

Air Monitoring Summary Tables

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

Project Name: Rockton Chemtool Fire ER

Date/Time: 06/20/21 15:15 to 06/21/21 06:57

Weather

Temperature: high of 75°F, low of 62°F

Wind Speed: 4 to 15 miles per hour

Wind Direction: South/Southwest to North/Northwest

Conditions: Overcast/Scattered Rain and Thunderstorms

Fixed Station 13: North Residential - North						
Instrument	Analyte	Chemtool Public Health Screening Level ¹	Public Health Screening Level Exceeded?	Number of 1-Hour Periods	1-Hour Period Concentration Range	Average of All 1-Hour Periods
AreaRAE Pro (S/N: 2411)	VOC (ppm)	1 ppm	No	5	0.04 to 0.08	0.07
	CO (ppm)	--	No	5	0.0 to 0.0	0.0
	O ₂ (%)	--	No	5	20.9 to 20.9	20.9
	H ₂ S (ppm)	0.1 ppm	No	5	0.0 to 0.0	0.0
	HCN (ppm)	1 ppm	No	5	0.0 to 0.0	0.0

Fixed Station 14: North Residential - East						
Instrument	Analyte	Chemtool Public Health Screening Level ¹	Public Health Screening Level Exceeded?	Number of 1-Hour Periods	1-Hour Period Concentration Range	Average of All 1-Hour Periods
AreaRAE Pro (S/N: 2412)	VOC (ppm)	1 ppm	No	10	0.00 to 0.23	0.10
	CO (ppm)	--	No	10	0.0 to 0.1	0.0
	O ₂ (%)	--	No	10	20.9 to 21.7	21.3
	H ₂ S (ppm)	0.1 ppm	No	10	0.0 to 0.0	0.0
	HCN (ppm)	1 ppm	No	10	0.0 to 0.0	0.0

Fixed Station 15: North Residential - South						
Instrument	Analyte	Chemtool Public Health Screening Level ¹	Public Health Screening Level Exceeded?	Number of 1-Hour Periods	1-Hour Period Concentration Range	Average of All 1-Hour Periods
AreaRAE Pro (S/N: 2410)	VOC (ppm)	1 ppm	No	11	0.00 to 0.01	0.00
	CO (ppm)	--	No	11	0.0 to 0.8	0.1
	O ₂ (%)	--	No	11	20.3 to 22.8	21.4
	H ₂ S (ppm)	0.1 ppm	No	11	0.0 to 0.0	0.0

Fixed Station 16: North Residential - West						
Instrument	Analyte	Chemtool Public Health Screening Level ¹	Public Health Screening Level Exceeded?	Number of 1-Hour Periods	1-Hour Period Concentration Range	Average of All 1-Hour Periods
AreaRAE Pro (S/N: 2413)	VOC (ppm)	1 ppm	No	13	0.00 to 0.29	0.07
	CO (ppm)	--	No	13	0.0 to 0.4	0.0
	O ₂ (%)	--	No	13	21.1 to 21.4	21.3
	H ₂ S (ppm)	0.1 ppm	No	13	0.0 to 0.0	0.0
	HCN (ppm)	1 ppm	No	13	0.0 to 0.0	0.0

Fixed Station #4: Corner of Union and Ferry						
Instrument	Analyte	Chemtool Public Health Screening Level ¹	Public Health Screening Level Exceeded?	Number of 1-Hour Periods	1-Hour Period Concentration Range	Average of All 1-Hour Periods
DustTrak (S/N: 4304)	PM _{2.5} (mg/m ³)	0.025 mg/m ³	Yes	8	0.000 to 0.029	0.013
	PM ₁₀ (mg/m ³)	0.05 mg/m ³	No	8	0.000 to 0.029	0.013
AreaRAE Pro (S/N: 2172)	VOC (ppm)	1 ppm	No	9	0.00 to 0.00	0.00
	CO (ppm)	--	No	9	0.0 to 0.0	0.0
	O ₂ (%)	--	No	9	20.2 to 20.5	20.4
	H ₂ S (ppm)	0.1 ppm	No	9	0.0 to 0.0	0.0
	HCN (ppm)	1 ppm	No	9	0.0 to 0.0	0.0

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Date/Time: 06/20/21 15:15 to 06/21/21 06:57

Weather

Temperature: high of 75°F, low of 62°F

Wind Speed: 4 to 15 miles per hour

Wind Direction: South/Southwest to North/Northwest

Conditions: Overcast/Scattered Rain and Thunderstorms

Fixed Station #5: Stand alone area near stop sign on Chapel and Bridge St						
Instrument	Analyte	Chemtool Public Health Screening Level ¹	Public Health Screening Level Exceeded?	Number of 1-Hour Periods	1-Hour Period Concentration Range	Average of All 1-Hour Periods
AreaRAE Pro (S/N: 0640)	VOC (ppm)	1 ppm	No	8	0.00 to 0.13	0.04
	CO (ppm)	--	No	8	0.0 to 0.0	0.0
	O ₂ (%)	--	No	8	20.9 to 20.9	20.9
	H ₂ S (ppm)	0.1 ppm	No	8	0.0 to 0.1	0.0
	HCN (ppm)	1 ppm	No	8	0.0 to 0.0	0.0

Fixed Station #6: Corner of Union and Chapel						
Instrument	Analyte	Chemtool Public Health Screening Level ¹	Public Health Screening Level Exceeded?	Number of 1-Hour Periods	1-Hour Period Concentration Range	Average of All 1-Hour Periods
DustTrak (S/N: 3911)	PM _{2.5} (mg/m ³)	0.025 mg/m ³	No	4	0.002 to 0.010	0.006
	PM ₁₀ (mg/m ³)	0.05 mg/m ³	No	4	0.003 to 0.010	0.007
AreaRAE Pro (S/N: 0643)	VOC (ppm)	1 ppm	No	9	0.00 to 0.03	0.01
	CO (ppm)	--	No	9	0.0 to 0.1	0.1
	O ₂ (%)	--	No	9	20.9 to 21.0	20.9
	H ₂ S (ppm)	0.1 ppm	No	9	0.0 to 0.0	0.0
	HCN (ppm)	1 ppm	No	9	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 of all units.
Air monitoring was not performed during inclement weather conditions/rain and thunderstorms.
1 - Chemtool Public Health Screening Levels are based on 1-hour time-weighted averages and were established by ATSDR
Notes: CO - Carbon Monoxide H2S - Hydrogen Sulfide O2 - Oxygen ppm - Parts per million VOC - Volatile organic compounds

Air Monitoring Summary Tables

The tables below summarize preliminary air monitoring data collected using Handheld DustTrak, SPM Flex, and MultiRAE Pro instruments.

Date/Time: 6/20/2021 19:52 to 6/21/2021 4:52

Fixed Discrete Air Monitoring Location EZ-01: 1101-1159 Innovation Dr					
Instrument	Analyte	Chemtool Public Health Screening Level ¹	Public Health Screening Level Exceeded?	Number of Measurements	Concentration Range
MultiRAE Pro	H ₂ S (ppm)	0.1 ppm	No	44	0.000 to 0.000
	HCN	1 ppm	No	44	0.000 to 0.000
	VOC (ppm)	1 ppm	No	44	0.000 to 0.000
SPM Flex	MDI (ppb)	5 ppb	Yes ²	13	0.000 to 8.2
	SO ₂ (ppb)	0.2 ppm	No	13	0.000 to 0.000
Handheld DustTrak	PM _{2.5} (mg/m ³)	0.025 mg/m ³	Yes	13	0.005 to 0.120
	PM ₁₀ (mg/m ³)	0.05 mg/m ³	Yes	13	0.007 to 0.140

Fixed Discrete Air Monitoring Location EZ-03: 860-998 N Prairie St					
Instrument	Analyte	Chemtool Public Health Screening Level ¹	Public Health Screening Level Exceeded?	Number of Measurements	Concentration Range
MultiRAE Pro	H ₂ S (ppm)	0.1 ppm	No	12	0.000 to 0.000
	HCN	1 ppm	No	12	0.000 to 0.000
	VOC (ppm)	1 ppm	No	12	0.000 to 0.000
SPM Flex	MDI (ppb)	5 ppb	Yes ²	12	0.000 to 8.2
	SO ₂ (ppb)	0.2 ppm	No	12	0.000 to 0.000
Handheld DustTrak	PM _{2.5} (mg/m ³)	0.025 mg/m ³	Yes	12	0.003 to 0.070
	PM ₁₀ (mg/m ³)	0.05 mg/m ³	Yes	12	0.008 to 0.070

Fixed Discrete Air Monitoring Location EZ-05: 907-1099 Watts Ave					
Instrument	Analyte	Chemtool Public Health Screening Level ¹	Public Health Screening Level Exceeded?	Number of Measurements	Concentration Range
MultiRAE Pro	H ₂ S (ppm)	0.1 ppm	No	12	0.000 to 0.000
	HCN	1 ppm	No	12	0.000 to 0.000
	VOC (ppm)	1 ppm	No	12	0.000 to 0.000
SPM Flex	MDI (ppb)	5 ppb	No	12	0.000 to 0.8
	SO ₂ (ppb)	0.2 ppm	No	12	0.000 to 0.000
Handheld DustTrak	PM _{2.5} (mg/m ³)	0.025 mg/m ³	Yes	11	0.005 to 0.060
	PM ₁₀ (mg/m ³)	0.05 mg/m ³	Yes	11	0.006 to 0.073

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Date/Time: 6/20/2021 19:52 to 6/21/2021 4:52

Fixed Discrete Air Monitoring Location EZ-06: 14632 S Bluff Rd					
Instrument	Analyte	Chemtool Public Health Screening Level ¹	Public Health Screening Level Exceeded?	Number of Measurements	Concentration Range
MultiRAE Pro	H ₂ S (ppm)	0.1 ppm	No	12	0.000 to 0.000
	HCN	1 ppm	No	12	0.000 to 0.000
	VOC (ppm)	1 ppm	No	12	0.000 to 0.000
SPM Flex	MDI (ppb)	5 ppb	No	12	0.000 to 4.200
	SO ₂ (ppb)	0.2 ppm	No	12	0.000 to 0.000
Handheld DustTrak	PM _{2.5} (mg/m ³)	0.025 mg/m ³	Yes	12	0.002 to 0.052
	PM ₁₀ (mg/m ³)	0.05 mg/m ³	No	12	0.005 to 0.040

Fixed Discrete Air Monitoring Location EZ-07: 14728-14758 S Bluff Rd					
Instrument	Analyte	Chemtool Public Health Screening Level ¹	Public Health Screening Level Exceeded?	Number of Measurements	Concentration Range
MultiRAE Pro	H ₂ S (ppm)	0.1 ppm	Yes	11	0.000 to 0.800
	HCN	1 ppm	No	12	0.000 to 0.000
	VOC (ppm)	1 ppm	No	12	0.000 to 0.000
SPM Flex	MDI (ppb)	5 ppb	No	10	0.000 to 4.400
	SO ₂ (ppb)	0.2 ppm	No	11	0.000 to 0.000
Handheld DustTrak	PM _{2.5} (mg/m ³)	0.025 mg/m ³	Yes	11	0.004 to 0.033
	PM ₁₀ (mg/m ³)	0.05 mg/m ³	No	11	0.000 to 0.044

Fixed Discrete Air Monitoring Location EZ-08: 1001-1199 Prairie Hill Rd					
Instrument	Analyte	Chemtool Public Health Screening Level ¹	Public Health Screening Level Exceeded?	Number of Measurements	Concentration Range
MultiRAE Pro	H ₂ S (ppm)	0.1 ppm	No	10	0.000 to 0.000
	HCN	1 ppm	No	10	0.000 to 0.000
	VOC (ppm)	1 ppm	No	10	0.000 to 0.000
SPM Flex	MDI (ppb)	5 ppb	No	10	0.000 to 4.700
	SO ₂ (ppb)	0.2 ppm	No	10	0.000 to 0.000
Handheld DustTrak	PM _{2.5} (mg/m ³)	0.025 mg/m ³	Yes	10	0.002 to 0.110
	PM ₁₀ (mg/m ³)	0.05 mg/m ³	No	10	0.004 to 0.033

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The tables below summarize preliminary air monitoring data collected using Handheld DustTrak, SPM Flex, and MultiRAE Pro instruments.

Date/Time: 6/20/2021 19:52 to 6/21/2021 4:52

Fixed Discrete Air Monitoring Location EZ-09: Guetschow Ave & Fischer Rd					
Instrument	Analyte	Chemtool Public Health Screening Level ¹	Public Health Screening Level Exceeded?	Number of Measurements	Concentration Range
MultiRAE Pro	H ₂ S (ppm)	0.1 ppm	Yes	10	0.000 to 0.600
	HCN	1 ppm	No	10	0.000 to 0.000
	VOC (ppm)	1 ppm	No	10	0.000 to 0.000
SPM Flex	MDI (ppb)	5 ppb	Yes ²	10	0.000 to 8.900
	SO ₂ (ppb)	0.2 ppm	No	10	0.000 to 0.000
Handheld DustTrak	PM _{2.5} (mg/m ³)	0.025 mg/m ³	Yes	10	0.002 to 0.035
	PM ₁₀ (mg/m ³)	0.05 mg/m ³	No	10	0.005 to 0.038

Comments
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 all
Air monitoring was not performed during inclement weather conditions/rain and thunderstorms.
1 - Chemtool Public Health Screening Levels are based on 1-hour time-weighted averages and were established by ATSDR.
2 - Elevated MDI readings above the established screening level were observed during and immediately following heavy rain, with relative humidity greater than 90%. This exceeds the upper limit operating parameter of 80% relative humidity for the diisocyanate ChemCassette. Additionally, the diisocyanate ChemCassette may also exhibit greater sensitivity at higher humidity due to the chemistry of the reaction used in the ChemCassette.

Notes:

CO - Carbon Monoxide

H₂S - Hydrogen Sulfide

O₂ - Oxygen

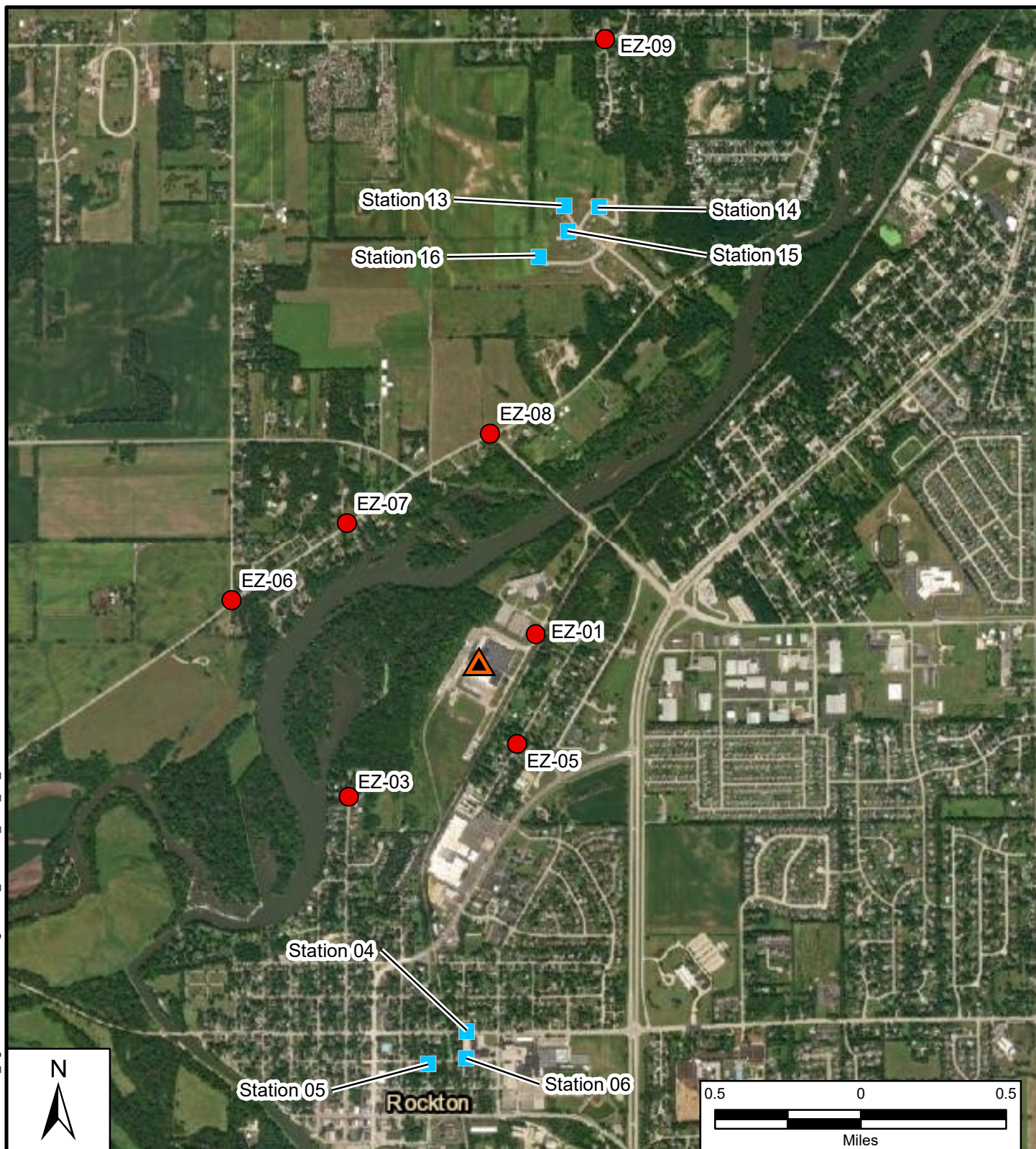
MDI - Methylene diphenyl diisocyanate

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



Source: Esri 2020

Legend

- Fixed Discrete Air Monitoring Locations
- ▲ Fire Location
- EPA Air Monitoring Station

Note: Monitoring station locations subject to change based on weather and operational objectives

Rockton Chemtool Fire ER
Rockton, IL

Figure 1
Air Monitoring Stations
06/20/2021 17:00 - 06/21/2021 6:00



Prepared For: USEPA

Prepared By: Tetra Tech Inc.