Arkansas Department of Health

4815 West Markham Street ● Little Rock, Arkansas 72205-3867 ● Telephone (501) 661-2000
Governor Asa Hutchinson
Nathaniel Smith, MD, MPH, Director and State Health Officer

Arkansas Department of Health
Review of Particulate Matter Air Monitoring near Trafalgar Road Fire
2/27/2019

The Arkansas Department of Health (ADH) received fine particulate matter ($PM_{2.5}$) data from the Arkansas Department of Environmental Quality (ADEQ) on February 26, 2019. ADH has evaluated $PM_{2.5}$ data collected by ADEQ from February 14, 2019 to February 24, 2019 at the Bella Vista Fire Department Station 2, and at the city transfer station (Pump Station) near Cooper Elementary School. The $PM_{2.5}$ levels observed during the monitoring period indicate the air quality was within the following Air Quality Index (AQI) range values:

Date	Fire Station 24 Hour $PM_{2.5}$ Concentration ($\mu g/m^3$)	Fire Station 24 Hour Air Quality Index (AQI)	AQI Category
February 14, 2019	SRT*	-	-
February 15, 2019	13.62	54	**Moderate**
February 16, 2019	7.96	33	**Good**
February 17, 2019	15.17	57	**Moderate**
February 18, 2019	13.54	54	**Moderate**
February 19, 2019	9.67	40	**Good**
February 20, 2019	7.50	31	**Good**
February 21, 2019	10.38	43	**Good**
February 22, 2019	7.58	31	**Good**
February 23, 2019	3.75	15	**Good**
February 24, 2019	11.33	47	**Good**

$\mu g/m^3$=micrograms per cubic meter
*Short Run Time --Possibly from power failure (no data)

Date	Pump Station by Cooper Elementary 24 Hour $PM_{2.5}$ Concentration (µg/m^3)	Pump Station by Cooper Elementary 24 Hour Air Quality Index (AQI)	AQI Category
February 14, 2019	6.19	25	Good
February 15, 2019	14.00	55	Moderate
February 16, 2019	8.42	35	Good
February 17, 2019	7.00	29	Good
February 18, 2019	13.67	54	Moderate
February 19, 2019	9.71	40	Good
February 20, 2019	6.54	27	Good
February 21, 2019	10.00	42	Good
February 22, 2019	7.12	30	Good
February 23, 2019	2.67	11	Good
February 24, 2019	8.79	36	Good
µg/m3=micrograms per cubic meter			

The Environmental Protection Agency (EPA) has developed the Air Quality Guide for Particle Pollution to help people make informed decisions on outdoor activity related to all PM levels. Individuals with health concerns should talk with their doctor. All individuals should consider spending less time outdoors when they can see or smell smoke in the air. People who suffer from breathing issues or lung diseases [such as asthma or chronic obstructive pulmonary disorder (COPD)]; those with heart disease; pregnant women; infants and young children; teenagers; and older adults can be more sensitive to particulate matter in air.

Public Health Statement for AQI Category:

Good (0 to 50): Air quality is considered satisfactory, and air pollution poses little to no risk.

Moderate (51 to 100): Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people.

Conditions in the area surrounding the Trafalgar Road fire will continue to change depending on weather, wind direction, and activity at the site. Breathing in smoke may cause eye and respiratory tract (throat, chest and nose) discomfort and irritation.

When smoke or strong odors are present, people in the area may protect themselves by taking the following actions:

- If it looks smoky outside, it is a good idea to limit exertion (running, yardwork, playing) during outside activity.
- If you have asthma or other lung diseases, you should follow your doctor's directions or asthma management plan.

- Run your Heating, Ventilation and Air Conditioning (HVAC) system and keep your air filter clean.
- If you have heart or lung disease, if you are an older adult, or if you have a child, talk with your doctor about whether or when you should leave the area.

PM monitoring measures the amount of solid and liquid droplets found in the air such as ash, dust, and smoke. The amount of PM in the air provides a snapshot of local air quality and how air quality may affect health. Several types of PM are collected based on size in micrometers. For example, there are $PM_{2.5}$ for small or fine particles and PM_{10} for large particles. PM in the air is highly variable based on the source of the particulates, weather conditions, the location of the monitor, and activity near the monitor. PM monitoring data does not identify the source of the PM, which may come from a wide range of natural and manmade sources such as smoke, dust and automobile exhaust.

For inquiries related to PM evaluations, contact ADH Environmental Epidemiology at adh.ts@arkansas.gov.

Reference: Air Quality Index (AQI) Basics; https://airnow.gov/index.cfm?action=aqibasics.aqi. Environmental Protection Agency. Accessed February 27, 2019.