

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: 06/21/21 04:05 to 06/21/21 17:25

Weather

Temperature: high of 71°F, low of 62°F
Wind Speed: 13 to 19 miles per hour
Wind Direction: North/Northwest
Conditions: Mostly Cloudy

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	No	11	0.001 to 0.005	0.003
	PM ₁₀ (mg/m ³)	0.05 mg/m ³	No	11	0.001 to 0.005	0.003
AreaRAE Pro (S/N: 2172)	VOC (ppm)	1 ppm	No	10	0.00 to 0.01	0.00
	CO (ppm)	--	No	10	0.0 to 0.0	0.0
	O ₂ (%)	--	No	10	20.2 to 20.9	20.5
	H ₂ S (ppm)	0.1 ppm	No	10	0.0 to 0.0	0.0
	HCN (ppm)	1 ppm	No	10	0.00 to 0.87	0.2

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	10	0.00 to 0.12	0.03
	CO (ppm)	--	No	10	0.0 to 0.0	0.0
	O ₂ (%)	--	No	10	20.9 to 20.9	20.9
	H ₂ S (ppm)	0.1 ppm	Yes	10	0.0 to 0.1	0.0
	HCN (ppm)	1 ppm	No	10	0.00 to 0.00	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	11	0.000 to 0.008	0.003
	PM ₁₀ (mg/m ³)	0.05 mg/m ³	No	11	0.001 to 0.008	0.003
AreaRAE Pro (S/N: 0643)	VOC (ppm)	1 ppm	No	10	0.00 to 0.02	0.00
	CO (ppm)	--	No	10	0.0 to 0.1	0.0
	O ₂ (%)	--	No	10	20.9 to 21.3	21.0
	H ₂ S (ppm)	0.1 ppm	Yes	10	0.0 to 0.2	0.0
	HCN (ppm)	1 ppm	No	10	0.00 to 0.00	0.0

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: 2412)	VOC (ppm)	1 ppm	No	11	0.04 to 0.23	0.12
	CO (ppm)	--	No	11	0.0 to 0.0	0.0
	O ₂ (%)	--	No	11	20.9 to 21.7	21.2
	H ₂ S (ppm)	0.1 ppm	No	11	0.0 to 0.0	0.0
	HCN (ppm)	1 ppm	No	11	0.00 to 0.00	0.0

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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: 2413)	VOC (ppm)	1 ppm	No	11	0.00 to 0.06	0.03
	CO (ppm)	--	No	11	0.0 to 0.0	0.0
	O ₂ (%)	--	No	11	20.9 to 21.4	21.1
	H ₂ S (ppm)	0.1 ppm	No	11	0.0 to 0.0	0.0
	HCN (ppm)	1 ppm	No	11	0.00 to 0.00	0.0

#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: 2411)	VOC (ppm)	1 ppm	No	11	0.03 to 0.08	0.05
	CO (ppm)	--	No	11	0.0 to 0.0	0.0
	O ₂ (%)	--	No	11	20.6 to 21.3	21.0
	H ₂ S (ppm)	0.1 ppm	No	11	0.0 to 0.0	0.0

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: 2410)	VOC (ppm)	1 ppm	No	11	0.00 to 0.00	0.00
	CO (ppm)	--	No	11	0.0 to 0.0	0.0
	O ₂ (%)	--	No	11	20.9 to 22.6	21.3
	H ₂ S (ppm)	0.1 ppm	No	11	0.0 to 0.0	0.0

Fixed Station #17: Northeast 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
DustTrak (S/N: 3913)	PM _{2.5} (mg/m ³)	0.025 mg/m ³	No	8	0.002 to 0.004	0.003
	PM ₁₀ (mg/m ³)	0.05 mg/m ³	No	8	0.002 to 0.005	0.003
AreaRAE Pro (S/N: 2168)	VOC (ppm)	1 ppm	No	9	0.00 to 0.00	0.00
	CO (ppm)	--	No	9	0.0 to 0.3	0.0
	O ₂ (%)	--	No	9	20.9 to 20.9	20.9
	H ₂ S (ppm)	0.1 ppm	No	9	0.0 to 0.0	0.0
	HCN (ppm)	1 ppm	No	9	0.00 to 0.02	0.0

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Wind Direction: North/Northwest

Conditions: Mostly Cloudy

Fixed Station #18: Northeast Residential - East						
Instrument	Analyte	Chemtool Public Health Screening	Public Health Screening Level	Number of 1-Hour Periods	1-Hour Period Concentration	Average of All 1-Hour Periods
DustTrak (S/N: 4006)	PM _{2.5} (mg/m ³)	0.025 mg/m ³	No	7	0.000 to 0.002	0.001
	PM ₁₀ (mg/m ³)	0.05 mg/m ³	No	7	0.000 to 0.002	0.001
AreaRAE Pro (S/N: 0642)	VOC (ppm)	1 ppm	No	8	0.16 to 0.30	0.23
	CO (ppm)	--	No	8	0.0 to 0.1	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 0.0	0.0
	HCN (ppm)	1 ppm	No	8	0.00 to 0.20	0.0

Fixed Station #19: Northeast 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
DustTrak (S/N: 4307)	PM _{2.5} (mg/m ³)	0.025 mg/m ³	No	7	0.001 to 0.003	0.002
	PM ₁₀ (mg/m ³)	0.05 mg/m ³	No	7	0.002 to 0.004	0.003
AreaRAE Pro (S/N: 2169)	VOC (ppm)	1 ppm	No	7	0.00 to 0.00	0.00
	CO (ppm)	--	No	7	0.0 to 0.0	0.0
	O ₂ (%)	--	No	7	20.9 to 20.9	20.9
	H ₂ S (ppm)	0.1 ppm	No	7	0.0 to 0.0	0.0
	HCN (ppm)	1 ppm	No	7	0.00 to 0.02	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: 6/21/2021 7:30 to 18:23

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	9	0.000 to 0.000
	HCN	1 ppm	No	9	0.000 to 0.000
	VOC (ppm)	1 ppm	No	8	0.000 to 0.000
SPM Flex	MDI (ppb)	5 ppb	Yes ²	9	0.000 to 8.2
	SO ₂ (ppb)	0.2 ppm	No	9	0.000 to 0.000
Handheld DustTrak	PM _{2.5} (mg/m ³)	0.025 mg/m ³	No	9	0.003 to 0.015
	PM ₁₀ (mg/m ³)	0.05 mg/m ³	No	9	0.003 to 0.015

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	8	0.000 to 0.000
	HCN	1 ppm	No	8	0.000 to 0.000
	VOC (ppm)	1 ppm	No	8	0.000 to 0.000
SPM Flex	MDI (ppb)	5 ppb	No	8	0.000 to 0.000
	SO ₂ (ppb)	0.2 ppm	No	8	0.000 to 0.000
Handheld DustTrak	PM _{2.5} (mg/m ³)	0.025 mg/m ³	No	8	0.001 to 0.005
	PM ₁₀ (mg/m ³)	0.05 mg/m ³	No	8	0.001 to 0.010

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	8	0.000 to 0.000
	HCN	1 ppm	No	8	0.000 to 0.000
	VOC (ppm)	1 ppm	No	8	0.000 to 0.000
SPM Flex	MDI (ppb)	5 ppb	No	8	0.0 to 0.5
	SO ₂ (ppb)	0.2 ppm	No	8	0.000 to 0.000
Handheld DustTrak	PM _{2.5} (mg/m ³)	0.025 mg/m ³	No	8	0.001 to 0.005
	PM ₁₀ (mg/m ³)	0.05 mg/m ³	No	8	0.001 to 0.005

Air Monitoring Summary Tables

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

Date/Time: 6/21/2021 7:30 to 18:23

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	7	0.000 to 0.000
	HCN	1 ppm	No	8	0.000 to 0.000
	VOC (ppm)	1 ppm	No	8	0.000 to 0.000
SPM Flex	MDI (ppb)	5 ppb	No	8	0.000 to 0.000
	SO ₂ (ppb)	0.2 ppm	No	9	0.000 to 0.000
Handheld DustTrak	PM _{2.5} (mg/m ³)	0.025 mg/m ³	No	8	0.002 to 0.003
	PM ₁₀ (mg/m ³)	0.05 mg/m ³	No	8	0.002 to 0.005

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	No	7	0.000 to 0.000
	HCN	1 ppm	No	7	0.000 to 0.000
	VOC (ppm)	1 ppm	No	7	0.000 to 0.000
SPM Flex	MDI (ppb)	5 ppb	No	7	0.000 to 0.000
	SO ₂ (ppb)	0.2 ppm	No	7	0.000 to 0.000
Handheld DustTrak	PM _{2.5} (mg/m ³)	0.025 mg/m ³	No	7	0.003 to 0.005
	PM ₁₀ (mg/m ³)	0.05 mg/m ³	No	7	0.003 to 0.005

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	7	0.000 to 0.000
	HCN	1 ppm	No	7	0.000 to 0.000
	VOC (ppm)	1 ppm	No	7	0.000 to 0.000
SPM Flex	MDI (ppb)	5 ppb	No	7	0.000 to 0.000
	SO ₂ (ppb)	0.2 ppm	No	7	0.000 to 0.000
Handheld DustTrak	PM _{2.5} (mg/m ³)	0.025 mg/m ³	No	7	0.002 to 0.005
	PM ₁₀ (mg/m ³)	0.05 mg/m ³	No	7	0.001 to 0.010

Air Monitoring Summary Tables

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

Date/Time: 6/21/2021 7:30 to 18:23

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	No	7	0.000 to 0.000
	HCN	1 ppm	No	7	0.000 to 0.000
	VOC (ppm)	1 ppm	No	7	0.000 to 0.000
SPM Flex	MDI (ppb)	5 ppb	No	7	0.000 to 0.000
	SO ₂ (ppb)	0.2 ppm	No	7	0.000 to 0.000
Handheld DustTrak	PM _{2.5} (mg/m ³)	0.025 mg/m ³	No	7	0.003 to 0.005
	PM ₁₀ (mg/m ³)	0.05 mg/m ³	No	7	0.003 to 0.005

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
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

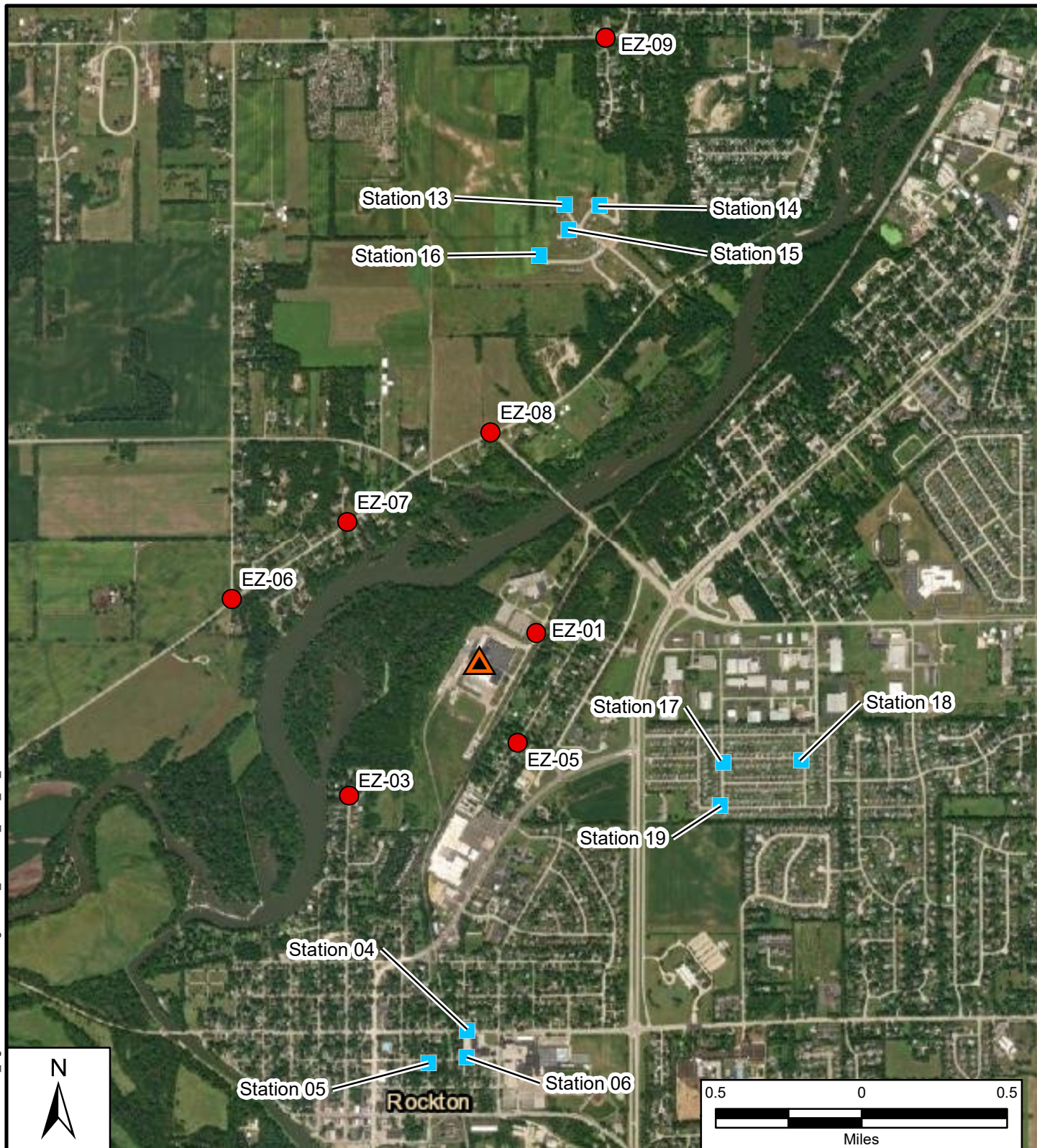
PM_{2.5} - particles that are 2.5 micrometers and smaller

PM₁₀ - particles that are 10 micrometers and smaller

ppm - Parts per million

VOC - Volatile organic compounds

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Source: Esri 2020

Legend

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

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

Rockton Chemtool Fire ER
Rockton, IL

Figure 1
Air Monitoring Stations
06/21/2021 04:00 - 06/21/2021 18:00



Prepared For: USEPA

Prepared By: Tetra Tech Inc.

Date Saved: 6/21/2021

EPA Contract No.: 68-HE-0519-D0005

TO/TOLIN No.: TBD

Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere

Projection: Mercator Auxiliary Sphere

Datum: WGS 1984 Units: Meter