



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

March 12, 2019

Stuart Spencer
Office of Air Quality Associate Director
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118-5317

RE: Trafalgar Road Fire, Bella Vista, AR

Dear Mr. Spencer,

The Arkansas Department of Health (ADH) received the February 10-12, 2019 Trafalgar Road Fire Air Sampling Data Results from the Environmental Protection Agency (EPA) on February 28, 2019. It included analytical results for two (2) days of volatile organic compound (VOC) sampling, and three (3) days of hydrogen cyanide (HCN) and polynuclear aromatic hydrocarbons (PAH) sampling.

Volatile Organic Compounds

EPA sampled five (5) community/off-site locations during this sampling event. The off-site benzene levels detected in samples taken on February 10-11 and 11-12, 2019, ranged from below the detection limit of 0.88 parts per billion (ppb) to 1.7 ppb. These results are consistent with the background levels that would be expected in rural subdivisions, as identified in the December 12, 2018 Health Consultation that stated, “Ambient air levels for benzene have been identified for remote/rural areas in the range of 0.16 parts per billion (ppb) to 3.5 ppb and suburban residential-remote from traffic in the range of 1.8 ppb to 4.5 ppb.”

The on-site benzene levels in samples taken on February 10-11 and 11-12, 2019 were 54 ppb and 22 ppb, respectively. These levels exceeded the acute screening level of 9.1 ppb. The benzene levels in the February 10-11, 2019 sample were higher than the benzene levels in the sample evaluated in the December 12, 2018 Health Consultation of 32 ppb, but remain below the Occupational Safety and Health Administration (OSHA) 8-hour exposure level of 1,000 ppb for on-site workers.

These additional VOC results continue to be consistent with the December 12, 2018 Health Consultation conclusions.

Hydrogen Cyanide and Polynuclear Aromatic Hydrocarbons

All HCN and PAH results from the five (5) community/off-site sampling locations were below the detection limit for HCN (2.8 ppb) and PAHs (1 ppb or lower) for all three (3) days of sampling.

HCN was detected on-site at levels ranging from 4 ppb to 12.5 ppb, which were below the OSHA 8-hour exposure level of 10,000 ppb for on-site workers.

Naphthalene, a PAH, was detected on-site at levels ranging from 0.15 ppb to 4.22 ppb, which were below the OSHA 8-hour exposure level of 10,000 ppb for on-site workers.

Summary of EPA Air Sampling Results for February 10th through 12th, 2019

Sampling Location	Benzene (VOC)	Hydrogen Cyanide	PAHs
Community/off-site	Below DL (0.88 ppb) to 1.7 ppb	Below DL (2.88 ppb)	Below DL (1 ppb or lower)
On-site	22 ppb to 52 ppb	4 ppb to 12.5 ppb	0.15 ppb* to 4.22 ppb*

EPA: Environmental Protection Agency

VOC: Volatile Organic Compound

ppb: parts per billion

DL: Detection Limit is the lowest concentration of a chemical that can be quantified by a particular analytical method.

PAH: Polynuclear aromatic hydrocarbons are a group of over 100 different chemicals that are formed during incomplete burning.

* Specifically, the PAH naphthalene

Conclusion

Based on the sample results collected by EPA from October 2018 through February 2019, community/off-site levels of VOCs, HCN, and PAHs are below levels of concern for public health hazards.

Please feel free to contact me at 501-614-5227 or chris.hemann@arkansas.gov, if you have any questions.

Sincerely,



Chris C. Hemann, M.S.

ADH Environmental Epidemiologist

ATSDR Cooperative Agreement Health Assessor

cc: Shirley Louie, M.S., CIH, ADH Center for Public Health Practice Director
Lori Simmons, M.S., ADH Epidemiology Branch Chief
Ashley Whitlow, M.S., ADH ATSDR Principal Investigator/ Environmental Epidemiology Supervisor
Kerry Krell, MPH, ADH ATSDR Health Outreach Coordinator/ Environmental Epidemiologist
Eva D. McLanahan, Ph.D., REHS/RS, CDR, USPHS, ATSDR Technical Project Officer
Jennifer Lyke, ATSDR Region 6
Patrick Young, ATSDR Region 6

*This publication was made possible by Grant Number CDC-RFA-TS17-170102CONT18 from the Agency for Toxic Substances and Disease Registry. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Agency for Toxic Substances and Disease Registry, or the Department of Health and Human Services.