

# Air Monitoring Summary Tables

The tables below summarize preliminary air monitoring data collected using EPA AreaRAE Pro and DustTrak DRX instruments.

**Project Name:** Morris Industrial Fire Site  
**Date/Time:** 07/06/2022 07:41 to 07/07/2022 16:53

Northeast Air Monitoring Station					
Instrument	Analyte	Morris Industrial Fire Public Health Screening Level <sup>1</sup>	Public Health Screening Level Exceeded?	1-Hour Period Concentration Range	Average of All 1-Hour Periods
DustTrak (S/N: 8533153912)	PM <sub>2.5</sub> (mg/m <sup>3</sup> )	0.025 mg/m <sup>3</sup>	No	0.006 to 0.023	0.012
	PM <sub>10</sub> (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>	No	0.006 to 0.023	0.012
AreaRAE Pro (S/N: W01A00002413)	VOC (ppm)	0.5 ppm	No	0.0 to 0.0	0.0
	CO (ppm)	--	No	0.0 to 0.0	0.0
	H <sub>2</sub> S (ppm)	0.1 ppm	No	0.0 to 0.0	0.0
	HF (ppm)	0.2 ppm	No	0.0 to 0.0	0.0

Northwest Air Monitoring Station					
Instrument	Analyte	Morris Industrial Fire Public Health Screening Level <sup>1</sup>	Public Health Screening Level Exceeded?	1-Hour Period Concentration Range	Average of All 1-Hour Periods
DustTrak (S/N: 8533153917)	PM <sub>2.5</sub> (mg/m <sup>3</sup> )	0.025 mg/m <sup>3</sup>	No	0.003 to 0.025	0.011
	PM <sub>10</sub> (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>	No	0.004 to 0.026	0.011
AreaRAE Pro (S/N: W01A00002412)	VOC (ppm)	0.5 ppm	No	0.0 to 0.1	0.0
	CO (ppm)	--	No	0.0 to 0.5	0.0
	H <sub>2</sub> S (ppm)	0.1 ppm	No	0.0 to 0.0	0.0
	HF (ppm)	0.2 ppm	No	0.0 to 0.0	0.0

Southeast Air Monitoring Station					
Instrument	Analyte	Morris Industrial Fire Public Health Screening Level <sup>1</sup>	Public Health Screening Level Exceeded?	1-Hour Period Concentration Range	Average of All 1-Hour Periods
DustTrak (S/N: 8533153910)	PM <sub>2.5</sub> (mg/m <sup>3</sup> )	0.025 mg/m <sup>3</sup>	Yes (see comment 2)	0.006 to 0.025	0.012
	PM <sub>10</sub> (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>	No	0.006 to 0.026	0.012
AreaRAE Pro (S/N: W01A00002410)	VOC (ppm)	0.5 ppm	No	0.0 to 0.0	0.0
	CO (ppm)	--	No	0.0 to 0.0	0.0
	H <sub>2</sub> S (ppm)	0.1 ppm	No	0.0 to 0.0	0.0
	HF (ppm)	0.2 ppm	Yes (see comment 3)	0.0 to 0.7	0.0

Notes: See last page.

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Southwest Air Monitoring Station					
Instrument	Analyte	Morris Industrial Fire Public Health Screening Level <sup>1</sup>	Public Health Screening Level Exceeded?	1-Hour Period Concentration Range	Average of All 1-Hour Periods
DustTrak (S/N: 8533154003)	PM <sub>2.5</sub> (mg/m <sup>3</sup> )	0.025 mg/m <sup>3</sup>	Yes (see comment 2)	0.005 to 0.026	0.012
	PM <sub>10</sub> (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>	No	0.006 to 0.028	0.012
AreaRAE Pro (S/N: W01A00002411)	VOC (ppm)	0.5 ppm	No	0.0 to 0.1	0.0
	CO (ppm)	--	No	0.0 to 0.0	0.0
	H <sub>2</sub> S (ppm)	0.1 ppm	No	0.0 to 0.0	0.0
	HF (ppm)	0.2 ppm	No	0.0 to 0.0	0.0

## Comments

Air monitoring measurements have been averaged over a 1-hour time period and summarized above.

Start and stop times for each air monitoring instrument varies. The monitoring period is based on the earliest start time and latest stop time out.

Air monitoring is not performed during inclement weather conditions/rain and thunderstorms.

1 - Morris Industrial Fire Public Health Screening Levels are based on 1-hour time-weighted averages and were established by Agency for Toxic Substances and Disease Registry (ATSDR).

2 - PM<sub>2.5</sub> 1-hour TWAs were greater than the Action Level at the southwest and southeast stations. The southeast station was greater than the Action level on July 7 from 7:52 to 7:58. The southwest station was greater than the Action Level on July 6, 2022 from 8:27 to 8:32 and July 7, 2022 from 8:04 to 8:08.

3 - HF exceedances for the southeast station are likely due to sensor drift due to high humidity outside of the HF sensor range.

### Notes:

°F - Degrees Fahrenheit  
 CO - Carbon Monoxide  
 ERRS - Emergency and Rapid Response Services  
 H<sub>2</sub>S - Hydrogen Sulfide  
 HF - Hydrogen Fluoride  
 LEL - Lower Explosive Limit  
 mg/m<sup>3</sup> - Milligrams per cubic meter  
 PM<sub>2.5</sub> - Particles that are 2.5 micrometers and smaller  
 PM<sub>10</sub> - Particles that are 10 micrometers and smaller  
 ppm - Parts per million  
 S/N - Serial number  
 VOC - Volatile organic compounds

Air Monitoring Station 005

**Preliminary Air Monitoring Results Summary Table**  
**Monitoring Period: 07/08/2022 07:56 to 08:06**  
**Morris Lithium Battery Fire Site**  
**Morris, Grundy County, Illinois**

Location	Date/Time	Action Levels Exceeded?	VOC (ppm)	LEL (%)	CO (ppm)	O <sub>2</sub> (%)	H <sub>2</sub> S (ppm)	PM <sub>10</sub> (mg/m <sup>3</sup> )	PM <sub>2.5</sub> (mg/m <sup>3</sup> )	HF (ppm)
			<sup>1</sup> Action Levels							
			0.5 ppm	5%	25 ppm	19.5 to 23.5 %	0.1 ppm	0.05 mg/m <sup>3</sup>	0.025 mg/m <sup>3</sup>	0.2 ppm
Outside SE	07/08/2022 07:56	Yes (see comment 2)	0	0	0	20.9	0	0.034	0.032	
Outside NE	07/08/2022 07:59	Yes (see comment 2)	0	0	0	20.9	0	0.032	0.031	
Outside SW	07/08/2022 08:03	Yes (see comment 2)	0	0	0	20.9	0	0.036	0.034	
Outside NW	07/08/2022 08:06	Yes (see comment 2)	0	0	0	20.9	0	0.047	0.038	

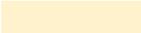
Notes: See last page.

**Preliminary Air Monitoring Results Summary Table**  
**Monitoring Period: 07/08/2022 07:56 to 08:06**  
**Morris Lithium Battery Fire Site**  
**Morris, Grundy County, Illinois**

Notes:

1 - Action Levels are established in the Site-Specific Health and Safety Plan.

2 - Upwind/off-site PM<sub>2.5</sub> likely impacted downwind stations, however discrete measurements do not represent conditions over a full 1-hour period and cannot be directly compared to Action Levels based on 1-hour time-weighted averages.

 Highlighted values are discrete readings above the Site-Specific Action Level

% - Percent

CO - Carbon Monoxide

H<sub>2</sub>S - Hydrogen Sulfide

HF - Hydrogen Fluoride

LEL - Lower Explosive Limit

mg/m<sup>3</sup> - milligrams per cubic meter

Not available

O<sub>2</sub> - Oxygen

PM<sub>2.5</sub> - particles that are 2.5 micrometers and smaller

PM<sub>10</sub> - particles that are 10 micrometers and smaller

ppm - Parts per million

VOC - Volatile organic compounds

## Air Quality Index Categories and Recommendations

Air Quality Index Category	24-Hour Avg. PM2.5 Concentrations (ug/m3)	24-Hour Avg. PM10 Concentrations (ug/m3)	Recommended Actions
Good	0 to 12.0	0 to 54	None
Moderate	12.1 to 35.4	55 to 154	People with heart or lung disease, older adults (65 and up), and children: <b>Consider reducing</b> prolonged or heavy exertion.
Unhealthy for Sensitive Groups	35.5 to 55.4	155 to 254	People with heart or lung disease, older adults (65 and up), and children: <b>Reduce</b> prolonged or heavy exertion.
Unhealthy	55.5 to 150.4	255 to 354	People with heart or lung disease, older adults (65 and up), and children: <b>Avoid</b> prolonged or heavy exertion.  Everyone else should <b>reduce</b> prolonged or heavy exertion.
Very Unhealthy	150.5 to 250.4	355 to 424	People with heart or lung disease, older adults (65 and up), and children: <b>Avoid all physical activity outdoors.</b>  Everyone else should <b>avoid</b> prolonged or heavy exertion.
Hazardous	250.5 to 500.4	<b>425 to 605</b>	<b>Everyone should avoid all physical activity outdoors.</b>  People with heart or lung disease, older adults (65 and up), and children should remain indoors and keep activity levels low.

Comment: Illinois Statewide Average 24-hour PM<sub>2.5</sub> Concentration in 2020: 19.9 ug/m3

Comment: Off-site monitoring locations include both upwind and downwind locations. Elevated PM<sub>2.5</sub> and PM<sub>10</sub> concentrations may represent other sources.

You can access daily average PM2.5 data for fixed monitoring locations here:

<http://www.epa.state.il.us/air/pm25/index.html>. Yesterday's average is available and it looks like you can access data for the trailing 12 months.

You can also get there by visiting the landing page for the Air Quality Index, Ozone, and PM Data:

<https://www2.illinois.gov/epa/topics/air-quality/outdoor-air/Pages/default.aspx>.