concerns within a Longmont residential neighborhood. The Longmont residential community is located in Longmont, Colorado. Some industry surrounds the residential community, including three oil and gas facilities, as well as one food processing facility. Gasoline contains benzene, an air toxic regulated by HB21-1189, a known carcinogen that has acute and chronic impacts at low concentrations. The goal of this deployment is to determine whether the Magellan Dupont gasoline storage facility is emitting hazardous concentrations of air toxics. This README file explains the instruments used, compounds detected, units of measurement, and specifications relevant for data interpretation.

**Measurement Specifications**

**BTEX (Benzene, Toluene, Ethyl Benzene, Xylenes)**

|  |  |
| --- | --- |
| **Instrument Manufacturer** | Pollution Analytical Equipment |
| **Instrument Model** | PyxisGC BTEX |
| **Compounds Detected** | Benzene, Toluene, Ethyl Benzene, Xylenes (BTEX) |
| **Units** | ppbV, ppbV, ppbV, ppbV |
| **Detection Limits (in units)** | 0.05, 0.05, 0.25, 1 |
| **Sampling Resolution** | 597 seconds (9 minutes, 57 seconds) |
| **Notes** | Sampling onto the preconcentrator occurs during the last 6 minutes of each sampling period. |

**Health Guideline Value (HGV) / Level 1 Acute Exposure Guideline Levels (AEGL) Reference Guide**

These concentrations are established by the EPA (AEGL) and CDPHE (HGV) for the compounds measured at this deployment that can cause acute health effects.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Exposure Time** | **Benzene (ppbV)** | **Toluene (ppbV)** | **Ethyl Benzene (ppbV)** | **Xylenes (ppbV)** |
| 10 min | 130000 | 67000 | 33000 | N/A |
| 30 min | 73000 | 67000 | 33000 | N/A |
| 60 min | 52000\*/9\*\* | 67000\*/2000\*\* | 33000\*/5000\*\* | 2000\*\* |
| 4 hr | 18000 | 67000 | 33000 | N/A |
| 8 hr | 9000 | 67000 | 33000 | N/A |

\*1 hour AEGL  
\*\*1 hour HGV