

What is the “Enhanced Air Quality Monitoring in the Cherokee Community of Pascagoula, Mississippi” Project

The Mississippi Department of Environmental Quality (MDEQ) applied for and received \$500,000 from the Environmental Protection Agency (EPA’s) Competitive Air Quality Monitoring Grant funded by the American Rescue Plan Act of 2021 (ARPA) to monitor ambient air for the air pollutants of greatest concern to the Cherokee Community. MDEQ also received an additional \$125,425 to expand the air monitoring project from EPA funded by the Inflation Reduction Act for Clean Air Act Grants of 2022 (CAA IRA).

What Are We Testing for and How Often

For one year, MDEQ will monitor for the following air pollutants using approved EPA collection and analysis methods.

<i>Pollutant</i>	<i>Air Monitoring Methodology/Technology</i>	<i>Monitoring Frequency</i>	<i>Funded by</i>
Particulate Matter (PM ₁₀ /PM _{2.5})	Collection using a continuous Teledyne API T640x particulate matter analyzer	Continuous	ARPA
Volatile Organic Compounds (VOCs)	Collection using summa canisters and analysis using GC/MS following Compendium Method TO-15	24-hour sample collected every 1 in 6 days (up to 25 additional random or response samples using SPod triggered canisters)	ARPA
PM ₁₀ Metals	Collection using a filter-based ThermoFisher Scientific 2025 particulate matter instrument with filter analysis using Compendium Method IO-3.5	24-hour sample collected every 1 in 6 days (up to 25 additional random / response samples)	CAA IRA
Total Reduced Sulfur/ Reduced Sulfur Compounds	Collection using a continuous Teledyne API T102 total reduced sulfur analyzer	Continuous	CAA IRA
	Collection using summa canisters and analysis using GC/SCD following ASTM Method D5504	24-hour random/response samples as needed, determined by continuous instrument readings (up to 25 samples)	CAA IRA

What are the Pollutants of Interest?

PM₁₀/PM_{2.5} – Fine particulate matter (a.k.a. dust particles) with a respective diameter of less than 10 and 2.5 micrometers (µm). For context, a strand of baby hair has an average diameter of 50 micrometers.

Volatile Organic Compounds – gases emitted from certain solids or liquids with a high vapor pressure (i.e., evaporates quickly).

PM₁₀ Metals – Fine particulate matter that is metal-based and has a diameter of less than 10 micrometers (µm).

Total Reduced Sulfur/Reduced Sulfur Compounds – sulfur-based gases created in the absence of oxygen (odors similar to rotten eggs or cabbage).

Current Project Status

MDEQ received the funds in July and October 2023. As of March 2024, MDEQ is in the process of preparing for sample testing such as ordering equipment, ensuring a secure location, and obtaining a laboratory contract.

Who to Contact?

Anyone interested in updates are free to contact Mr. Jaricus Whitlock (601-961-5303; jwhitlock@mdeq.ms.gov) or Mrs. Laura James (601-961-5675; ljames@mdeq.ms.gov).