

# Air Monitoring Summary Tables

The tables below summarize preliminary air monitoring data collected using MultiRAE Pro and UltraRAE Pro 3000 instruments.

**Project Name:** Edwardsville Oil Spill ER  
**Date/Time:** 3/12/22 9:16 PM to 3/13/2022 6:19 PM

**Weather**

**Wind Speed:** 7 to 20 miles per hour  
**Wind Direction:** West/Southwest

Background					
Instrument	Parameter	Action Level <sup>1</sup>	Action Level Exceeded?	Number of Measurements	Concentration Range
MultiRAE Pro	H <sub>2</sub> S (ppm)	0.1 ppm	No	4	0.000 to 0.000
	CO (ppm)	25 ppm	No	4	0.00 to 0.00
	O <sub>2</sub> (%)	19.5 to 23.5 %	No	4	20.9 to 20.9
	LEL (%)	5 %	No	4	0.000 to 0.000
	VOC (ppm)	5 ppm	No	4	0.000 to 0.010
UltraRAE 3000	Benzene (ppm)	1 ppm	No	3	0.000 to 0.000

5 Diamonds Campground					
Instrument	Parameter	Action Level <sup>1</sup>	Action Level Exceeded?	Number of Measurements	Concentration Range
MultiRAE Pro	H <sub>2</sub> S (ppm)	0.1 ppm	No	3	0.000 to 0.000
	CO (ppm)	25 ppm	No	4	0.00 to 0.00
	O <sub>2</sub> (%)	19.5 to 23.5 %	No	4	20.9 to 21.1
	LEL (%)	5 %	No	4	0.000 to 0.000
	VOC (ppm)	5 ppm	No	4	0.000 to 0.040
UltraRAE 3000	Benzene (ppm)	1 ppm	No	2	0.000 to 0.000

Lewis and Clark Campground					
Instrument	Parameter	Action Level <sup>1</sup>	Action Level Exceeded?	Number of Measurements	Concentration Range
MultiRAE Pro	H <sub>2</sub> S (ppm)	0.1 ppm	No	1	0.000 to 0.000
	CO (ppm)	25 ppm	No	2	0.00 to 0.00
	O <sub>2</sub> (%)	19.5 to 23.5 %	No	2	20.9 to 20.9
	LEL (%)	5 %	No	2	0.000 to 0.000
	VOC (ppm)	5 ppm	No	2	0.000 to 0.000
UltraRAE 3000	Benzene (ppm)	1 ppm	No	1	0.000 to 0.000

Notes: See last page.

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Hunicke & Philipena					
Instrument	Parameter	Action Level <sup>1</sup>	Action Level Exceeded?	Number of Measurements	Concentration Range
MultiRAE Pro	H <sub>2</sub> S (ppm)	0.1 ppm	No	3	0.000 to 0.000
	CO (ppm)	25 ppm	No	4	0.00 to 0.00
	O <sub>2</sub> (%)	19.5 to 23.5 %	No	4	20.9 to 20.9
	LEL (%)	5 %	No	3	0.000 to 0.000
	VOC (ppm)	5 ppm	No	5	0.000 to 0.090
UltraRAE 3000	Benzene (ppm)	1 ppm	No	4	0.000 to 0.000

Henry & M					
Instrument	Parameter	Action Level <sup>1</sup>	Action Level Exceeded?	Number of Measurements	Concentration Range
MultiRAE Pro	H <sub>2</sub> S (ppm)	0.1 ppm	No	3	0.000 to 0.000
	CO (ppm)	25 ppm	No	4	0.00 to 0.00
	O <sub>2</sub> (%)	19.5 to 23.5 %	No	4	20.9 to 21.1
	LEL (%)	5 %	No	4	0.000 to 0.000
	VOC (ppm)	5 ppm	No	4	0.000 to 1.500
UltraRAE 3000	Benzene (ppm)	1 ppm	No	3	0.000 to 0.000

Schiller & Ebehart					
Instrument	Parameter	Action Level <sup>1</sup>	Action Level Exceeded?	Number of Measurements	Concentration Range
MultiRAE Pro	H <sub>2</sub> S (ppm)	0.1 ppm	No	2	0.000 to 0.000
	CO (ppm)	25 ppm	No	3	0.00 to 0.00
	O <sub>2</sub> (%)	19.5 to 23.5 %	No	3	20.9 to 20.9
	LEL (%)	5 %	No	3	0.000 to 0.000
	VOC (ppm)	5 ppm	No	3	0.000 to 0.040
UltraRAE 3000	Benzene (ppm)	1 ppm	No	2	0.000 to 0.000

Notes: See last page.

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**Wind Direction:** West/Southwest

Tower & Tower					
Instrument	Parameter	Action Level <sup>1</sup>	Action Level Exceeded?	Number of Measurements	Concentration Range
MultiRAE Pro	H <sub>2</sub> S (ppm)	0.1 ppm	No	2	0.000 to 0.000
	CO (ppm)	25 ppm	No	3	0.00 to 0.00
	O <sub>2</sub> (%)	19.5 to 23.5 %	No	3	20.9 to 20.9
	LEL (%)	5 %	No	3	0.000 to 0.000
	VOC (ppm)	5 ppm	No	3	0.000 to 0.000
UltraRAE 3000	Benzene (ppm)	1 ppm	No	2	0.000 to 0.000

N O Nelson School					
Instrument	Parameter	Action Level <sup>1</sup>	Action Level Exceeded?	Number of Measurements	Concentration Range
MultiRAE Pro	H <sub>2</sub> S (ppm)	0.1 ppm	No	2	0.000 to 0.000
	CO (ppm)	25 ppm	No	3	0.00 to 0.00
	O <sub>2</sub> (%)	19.5 to 23.5 %	No	3	20.9 to 20.9
	LEL (%)	5 %	No	3	0.000 to 0.000
	VOC (ppm)	5 ppm	No	3	0.000 to 0.000
UltraRAE 3000	Benzene (ppm)	1 ppm	No	2	0.000 to 0.000

SR143 & Old Alton Edwardsville					
Instrument	Parameter	Action Level <sup>1</sup>	Action Level Exceeded?	Number of Measurements	Concentration Range
MultiRAE Pro	H <sub>2</sub> S (ppm)	0.1 ppm	No	3	0.000 to 0.000
	CO (ppm)	25 ppm	No	4	0.00 to 0.00
	O <sub>2</sub> (%)	19.5 to 23.5 %	No	4	20.9 to 20.9
	LEL (%)	5 %	No	4	0.000 to 0.000
	VOC (ppm)	5 ppm	No	4	0.000 to 0.610
UltraRAE 3000	Benzene (ppm)	1 ppm	No	3	0.000 to 0.000

Notes: See last page.

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**Weather**  
**Wind Speed:** 7 to 20 miles per hour  
**Wind Direction:** West/Southwest

Oldenburg					
Instrument	Parameter	Action Level <sup>1</sup>	Action Level Exceeded?	Number of Measurements	Concentration Range
MultiRAE Pro	H <sub>2</sub> S (ppm)	0.1 ppm	No	2	0.000 to 0.000
	CO (ppm)	25 ppm	No	3	0.00 to 0.00
	O <sub>2</sub> (%)	19.5 to 23.5 %	No	3	20.9 to 21.1
	LEL (%)	5 %	No	3	0.000 to 0.000
	VOC (ppm)	5 ppm	No	3	0.000 to 0.060
UltraRAE 3000	Benzene (ppm)	1 ppm	No	2	0.000 to 0.000

Tiger & Bohn School					
Instrument	Parameter	Action Level <sup>1</sup>	Action Level Exceeded?	Number of Measurements	Concentration Range
MultiRAE Pro	H <sub>2</sub> S (ppm)	0.1 ppm	No	2	0.000 to 0.000
	CO (ppm)	25 ppm	No	3	0.00 to 0.00
	O <sub>2</sub> (%)	19.5 to 23.5 %	No	3	20.9 to 20.9
	LEL (%)	5 %	No	3	0.000 to 0.000
	VOC (ppm)	5 ppm	No	3	0.000 to 0.000
UltraRAE 3000	Benzene (ppm)	1 ppm	No	2	0.000 to 0.000

Comments					
The monitoring period is based on the earliest to the most recent monitoring time for all units.					
1 - Action Levels are based on 8-hour time-weighted averages described in the Edwardsville Oil Spill Emergency Response Health and Safety Plan (Tetra Tech 2022). Fixed discrete monitoring readings are discrete readings, and so do not represent conditions over a full 8-hour period.					

- Notes:**  
 % - Percent  
 CO - Carbon Monoxide  
 H<sub>2</sub>S - Hydrogen Sulfide  
 LEL - Lower Explosive Limit  
 O<sub>2</sub> - Oxygen  
 ppm - Parts per million  
 VOC - Volatile organic compounds

**Preliminary Air Monitoring Results Summary Table**  
**Monitoring Period: 3/13/2022 17:21 through 3/14/2022 18:09**  
**Marathon Pipeline Release - Wood River to Patoka System**  
**Edwardsville, Madison County, Illinois**

Location	Date/Time	PID (ppm)	LEL (%)	CO (ppm)	O2 (%)	Benzene (ppm)	H2S (ppm)
		Action Levels <sup>1</sup>					
		5 ppm	5 %	25 ppm	19.5 to 23.5 %	1 ppm	0.1 ppm
Background	3/13/2022 21:30	0	0	0	20.9	0	0
	3/14/2022 01:26	0	0	0	20.9	0	0
	3/14/2022 08:12	0.01	0	0	20.9	--	0
Hunicke & Philipena	3/13/2022 17:24	0	0	0	20.9	--	0
	3/13/2022 21:43	0	0	0	20.9	0	0
	3/14/2022 03:45	0.01	0	0	20.9	0	0
	3/14/2022 08:24	0.02	0	0	20.9	--	0
Henry & M	3/13/2022 17:28	0	0	0	21.1	--	0
	3/13/2022 21:53	0	0	0	20.9	0	0
	3/14/2022 03:50	0.01	0	0	20.9	0	0
	3/14/2022 08:31	0.02	0	0	20.9	--	0
Schiller & Ebehart	3/13/2022 17:32	0	0	0	20.9	--	0
	3/13/2022 21:57	0	0	0	20.9	0	0
	3/14/2022 03:54	0.01	0	0	20.9	0	0
	3/14/2022 08:36	0.02	0	0	20.9	--	0
Tower & Tower	3/13/2022 17:37	0	0	0	20.9	--	0
	3/13/2022 22:04	0	0	--	20.9	0	0
	3/14/2022 03:58	0.01	0	0	20.9	0	0
	3/14/2022 08:40	0.02	0	0	20.9	--	0
N O Nelson School	3/13/2022 17:40	0	0	0	20.9	--	0
	3/13/2022 22:16	0	0	0	20.9	0	0
	3/14/2022 04:01	0.01	0	0	20.9	0	0
	3/14/2022 08:44	0.02	0	0	20.9	--	0
SR143 & Old Alton Edwardsville	3/13/2022 17:21	0	0	0	20.9	--	0
	3/13/2022 23:49	0	0	0	20.9	0	0
	3/14/2022 04:21	0.02	0	0	20.9	0	0
	3/14/2022 09:13	0.13	0	0	20.9	--	0
	3/14/2022 17:37	--	--	--	--	0	--
3/14/2022 17:44	0	0	0	20.9	--	--	
Tiger & Bohn School	3/13/2022 17:43	0	0	0	20.9	--	0
	3/14/2022 00:20	0	0	0	20.9	0	0
	3/14/2022 04:44	0	0	0	20.9	0	0
	3/14/2022 08:48	0.02	0	0	20.9	--	0
Oldenburg	3/13/2022 17:52	0.06	0	0	21.1	--	0
	3/14/2022 00:40	0	0	0	20.9	0.01	0
	3/14/2022 04:50	0	0	0	20.9	0	0
	3/14/2022 11:19	0.03	0	0	0	--	0
5 Diamonds Campground	3/13/2022 18:15	0	0	0	20.9	--	0
	3/13/2022 18:19	0	0	0	21.1	--	0
	3/14/2022 01:05	0	0	0	20.9	0.01	0
	3/14/2022 05:29	0	0	0	20.9	0	0
	3/14/2022 11:33	0.02	0	0	20.9	--	0
Lewis and Clark Campground	3/14/2022 01:18	0	0	0	20.9	0.01	0
	3/14/2022 05:14	0	0	0	20.9	0	0
	3/14/2022 11:27	0.01	0	0	20.9	--	0
Bridge over creek	3/14/2022 18:09	0.36	0	0	20.9	0	--

Notes:

1 - Action Levels are based on 8-hour time-weighted averages described in the Edwardsville Oil Spill Emergency Response Health and Safety Plan (Tetra Tech 2022). Fixed discrete monitoring readings are discrete readings, and so do not represent conditions over a full 8-hour period.

% - Percent

CO - Carbon Monoxide

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

LEL - Lower Explosive Limit

O<sub>2</sub> - Oxygen

ppm - Parts per million

VOC - Volatile organic compounds

**Preliminary Air Monitoring Results Summary Table**  
**Monitoring Period: 3/14/2022 17:44 through 3/15/2022 19:20**  
**Marathon Pipeline Release - Wood River to Patoka System**  
**Edwardsville, Madison County, Illinois**

Location	Date/Time	PID (ppm)	LEL (%)	CO (ppm)	O2 (%)	Benzene (ppm)	H2S (ppm)
		Action Levels <sup>1</sup>					
		5 ppm	5 %	25 ppm	19.5 to 23.5 %	1 ppm	0.1 ppm
Hunicke & Philipena	3/15/2022 17:09	0	0	0	20.9	0	0
	3/15/2022 05:23	0	0	0	20.9	0.01	0
	3/14/2022 22:03	0	0	0	20.9	0.01	0
	3/15/2022 11:22	0	0	0	20.9	0	0
Henry & M	3/15/2022 11:42	0	0	0	20.9	0	0
	3/15/2022 05:28	0	0	--	20.9	0.01	0
	3/15/2022 17:57	0	0	0	20.9	0	0
	3/14/2022 22:08	0	0	0	20.9	0.01	0
Schiller & Ebehart	3/15/2022 18:08	0	0	0	20.9	0	0
	3/14/2022 22:19	0	0	0	20.9	0	0
	3/15/2022 13:00	0	0	0	20.9	0	0
	3/15/2022 05:33	0	0	0	--	0.01	0
Tower & Tower	3/15/2022 18:13	0	0	0	21.1	0	0
	3/14/2022 22:24	0	0	0	20.9	0.01	0
	3/15/2022 05:41	0	0	0	20.9	0.01	0
	3/15/2022 13:08	0	0	0	0	0	0
N O Nelson School	3/15/2022 13:26	0	0	0	21.1	0	0
	3/15/2022 18:20	0	0	0	20.9	0	0
	3/15/2022 05:47	0.01	0	0	20.9	0.02	0
	3/15/2022 13:22	0	0	0	21.1	0	0
	3/14/2022 22:29	0	0	0	20.9	0	0
SR143 & Old Alton Edwardsville	3/14/2022 17:44	0	0	0	20.9	--	--
	3/15/2022 18:30	0	0	0	20.9	0	0
	3/14/2022 22:37	0	0	0	20.9	0.01	0
	3/15/2022 05:17	0.1	0	0	20.9	0.01	0
	3/15/2022 04:31	--	--	--	--	<b>4.43</b>	--
3/15/2022 13:38	0	0	0	21.2	0	0	
Oldenburg	3/15/2022 15:09	0	0	0	20.9	0	0
	3/15/2022 18:58	0	0	0	20.9	0	0
	3/15/2022 00:41	0	0	0	20.9	0.03	0
	3/15/2022 06:17	0.01	0	0	20.9	0.02	0
5 Diamonds Campground	3/15/2022 01:23	0	0	0	20.9	0.01	0
	3/15/2022 06:34	0.01	0	0	20.9	0.02	0
	3/15/2022 19:08	0	0	0	20.9	0	0
	3/15/2022 15:25	0	0	0	20.9	0	0
Lewis & Clark Campground	3/15/2022 01:00	0	0	--	20.9	0.01	0
	3/15/2022 15:39	0	0	0	20.9	0	0
	3/15/2022 19:20	0	0	0	20.9	0	0
	3/15/2022 06:27	0	0	0	20.9	0.02	0
Bridge over creek	3/14/2022 18:09	0.36	0	0	20.9	0	--
Pipeline area	3/15/2022 18:25	0	--	--	--	--	--
South side of pipeline	3/15/2022 18:29	0.01	0	0	20.9	--	0
SR143 Bridge	3/15/2022 07:15	0.035	0	0	20.9	--	0
	3/15/2022 09:25	0.34	0	0	20.9	--	0
Wetland area	3/15/2022 08:48	1.06	0	0	20.9	0.05	0
Background Location	3/14/2022 19:58	0	0	0	20.9	0	0
	3/15/2022 04:06	0	0	0	20.9	0	0
Wetland area perimeter	3/15/2022 16:37	0.1	0	0	20.9		0
Tiger & Bohm School	3/15/2022 14:47	0	0	0	21.1	0	0
	3/15/2022 18:43	0	0	0	20.9	0	0
	3/15/2022 00:05	0	0	0	20.9	0	0
	3/15/2022 06:02	0.01	0	0	20.9	0.02	0

Notes:

**Highlighted and bolded value** Measurement is greater than the Action Level<sup>1</sup>

1 - Action Levels are based on the EPA-approved Edwardsville Oil Spill Emergency Response Site Air Monitoring and Sampling Plan (Tetra Tech 2022).

% - Percent

CO - Carbon Monoxide

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

LEL - Lower Explosive Limit

O<sub>2</sub> - Oxygen

ppm - Parts per million

VOC - Volatile organic compounds