

# Ameren Champaign MGP - Fifth Street

Weekly Air Monitoring Report

31 January 2022

Project No.: 0529307

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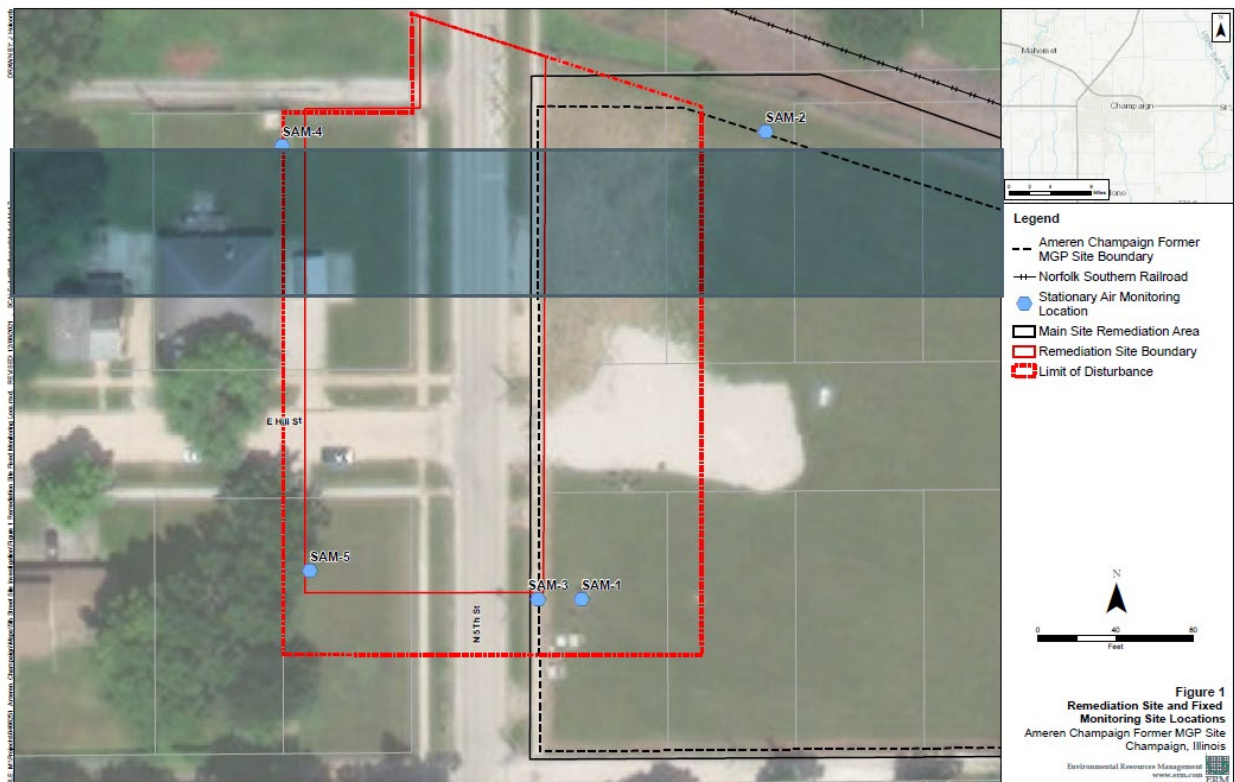
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## 1. INTRODUCTION

Environmental Resources Management, Inc. (ERM) installed five stationary air monitors (SAMs) at four locations around the perimeter of the remediation site to monitor dust levels (PM<sub>10</sub>), volatile organic compounds (VOCs), and semi-volatile organic compounds (SVOCs) produced by the excavation. SAMs 1 and 3 were collocated in the southeast corner to provide duplicate measurements for quality control purposes. A meteorological monitoring station was installed to collect wind speed and direction, temperature, and barometric pressure to document atmospheric conditions and to support interpretation of the air quality data. A map showing the monitoring network layout is presented in Figure 1.

**Figure 1: Ameren Champaign 5<sup>th</sup> Street - Monitoring Site Locations**



This weekly summary presents the real-time ambient air quality and meteorological data collected from January 19, 2021 through January 25, 2022. The laboratory results were collected from December 29, 2021 through January 12, 2022. Both periods are representative of ongoing remedial efforts.

ERM used health effects data to establish maximum acceptable exposure levels for each of the constituents of concern (COC). These were used to set action levels for the monitoring compounds.

## 2. SUMMARY

The reporting period covers the initial remediation operational phase. No parameters exceeded their corresponding designated action levels over the reporting period. This indicates that there was no significant adverse impact on local air quality. Since there were no exceedances of the action or maximum acceptable exposure levels, there was no need to curtail remediation activities or enhance

emission control measures. Table 1 presents a summary of the air quality monitoring results for the reporting period.

**Table 1 Reporting Period Air Monitoring Summary<sup>1</sup>**

CONSTITUENTS OF CONCERN	MONITORING PERIOD	NUMBER OF ACTION LEVEL OR ACCEPTABLE EXPOSURE LEVEL EXCEEDANCES	MAXIMUM MEASURED CONCENTRATION	ACTION LEVEL OR ACCEPTABLE EXPOSURE LEVEL
Inhalable Particulate Matter (15-min average, $\mu\text{g}/\text{m}^3$ )	1/19/2022 – 1/26/2022	0	56	360
VOC (1-minute average, $\mu\text{g}/\text{m}^3$ )	1/19/2022 – 1/26/2022	0	0	156.7
Benzene, Real-time GC (1-minute average $\mu\text{g}/\text{m}^3$ )	1/19/2022 – 1/26/2022	0	NM	156.7
Styrene, Method 325B (14 day sample period, $\mu\text{g}/\text{m}^3$ )	12/29/2021 – 1/12/2022	0	0.21	205,000
Benzene, Method 325B (14 day sample period, $\mu\text{g}/\text{m}^3$ )	12/29/2021 – 1/12/2022	0	0.71	16.5
Toluene, Method 325B (14 day sample period, $\mu\text{g}/\text{m}^3$ )	12/29/2021 – 1/12/2022	0	0.53	23,400
Xylenes (total), Method 325B (14 day sample period, $\mu\text{g}/\text{m}^3$ )	12/29/2021 – 1/12/2022	0	0.56	41,000
Ethylbenzene, Method 325B (14 day sample period, $\mu\text{g}/\text{m}^3$ )	12/29/2021 – 1/12/2022	0	0.28	59,400
2-methylnaphthalene, Method TO-13A (3 day sample period, $\mu\text{g}/\text{m}^3$ )	1/10/2022 – 1/12/2022	0	ND	820
Acenaphthene, Method TO-13A (3 day sample period, $\mu\text{g}/\text{m}^3$ )	1/10/2022 – 1/12/2022	0	ND	12,300
Acenaphthylene, Method TO-13A (3 day sample period, $\mu\text{g}/\text{m}^3$ )	1/10/2022 – 1/12/2022	0	ND	615
Anthracene, Method TO-13A (3 day sample period, $\mu\text{g}/\text{m}^3$ )	1/10/2022 – 1/12/2022	0	ND	615
Benzo(a)anthracene, Method TO-13A (3 day sample period, $\mu\text{g}/\text{m}^3$ )	1/10/2022 – 1/12/2022	0	ND	1.54
Benzo(a)pyrene, Method TO-13A (3 day sample period, $\mu\text{g}/\text{m}^3$ )	1/10/2022 – 1/12/2022	0	ND	0.154
Benzo(k)fluoranthene, Method TO-13A (3 day sample period, $\mu\text{g}/\text{m}^3$ )	1/10/2022 – 1/12/2022	0	ND	15.4
Benzo(b)fluoranthene, Method TO-13A (3 day sample period, $\mu\text{g}/\text{m}^3$ )	1/10/2022 – 1/12/2022	0	ND	15.4
Chrysene, Method TO-13A (3 day sample period, $\mu\text{g}/\text{m}^3$ )	1/10/2022 – 1/12/2022	0	ND	154

CONSTITUENTS OF CONCERN	MONITORING PERIOD	NUMBER OF ACTION LEVEL OR ACCEPTABLE EXPOSURE LEVEL EXCEEDANCES	MAXIMUM MEASURED CONCENTRATION	ACTION LEVEL OR ACCEPTABLE EXPOSURE LEVEL
Dibenzo(a,h)anthracene, Method TO-13A (3 day sample period, µg/m <sup>3</sup> )	1/10/2022 – 1/12/2022	0	ND	0.154
Fluoranthene, Method TO-13A (3 day sample period, µg/m <sup>3</sup> )	1/10/2022 – 1/12/2022	0	ND	8,200
Fluorene, Method TO-13A (3 day sample period, µg/m <sup>3</sup> )	1/10/2022 – 1/12/2022	0	ND	8,200
Ideno(1,2,3-cd)pyrene, Method TO-13A (3 day sample period, µg/m <sup>3</sup> )	1/10/2022 – 1/12/2022	0	ND	1.54
Napthalene, Method TO-13A (3 day sample period, µg/m <sup>3</sup> )	1/10/2022 – 1/12/2022	0	ND	176
Phenanthrene, Method TO-13A (3 day sample period, µg/m <sup>3</sup> )	1/10/2022 – 1/12/2022	0	ND	6,150
Pyrene, Method TO-13A (3 day sample period, µg/m <sup>3</sup> )	1/10/2022 – 1/12/2022	0	ND	6,150

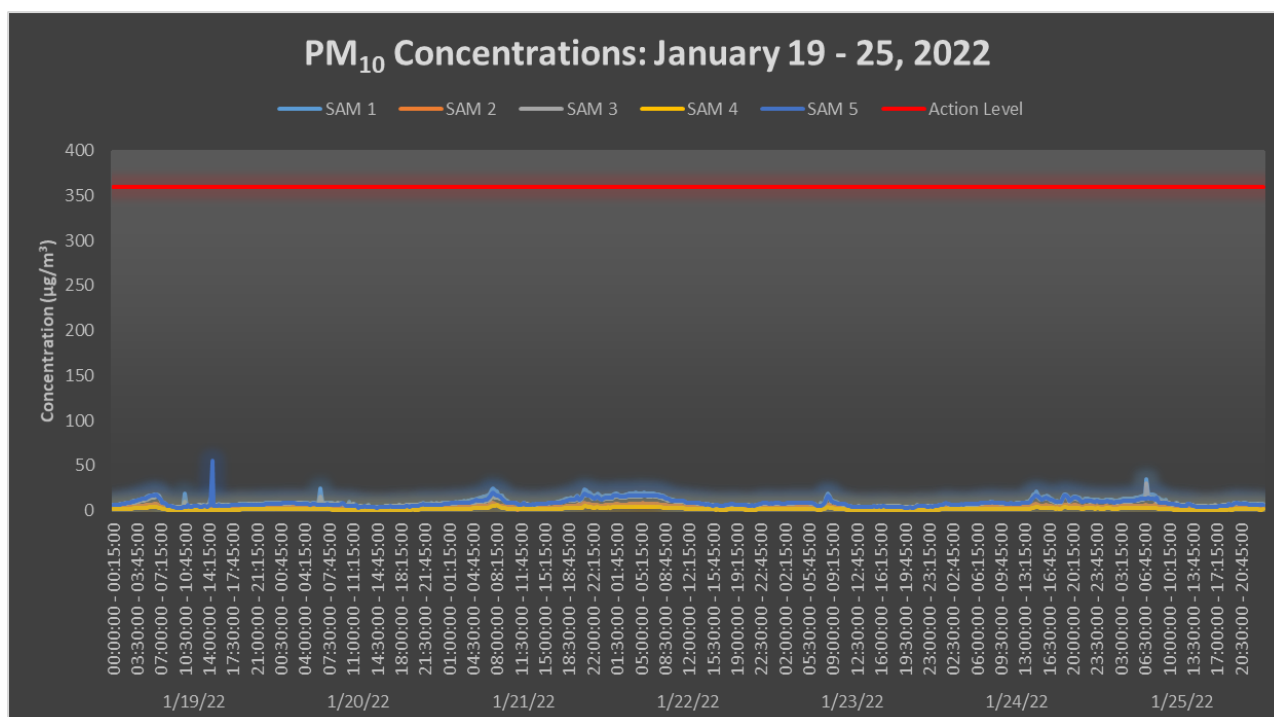
<sup>1</sup> Data presented have yet to be fully quality-assured; final values may vary of these preliminary results once all quality control measures have been applied.

NM = No measurements (benzene-specific measurements only made with portable gas chromatograph, in response to VOC exceedance)

ND = Not detected (concentrations below laboratory minimum detection limits)

The preliminary (not fully quality-assured) data record for the reporting period is contained in Appendix A. PM<sub>10</sub> concentrations for the week are represented in Figure 2.

**Figure 2: PM<sub>10</sub> Concentrations**



**APPENDIX A      COMPLETE PRELIMINARY DATA RECORD**



## **APPENDIX B**

## **COMPLETE PRELIMINARY LAB RESULT DATA**



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**ERM has over 160 offices across the following countries and territories worldwide**

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**ERM Rolling Meadows**

One Continental Towers  
1701 Golf Road, Suite 1-700  
Rolling Meadows, IL 60008

T: +1 847 258 8900

F: +1 847 713-4813

[www.erm.com](http://www.erm.com)