**Magellan Dupont README**

**Overview**

The Magellan Dupont deployment is 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 complaints from the neighboring community. The Magellan Dupont terminal is a gasoline storage 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** | Entanglement Technologies |
| --- | --- |
| **Instrument Model** | AROMA-TOX-EtO |
| **Compounds Detected** | Benzene, Toluene, Ethyl Benzene, Xylenes (BTEX) |
| **Units** | ppbV, ppbV, ppbV, ppbV |
| **Detection Limits (in units)** | 0.056, 0.118, 0.182, 0.538 |
| **Sampling Resolution** | 667 seconds (11 minutes, 7 seconds) |
| **Notes** | Sampling period is 667 seconds, measurement pauses between samples to process data and can vary slightly. |

**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

**Note on Solar Radiation Measurements**

The MARMOT trailer is deployed directly North of a large tree. This tree may impart shade on the Gill Maximet GMX501 meteorological station, systematically lowering solar radiation measurements at points throughout the day.