

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: 10/17/2022 06:57 to 10/19/2022 17:01

Northeast Air Monitoring Station					
Instrument	Analyte	Morris Industrial Fire Public Health Screening Level ¹	Public Health Screening Level Exceeded?	8-hour Period Concentration Range	Average of All 8-hour Periods
DustTrak #003 (S/N: 8533153915)	PM _{2.5} (mg/m ³)	0.025 mg/m ³	Yes (see comment 2)	0.000 to 0.036	0.002
	PM ₁₀ (mg/m ³)	0.05 mg/m ³	Yes (see comment 2)	0.000 to 0.057	0.002
AreaRAE Pro #4 (S/N: W01A00002413)	VOC (ppm)	0.5 ppm	No	0.0 to 0.3	0.0
	CO (ppm)	--	No	0.0 to 0.2	0.0
	H ₂ 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 ¹	Public Health Screening Level Exceeded?	8-hour Period Concentration Range	Average of All 8-hour Periods
DustTrak #007 (S/N: 8533153917)	PM _{2.5} (mg/m ³)	0.025 mg/m ³	No	0.002 to 0.007	0.004
	PM ₁₀ (mg/m ³)	0.05 mg/m ³	No	0.002 to 0.010	0.004
AreaRAE Pro #3 (S/N: W01A00002412)	VOC (ppm)	0.5 ppm	No	0.0 to 0.1	0.0
	CO (ppm)	--	No	0.0 to 0.0	0.0
	H ₂ 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 1.2	0.1

Southeast Air Monitoring Station					
Instrument	Analyte	Morris Industrial Fire Public Health Screening Level ¹	Public Health Screening Level Exceeded?	8-hour Period Concentration Range	Average of All 8-hour Periods
DustTrak #016 (S/N: 8533173907)	PM _{2.5} (mg/m ³)	0.025 mg/m ³	No	0.002 to 0.017	0.003
	PM ₁₀ (mg/m ³)	0.05 mg/m ³	No	0.002 to 0.031	0.004
AreaRAE Pro #1 (S/N: W01A00002410)	VOC (ppm)	0.5 ppm	No	0.0 to 0.1	0.0
	CO (ppm)	--	No	0.0 to 0.0	0.0
	H ₂ 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 1.0	0.3

Notes: See last page.

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Southwest Air Monitoring Station					
Instrument	Analyte	Morris Industrial Fire Public Health Screening Level ¹	Public Health Screening Level Exceeded?	8-hour Period Concentration Range	Average of All 8-hour Periods
DustTrak #008 (S/N: 8533154004)	PM _{2.5} (mg/m ³)	0.025 mg/m ³	No	0.000 to 0.007	0.003
	PM ₁₀ (mg/m ³)	0.05 mg/m ³	No	0.001 to 0.016	0.004
AreaRAE Pro #2 (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 ₂ 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 8-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 of
Air monitoring is not performed during inclement weather conditions/rain and thunderstorms.
1 - Morris Industrial Fire Public Health Screening Levels are based on 8-hour time-weighted averages and were established by Agency for Toxic Substances and Disease Registry (ATSDR).
2 - PM _{2.5} and PM ₁₀ 1-hour TWAs were greater than the Action Level at the Northeast Station. Upwind/off-site elevated levels PM _{2.5} and PM ₁₀ impacted downwind air monitoring stations.
3 - Elevated HF measurements were documented at multiple stations. A mobile air monitoring instrument was used to verify the elevated measurements. The mobile instrument documented HF concentrations were 0 ppm during this time period.
Notes: °F - Degrees Fahrenheit CO - Carbon Monoxide H ₂ S - Hydrogen Sulfide HF - Hydrogen Fluoride LEL - Lower Explosive Limit mg/m ³ - Milligrams per cubic meter PM _{2.5} - Particles that are 2.5 micrometers and smaller PM ₁₀ - Particles that are 10 micrometers and smaller ppm - Parts per million S/N - Serial number VOC - Volatile organic compounds

Preliminary Air Monitoring Results Summary Table
Monitoring Period: 10/20/2022 10:41 to 10/21/2022 17:13
Morris Lithium Battery Fire Site
Morris, Grundy County, Illinois

Location	Date/Time	VOC (ppm)	LEL (%)	CO (ppm)	O ₂ (%)	H ₂ S (ppm)	PM ₁₀ (mg/m ³)	PM _{2.5} (mg/m ³)	HF (ppm)
		Action Levels ¹							
		0.5 ppm	5%	25 ppm	19.5% to 23.5%	0.1 ppm	0.05 mg/m ³	0.025 mg/m ³	0.2 ppm
Southeast Corner	10/20/2022 10:41	0	0	0	20.9	0	0.022	0.014	0
	10/20/2022 15:06	0	0	0	20.9	0	0.023	0.015	0
	10/21/2022 07:49	0	0	0	20.9	0	0.027	0.018	0
	10/21/2022 14:42	0	0	0	20.9	0	0.032	0.021	0
Northeast Corner	10/20/2022 10:46	0	0	0	20.9	0	0.025	0.017	0
	10/20/2022 15:09	0	0	0	20.9	0	0.073	0.042	0
	10/21/2022 14:46	0	0	0	20.9	0	0.035	0.023	0
	10/21/2022 19:53	0	0	0	20.9	0	0.022	0.016	0
Southwest Corner	10/20/2022 10:51	0	0	0	20.9	0	0.032	0.018	0
	10/20/2022 15:18	0	0	0	20.9	0	0.043	0.023	0
	10/21/2022 07:57	0	0	0	20.9	0	0.021	0.016	0
	10/21/2022 14:53	0	0	0	20.9	0	0.042	0.023	0
Northwest Corner	10/20/2022 10:54	0	0	0	20.9	0	0.04	0.021	0
	10/20/2022 15:20	0	0	0	20.9	0	0.028	0.017	0
	10/21/2022 08:01	0	0	0	20.9	0	0.025	0.018	0
	10/21/2022 17:13	0	0	0	20.9	0	0.044	0.026	0

Notes:

Highlighted values are discrete readings above the Site-Specific Action Level. PM_{2.5} and PM₁₀ 1-hour TWAs were greater than the Action Level at the Northeast Station on 10/20/2022 and PM_{2.5} 1-hour TWAs were greater than the Action Level at the Northwest station on 10/21/2022. Upwind/off-site elevated levels PM_{2.5} and PM₁₀ impacted downwind air monitoring stations.

% - percent

CO - carbon monoxide

H₂S - hydrogen sulfide

HF - hydrogen fluoride

LEL - lower explosive limit

mg/m³ - milligrams per cubic meter

O₂ - oxygen

PM_{2.5} - particles that are 2.5 micrometers and smaller

PM₁₀ - 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: Consider reducing 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: Reduce 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: Avoid prolonged or heavy exertion. Everyone else should reduce 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: Avoid all physical activity outdoors. Everyone else should avoid prolonged or heavy exertion.
Hazardous	250.5 to 500.4	425 to 605	Everyone should avoid all physical activity outdoors. 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_{2.5} Concentration in 2020: 19.9 ug/m3

Comment: Off-site monitoring locations include both upwind and downwind locations. Elevated PM_{2.5} and PM₁₀ 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>.