

Air Monitoring Summary Tables

The tables below summarize monitoring data collected using EPA's Viper wireless remote monitoring system. The "Number of Readings" are artificially reduced to manage large quantities of data for this report. Further discussion is provided in the notes section on page 5.



Project Name: Applegate Lane Containers

**From: 10/23/23
7:01 AM**

**To: 10/24/23
7:00 AM**

Station 01 - Tier I							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRAE 1	VOC	No	2878	0	0-0 ppb	0.00 ppb	9000 ppb
	CO	No	2878	0	0-0 ppm	0.00 ppm	83 ppm
	H2S	No	2878	0	0-0 ppm	0.00 ppm	0.51 ppm
	O2	No	2878	2878	20.6-21.3 %	20.96 %	<19.5 or >23 %
	LEL	No	2878	0	0-0 %	0.00 %	10 %
	HCN	No	2878	0	0-0 ppm	0.00 ppm	2 ppm
DustTrak 1	PM2.5	See PM-2.5 Action Levels	1439	1439	2-27 µg/m3	5.19 µg/m3	See PM-2.5 Action Levels
SPM Flex 1	Ammonia (NH3)	No	1439	1	0-0.04 ppm	0.00 ppm	30 ppm
SPM Flex 2	Nitric Acid (HNO3)	No	1440	0	0-0 ppm	0.00 ppm	0.16 ppm

Station 02 - Tier I							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRAE 2	VOC	No	2877	2013	0-477 ppb	213.59 ppb	9000 ppb
	CO	No	2877	0	0-0 ppm	0.00 ppm	83 ppm
	H2S	No	2877	0	0-0 ppm	0.00 ppm	0.51 ppm
	O2	No	2877	2877	20.9-20.9 %	20.90 %	<19.5 or >23 %
	LEL	No	2877	0	0-0 %	0.00 %	10 %
	HCN	No	2877	572	0-0.7 ppm	0.07 ppm	2 ppm
DustTrak 2	PM2.5	See PM-2.5 Action Levels	1447	1447	5-50 µg/m3	10.48 µg/m3	See PM-2.5 Action Levels
SPM Flex 3	Ammonia (NH3)	No	1440	0	0-0 ppm	0.00 ppm	30 ppm
SPM Flex 4	Nitric Acid (HNO3)	No	1439	0	0-0 ppm	0.00 ppm	0.16 ppm

Station 03 - Tier I							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRAE 3	VOC	No	2805	338	0-144 ppb	6.75 ppb	9000 ppb
	CO	No	2805	0	0-0 ppm	0.00 ppm	83 ppm
	H2S	No	2805	0	0-0 ppm	0.00 ppm	0.51 ppm
	O2	No	2805	2805	20.5-22 %	21.05 %	<19.5 or >23 %
	LEL	No	2805	0	0-0 %	0.00 %	10 %
	HCN	No	2805	1366	0-0.6 ppm	0.09 ppm	2 ppm
DustTrak 3	PM2.5	See PM-2.5 Action Levels	1440	1440	3-27 µg/m3	6.97 µg/m3	See PM-2.5 Action Levels
SPM Flex 5	Ammonia (NH3)	No	1440	42	0-0.02 ppm	0.00 ppm	30 ppm
SPM Flex 6	Nitric Acid (HNO3)	No	1439	0	0-0 ppm	0.00 ppm	0.16 ppm

Air Monitoring Summary Tables

The tables below summarize monitoring data collected using EPA's Viper wireless remote monitoring system. The "Number of Readings" are artificially reduced to manage large quantities of data for this report. Further discussion is provided in the notes section on page 5.



Project Name: Applegate Lane Containers

**From: 10/23/23
7:01 AM**

**To: 10/24/23
7:00 AM**

Station 04 - Tier 1							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRae 4	VOC	No	2877	0	0-0 ppb	0.00 ppb	9000 ppb
	CO	No	2877	0	0-0 ppm	0.00 ppm	83 ppm
	H2S	No	2877	0	0-0 ppm	0.00 ppm	0.51 ppm
	O2	No	2877	2877	20.2-20.4 %	20.33 %	<19.5 or >23 %
	LEL	No	2877	0	0-0 %	0.00 %	10 %
	HCN	No	2877	64	0-0.2 ppm	0.00 ppm	2 ppm
DustTrak 4	PM2.5	See PM-2.5 Action Levels	1439	1439	4-27 µg/m3	8.23 µg/m3	See PM-2.5 Action Levels
SPM Flex 7	Ammonia (NH3)	No	1439	45	0-0.05 ppm	0.00 ppm	30 ppm
SPM Flex 8	Nitric Acid (HNO3)	No	1391	0	0-0 ppm	0.00 ppm	0.16 ppm

Station 05 - Tier I							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRae 5	VOC	No	2876	2238	0-538 ppb	268.20 ppb	9000 ppb
	CO	No	2876	8	0-4 ppm	0.01 ppm	83 ppm
	H2S	No	2876	0	0-0 ppm	0.00 ppm	0.51 ppm
	O2	No	2876	2876	20.6-20.9 %	20.88 %	<19.5 or >23 %
	LEL	No	2876	0	0-0 %	0.00 %	10 %
	HCN	No	2876	284	0-0.3 ppm	0.01 ppm	2 ppm
DustTrak 5	PM2.5	See PM-2.5 Action Levels	1439	1439	3-39 µg/m3	9.72 µg/m3	See PM-2.5 Action Levels
SPM Flex 9	Ammonia (NH3)	No	1439	279	0-0.64 ppm	0.01 ppm	30 ppm
SPM Flex 10	Nitric Acid (HNO3)	No	1439	0	0-0 ppm	0.00 ppm	0.16 ppm

Station 06 - Tier I							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRae 6	VOC	No	2878	2878	9-432 ppb	282.74 ppb	9000 ppb
	CO	No	2878	0	0-0 ppm	0.00 ppm	83 ppm
	H2S	No	2878	0	0-0 ppm	0.00 ppm	0.51 ppm
	O2	No	2878	2878	20.1-20.9 %	20.25 %	<19.5 or >23 %
	LEL	No	2878	138	0-4 %	0.13 %	10 %
	HCN	No	2878	176	0-0.5 ppm	0.01 ppm	2 ppm
DustTrak 6	PM2.5	See PM-2.5 Action Levels	1439	1439	4-29 µg/m3	8.46 µg/m3	See PM-2.5 Action Levels
SPM Flex 11	Ammonia (NH3)	No	1440	266	0-0.72 ppm	0.01 ppm	30 ppm
SPM Flex 12	Nitric Acid (HNO3)	No	1439	0	0-0 ppm	0.00 ppm	0.16 ppm

Air Monitoring Summary Tables

The tables below summarize monitoring data collected using EPA's Viper wireless remote monitoring system. The "Number of Readings" are artificially reduced to manage large quantities of data for this report. Further discussion is provided in the notes section on page 5.



Project Name: Applegate Lane Containers

**From: 10/23/23
7:01 AM**

**To: 10/24/23
7:00 AM**

Station 07 - Tier I							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRae 7	VOC	No	2877	2877	189-1010 ppb	713.94 ppb	9000 ppb
	CO	No	2877	0	0-0 ppm	0.00 ppm	83 ppm
	H2S	No	2877	0	0-0 ppm	0.00 ppm	0.51 ppm
	O2	No	2877	2877	19.9-20.9 %	20.13 %	<19.5 or >23 %
	LEL	No	2877	0	0-0 %	0.00 %	10 %
	HCN	No	2877	234	0-0.4 ppm	0.01 ppm	2 ppm
DustTrak 7	PM2.5	See PM-2.5 Action Levels	1436	1436	2-27 µg/m3	10.44 µg/m3	See PM-2.5 Action Levels
SPM Flex 13	Ammonia (NH3)	No	1437	224	0-0.44 ppm	0.01 ppm	30 ppm
SPM Flex 14	Nitric Acid (HNO3)	No	1437	0	0-0 ppm	0.00 ppm	0.16 ppm

Station 10 - Tier II							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRae 10	VOC	No	2873	0	0-0 ppb	0.00 ppb	9000 ppb
	CO	No	2873	0	0-0 ppm	0.00 ppm	83 ppm
	H2S	No	2873	0	0-0 ppm	0.00 ppm	0.51 ppm
	O2	No	2873	2873	20.9-20.9 %	20.90 %	<19.5 or >23 %
	LEL	No	2873	0	0-0 %	0.00 %	10 %
	HCN	No	2873	0	0-0 ppm	0.00 ppm	2 ppm
DustTrak 10	PM2.5	See PM-2.5 Action Levels	1440	1440	1-66 µg/m3	6.06 µg/m3	See PM-2.5 Action Levels
SPM Flex 19	Ammonia (NH3)	No	1440	233	0-0.62 ppm	0.01 ppm	30 ppm
SPM Flex 20	Nitric Acid (HNO3)	No	1439	0	0-0 ppm	0.00 ppm	0.16 ppm

Station 11 - Tier II							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRae 11	VOC	No	2873	2873	21-13742 ppb	577.87 ppb	9000 ppb
	CO	No	2873	4	0-88 ppm	0.06 ppm	83 ppm
	H2S	No	2873	4	0-0.9 ppm	0.00 ppm	0.51 ppm
	O2	No	2873	2873	20.9-21.2 %	20.94 %	<19.5 or >23 %
	LEL	No	2873	0	0-0 %	0.00 %	10 %
	HCN	No	2873	58	0-4.1 ppm	0.01 ppm	2 ppm
DustTrak 11	PM2.5	See PM-2.5 Action Levels	1440	1440	3-216 µg/m3	7.78 µg/m3	See PM-2.5 Action Levels
SPM Flex 21	Ammonia (NH3)	No	1439	24	0-0.23 ppm	0.00 ppm	30 ppm
SPM Flex 22	Nitric Acid (HNO3)	No	1440	0	0-0 ppm	0.00 ppm	0.16 ppm

Air Monitoring Summary Tables

The tables below summarize monitoring data collected using EPA's Viper wireless remote monitoring system. The "Number of Readings" are artificially reduced to manage large quantities of data for this report. Further discussion is provided in the notes section on page 5.



Project Name: Applegate Lane Containers

**From: 10/23/23
7:01 AM**

**To: 10/24/23
7:00 AM**

Station 12 - Tier II							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRae 12	VOC	No	2877	2525	0-638 ppb	358.06 ppb	9000 ppb
	CO	No	2877	36	0-35 ppm	0.12 ppm	83 ppm
	H2S	No	2877	12	0-1.1 ppm	0.00 ppm	0.51 ppm
	O2	No	2877	2877	20.2-20.9 %	20.59 %	<19.5 or >23 %
	LEL	No	2877	0	0-0 %	0.00 %	10 %
	HCN	No	2877	164	0-0.4 ppm	0.01 ppm	2 ppm
DustTrak 12	PM2.5	See PM-2.5 Action Levels	1439	1439	9-51 µg/m3	12.52 µg/m3	See PM-2.5 Action Levels
SPM Flex 23	Ammonia (NH3)	No	1439	94	0-0.03 ppm	0.00 ppm	30 ppm
SPM Flex 24	Nitric Acid (HNO3)	No	1440	0	0-0 ppm	0.00 ppm	0.16 ppm

Station 13 - Tier II							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRae 13	VOC	No	2850	2418	0-622 ppb	310.35 ppb	9000 ppb
	CO	No	2850	0	0-0 ppm	0.00 ppm	83 ppm
	H2S	No	2850	0	0-0 ppm	0.00 ppm	0.51 ppm
	O2	No	2850	2850	20.2-20.9 %	20.64 %	<19.5 or >23 %
	LEL	No	2850	0	0-0 %	0.00 %	10 %
	HCN	No	2850	110	0-0.2 ppm	0.01 ppm	2 ppm
DustTrak 13	PM2.5	See PM-2.5 Action Levels	1439	1429	-58-57 µg/m3	6.09 µg/m3	See PM-2.5 Action Levels
SPM Flex 25	Ammonia (NH3)	No	1439	40	0-0.06 ppm	0.00 ppm	30 ppm
SPM Flex 26	Nitric Acid (HNO3)	No	1439	0	0-0 ppm	0.00 ppm	0.16 ppm

Station 14 - Tier II							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRae 14	VOC	No	2875	0	0-0 ppb	0.00 ppb	9000 ppb
	CO	No	2875	36	0-17 ppm	0.06 ppm	83 ppm
	H2S	No	2875	0	0-0 ppm	0.00 ppm	0.51 ppm
	O2	No	2875	2875	20.9-21.5 %	20.97 %	<19.5 or >23 %
	LEL	No	2875	0	0-0 %	0.00 %	10 %
	HCN	No	2875	4	0-0.6 ppm	0.00 ppm	2 ppm
DustTrak 14	PM2.5	See PM-2.5 Action Levels	1437	1399	-1-121 µg/m3	11.26 µg/m3	See PM-2.5 Action Levels
SPM Flex 27	Ammonia (NH3)	No	1439	100	0-0.3 ppm	0.00 ppm	30 ppm
SPM Flex 28	Nitric Acid (HNO3)	No	1439	0	0-0 ppm	0.00 ppm	0.16 ppm

Air Monitoring Summary Tables

The tables below summarize monitoring data collected using EPA's Viper wireless remote monitoring system. The "Number of Readings" are artificially reduced to manage large quantities of data for this report. Further discussion is provided in the notes section on page 5.



Project Name: **Applegate Lane Containers**

From: **10/23/23**
7:01 AM

To: **10/24/23**
7:00 AM

Notes:

Air monitoring instruments around the site are continuously operating 24-hours per day and transmitting to a central location. When elevated readings are detected, response personnel at the Site are automatically notified so that confirmation and appropriate actions can take place. Each day, these instruments collect 44 million records and 5GB of data. To generate this summary report, the number of records have been artificially reduced by using one reading per minute from each instrument - this does not affect the period average has no significant effect on the concentration range. No data is lost and elevated concentrations of any analyte being measured at the Site would be sufficiently represented within the data shown here.

Ammonia Detections: Multiple instruments show low levels of Ammonia detections below 1.0 ppm. This is below the action level of 30 ppm based on the most protective Acute Exposure Guideline Levels for a 1-hour average exposure. EPA has provided this data to the Agency of Toxic Substances and Disease Registry (ASTDR) for review and an assessment of these data have been provided in the Air Monitoring Data Summary Report for Oct 17 at 0700 to Oct 18 at 0700.

DustTrak13 at Station 13 on Oct 18: This instrument returned negative values for particulate matter between 7:23pm and 7:28pm. These were inaccurate values due to an instrument fault. This is the second time that DustTrak13 at Station 13 has experienced this fault.

AreaRAEs at Stations 5, 6, and 7 recorded HCN readings above zero and below 0.4 ppm between 2-7pm for station 5 and 4-6pm for stations 6 and 7. These stations are located on the south, east and north of the Site, respectively. During this time, wind was blowing from the south at less than 5mph. All readings were below the action level of 2 ppm for HCN. These data are being reviewed and further information will be posted in a subsequent report

Analyte	Definition	Action Level Reference
VOC	Volatile Organic Compounds	AEGL-1 8hr for Benzene
CO	Carbon Monoxide	AEGL-2 1hr
H2S	Hydrogen Sulfide	AEGL-1 1hr
O2	Oxygen	29 CFR 1910.146, Confined Spaces
LEL	Lower Explosive Limit	29 CFR 1910.146, Confined Spaces
NH3	Ammonia	AEGL-1 1hr
HNO3	Nitric Acid	AEGL-1, 1hr
SO2	Sulfur Dioxide	AEGL-1 1hr
Cl2	Chlorine	AEGL-1 1hr
HCN	Hydrogen Cyanide	AEGL-1 1hr
NO	Nitric Oxide	PAC-1 (compare Cl2 and H2S PAC-1 to AEGL-1)
PM 2.5	Particulate Matter 2.5	See PM-2.5 Action Levels Sheet
%	Percent	
<	Less than	
>	Greater than	
AEGL	Acute Exposure Guideline Levels for Airborne Chemicals	
C/m	Counts (ionization events) per minute	
mg/m3	milligrams per cubic meter	
min	Minute	
PAC	Protective Action Criteria	
PEL	Permissible exposure limit	
ppb	Parts per billion	
ppm	Parts per million	
PM	Particulate Matter	
SOG	Standard Operating Guidelines	
SPM	Single Point Monitor	
TEEL	Temporary Emergency Exposure Limit	
TLV	Threshold Limit Value	
µg/m3	Micrograms per cubic meter	
µrem/h	Microrem per hour	



Legend



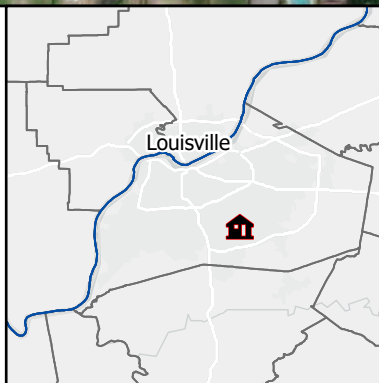
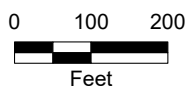
6213 Applegate Lane



Tier I



Tier II



United States
Environmental Protection Agency
Region 4

Applegate Lane Container Site Air Monitoring Station Locations

City:
Louisville

County:
Jefferson

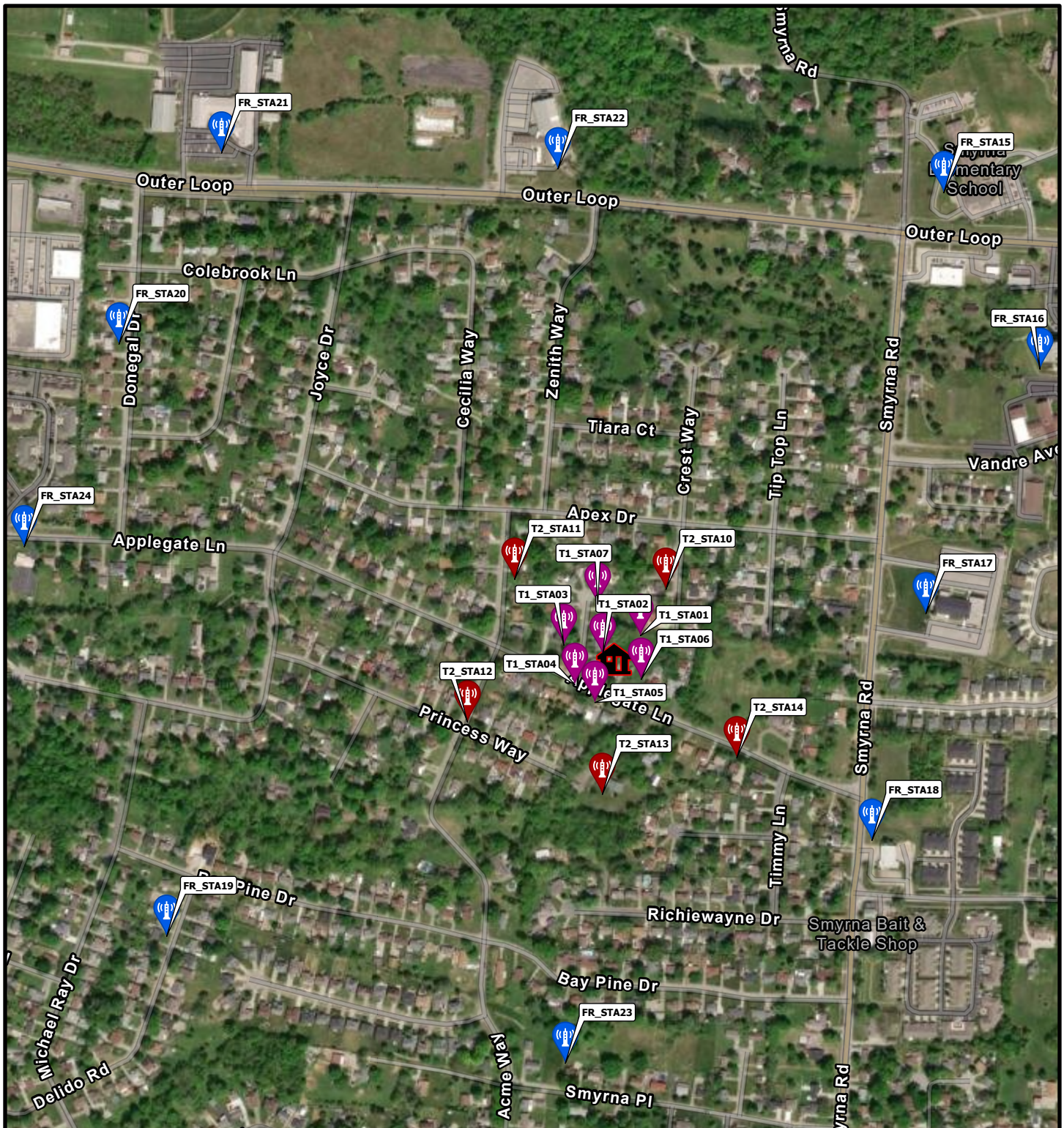
State:
Kentucky



TETRA TECH

Date:
10/10/2023

Analyst:
MORGAN.TORRES



Legend



6213 Applegate Lane



Tier I



Tier II



Contingency



0 250 500
Feet



United States
Environmental Protection Agency
Region 4

Applegate Lane Container Site Air Monitoring Station Locations

City:
Louisville

County:
Jefferson

State:
Kentucky



TETRA TECH

Date:
10/10/2023
Analyst:
MORGAN.TORRES

PM2.5 (Particulate Matter ≤ 2.5 microns) Community Action Threshold Levels				
For Unified Command Use				
1-Hour Average (µg/m3)	24-Hour Average (µg/m3)	Level of Health Concern	Meaning	Action
0.0 - 40.0	0.0-12.0	Good	Air Quality is considered satisfactory, and air pollution poses little or no risk.	Implement communication plan.
40.1 - 80.0	12.1 - 35.4	Moderate	Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution.	Issue public announcement about health effects. Stay out of areas with visible smoke.
80.1 - 175.0	35.5 - 55.4	Unhealthy for Sensitive Groups	Members of sensitive groups may experience health effects. The general public is not likely to be affected.	Recommend evacuation or shelter-in-place for sensitive populations.
175.1 - 300.0	55.5 - 150.4	Unhealthy	Everyone may begin to experience health effects; members of sensitive groups may experience more serious health effects.	Consider closing schools and cancelling outdoor events. Recommend shelter-in-place for affected neighborhoods.
300.1 - 500.0	150.5 - 250.4	Very Unhealthy	Health warnings of emergency conditions. The entire population is more likely to be affected.	Consider closing schools and cancel all outdoor events. Recommend shelter-in-place and/or evacuation for affected neighborhoods.
> 500.0	> 250.5	Hazardous	Health alert: everyone may experience more serious health effects.	Recommend closing schools & cancel outdoor events. Recommend closing workplaces and evacuating affected neighborhoods.

See The National Ambient Air Quality Standards for Particle Pollution REVISED AIR QUALITY STANDARDS FOR PARTICLE POLLUTION AND UPDATES TO THE AIR QUALITY INDEX (AQI) (https://www.epa.gov/sites/default/files/2016-04/documents/2012_aqi_factsheet.pdf)