

Air Monitoring and Sampling Summary Tables

The tables below summarize preliminary air monitoring data collected using EPA DustTrak DRX instruments and preliminary lead dust analytical results.

Project Name: ASARCO Taylor Springs Site Removal #2 - TCRA

Background Dust Monitoring Measurements (Pre-Removal) 9/26/2023 Only					
Property #2 (Mill Lane) - Dust Monitoring Stations ^a					
Time: 09:08 to 16:48					
Instrument	Analyte	NAAQS Health Screening Level ^b	Public Health Screening Level Exceeded? ^c	Max Instantaneous Reading (mg/m ³)	8-hour TWA Results (mg/m ³) ^d
DustTrak #003 (S/N: 8533153915) (Upwind Station 02)	PM _{2.5} (mg/m ³)	0.035 mg/m ³ TWA 24-Hour	Yes	0.119	0.013*
	PM ₁₀ (mg/m ³)	0.150 mg/m ³ TWA 24-Hour	No	0.147	0.015*
DustTrak #004 (S/N: 8533153914) (Upwind Station 01)	PM _{2.5} (mg/m ³)	0.035 mg/m ³ TWA 24-Hour	No	0.028	0.01*
	PM ₁₀ (mg/m ³)	0.150 mg/m ³ TWA 24-Hour	No	0.059	0.014*
DustTrak #006 (S/N: 8533164307) (Downwind Station 04)	PM _{2.5} (mg/m ³)	0.035 mg/m ³ TWA 24-Hour	Yes	0.075	0.006*
	PM ₁₀ (mg/m ³)	0.150 mg/m ³ TWA 24-Hour	No	0.103	0.007*
DustTrak #008 (S/N: 8533154004) (Downwind Station 03)	PM _{2.5} (mg/m ³)	0.035 mg/m ³ TWA 24-Hour	Yes	0.055	0.003*
	PM ₁₀ (mg/m ³)	0.150 mg/m ³ TWA 24-Hour	Yes	0.281	0.004*

Upwind Vs Downwind Excavation Air Monitoring 9/27/2023 - 9/29/2023						
Property #1 (Carrie Street) - Dust Monitoring Stations						
Date/Time	Instrument	Analyte	NAAQS Health Screening Level ^b	Public Health Screening Level Exceeded? ^c	Max Instantaneous Reading (mg/m ³)	8-hour TWA Results (mg/m ³) ^d
Wednesday 9/27/2023 08:57 to 16:34	Upwind (at Station 01)	PM _{2.5} (mg/m ³)	0.035 mg/m ³ TWA 24-Hour	Yes	0.069	0.007*
		PM ₁₀ (mg/m ³)	0.150 mg/m ³ TWA 24-Hour	No	0.075	0.007*
	Downwind (at Station 02)	PM _{2.5} (mg/m ³)	0.035 mg/m ³ TWA 24-Hour	Yes	0.084	0.015*
		PM ₁₀ (mg/m ³)	0.150 mg/m ³ TWA 24-Hour	No	0.087	0.017*
Thursday 9/28/2023 08:50 to 17:00	Upwind (at Station 03)	PM _{2.5} (mg/m ³)	0.035 mg/m ³ TWA 24-Hour	Yes	0.327	0.017
		PM ₁₀ (mg/m ³)	0.150 mg/m ³ TWA 24-Hour	Yes	1.15	0.025
	Downwind (at Station 01)	PM _{2.5} (mg/m ³)	0.035 mg/m ³ TWA 24-Hour	No	0.022	0.006
		PM ₁₀ (mg/m ³)	0.150 mg/m ³ TWA 24-Hour	No	0.023	0.007
Friday 9/29/2023 08:20 to 15:54	Upwind (at Station 04)	PM _{2.5} (mg/m ³)	0.035 mg/m ³ TWA 24-Hour	Yes	0.174	0.017*
		PM ₁₀ (mg/m ³)	0.150 mg/m ³ TWA 24-Hour	Yes	0.176	0.019*
	Downwind (at Station 05)	PM _{2.5} (mg/m ³)	0.035 mg/m ³ TWA 24-Hour	Yes	0.078	0.013*
		PM ₁₀ (mg/m ³)	0.150 mg/m ³ TWA 24-Hour	No	0.079	0.013*

Air Monitoring and Sampling Summary Tables

Property #2 (Mill Lane) - NIOSH 7303 Background Air Sampling Results (Pre-Removal) 9/20/2023 Only			
NIOSH 7303 Lead Dust Sampling Results ^a			
Time: 09:17 to 15:07			
Air Sample Station Number	ACGIH TLV 50 µg/m ³ (8-hour TWA) Exceedance (Y/N) ^c	NAAQS 0.15 µg/m ³ Exceedance (Y/N) ^b	Results (µg/m ³) ^f
01	No	No	<0.0188
01 Duplicate	No	No	<0.0189
02	No	No	<0.0189
03	No	No	<0.0187
04	No	No	<0.0148

Comments/Notes
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 is not performed during inclement weather conditions/rain and thunderstorms.
^a - Project background dust monitoring and lead dust sampling were conducted before project activities commenced and occurred at Property #2.
^b - EPA NAAQS are available online at https://www.epa.gov/criteria-air-pollutants/naaqs-table .
^c - Maximum instantaneous PM _{2.5} and PM ₁₀ concentrations exceeded NAAQS in some cases. Instantaneous high readings may occur due to dusts from vehicular and other upwind/off-site environmental factors. However, the NAAQS are based on 24-hour TWAs, not instantaneous concentrations. All 8-hour TWA PM _{2.5} and PM ₁₀ monitoring results were less than the NAAQS. Also, dust monitoring results indicate that upwind/off-site elevated levels of PM _{2.5} and PM ₁₀ impacted downwind air monitoring at many locations.
^d - Air monitoring measurements have been averaged over an 8-hour time period. However, the TWA results indicated with an asterisk (*) had a run time of under 8 hours due to inclement weather, battery issues, etc. In those cases, the TWA result is based on full run time of instrument.
^e - The ACGIH TLV is available online at https://www.acgih.org/lead-and-inorganic-compounds-3/ .
^f - The lead dust analytical results are preliminary unvalidated results.
Notes: °F - Degrees Fahrenheit < - Less than ACGIH - American Conference of Governmental Industrial Hygienists EPA - U.S. Environmental Protection Agency µg/m ³ - Microgram per cubic meter mg/m ³ - Milligrams per cubic meter NAAQS - National Ambient Air Quality Standards 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 TLV - Threshold Limit Value

Air Quality Index Categories and Recommendations

Air Quality Index Category	24-Hour Avg. PM _{2.5} Concentrations (ug/m ³)	24-Hour Avg. PM ₁₀ Concentrations (ug/m ³)	People at Risk	Recommended Actions
Good	0 to 12.0	0 to 54		It is a good day to be active outside.
Moderate	12.1 to 35.4	55 to 154	Some who are <u>unusually sensitive</u> to particle pollution	<u>Unusually sensitive people:</u> Consider making outdoor activities shorter and less intense. Watch for symptoms such as coughing or shortness of breath. These are signs to take it easier. <u>Everyone else:</u> It is a good day to be active outside.
Unhealthy for Sensitive Groups	35.5 to 55.4	155 to 254	<u>Sensitive groups</u> include people with <u>heart or lung disease</u> , older adults, children and teenagers, minority populations, and outdoor workers	<u>Sensitive groups:</u> Make outdoor activities shorter and less intense. It is OK to be active outdoors, but take more breaks. Watch for symptoms such as coughing or shortness of breath. <u>People with asthma:</u> Follow your asthma action plan and keep quick relief medicine handy. <u>People with heart disease:</u> Symptoms such as palpitations, shortness of breath, or unusual fatigue may indicate a serious problem. If you have any of these, contact your health care provider.
Unhealthy	55.5 to 150.4	255 to 354	<u>Everyone</u>	<u>Sensitive groups:</u> Avoid long or intense outdoor activities. Consider rescheduling or moving activities indoors.* <u>Everyone else:</u> Reduce long or intense activities. Take more breaks during outdoor activities.
Very Unhealthy	150.5 to 250.4	355 to 424	<u>Everyone</u>	<u>Sensitive groups:</u> Avoid all physical activity outdoors. Reschedule to a time when air quality is better or move activities indoors.* <u>Everyone else:</u> Avoid long or intense activities. Consider rescheduling or moving activities indoors.*
Hazardous	250.5 to 500.4	425 to 605	<u>Everyone</u>	<u>Everyone:</u> Avoid all physical activity outdoors. <u>Sensitive groups:</u> Remain indoors and keep activity levels low. Follow tips for keeping particle levels low indoors.*

*Note: If you do not have an air conditioner, staying inside with the windows closed may be dangerous in extremely hot weather. If you are hot, go someplace with air conditioning or check with your local government to find out if cooling centers are available in your community.

- Particle pollution can cause serious health problems, including asthma attacks, heart attacks, strokes, and early death.
- When particle levels are high outdoors, they can be high indoors too. Keep particles lower indoors by using a portable air cleaner with HEPA filters, and installing high efficiency furnace filters in your HVAC system.

Comment: Illinois Statewide Average 24-hour PM_{2.5} Concentration in 2021: 9.4 ug/m³¹

Comment: Monitoring locations include both upwind and background locations. Elevated PM₁₀ concentrations may represent other sources.

¹ Illinois Annual Air Quality Report 2021. Available from: <https://epa.illinois.gov/topics/air-quality/outdoor-air/air-monitoring/air-quality-reports.html>

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