

Arkansas Department of Health  
Review of Hydrogen Sulfide Air Monitoring Data in Crossett, AR

**Special Data Review Announcement: November 14-15, 2016**

Continuous hydrogen sulfide (*or*, H<sub>2</sub>S) air quality monitoring has been conducted by the TRC Environmental Corporation (TRC) on behalf of the Georgia-Pacific Crossett Mill in Crossett, AR. The Arkansas Department of Health (ADH) has reviewed the air quality monitoring data from the TRC database and determined that higher than average readings occurred intermittently on Monday, November 14, 2016, from approximately 2:40 a.m. to approximately 8:30 a.m., and then again on Tuesday, November 15, 2016, from approximately 9:00 p.m. to approximately 11:50 p.m. The continuous air quality monitoring data suggest this was an isolated event, since average hydrogen sulfide readings have returned to background levels.

Personnel from the Georgia-Pacific Crossett Mill notified ADH of the higher than average readings on Monday, November 14, 2016, and again on Wednesday, November 16, 2016. A 24-hour calibration process was used in order to validate these data. According to Georgia-Pacific personnel, their investigation suggests that typical paper mill operations of shutting down and starting up pulping or bleaching lines can raise or lower the pH in the associated process and effluent (wastewater) streams. These changes can contribute to higher hydrogen sulfide readings. Additionally, Georgia-Pacific personnel stated the mill has been conducting routine maintenance dredging to remove solids from the wastewater pond; this maintenance work may have also contributed to increased hydrogen sulfide emissions.

The health screening levels used in this review apply to the general public, including sensitive individuals, such as people with asthma or other chronic respiratory conditions. The screening values are intended to provide health-based standards for interpreting air monitoring data. Monitoring data may be used as a tool to help determine whether a facility is controlling hydrogen sulfide releases. See the figure below for a picture of the higher concentration spikes reported from the air quality monitoring data as compared to the screening value.

The higher concentrations of hydrogen sulfide detected at the monitoring station happened in the later hours of the evening into the early hours of the morning when some people may have been indoors. The possible health effects were likely to have been temporary and more likely to have occurred in sensitive individuals, such as people with asthma and other chronic respiratory conditions. Should anyone feel they are experiencing possible health effects related to this event, please contact a physician or health care professional.

Hydrogen sulfide is a heavier-than-air, colorless gas with an odor of rotten eggs. Odors can alert people that something may be harmful, but generally you can smell many chemicals before they are at levels that are harmful to your health. People usually can smell hydrogen sulfide at low concentrations in air, usually at levels much lower than the health screening levels set to determine health effects.

It is important to note that hydrogen sulfide exposures at low levels have not been shown to result in any lasting health effects. Hydrogen sulfide is not known to cause cancer.

For more information, see the Agency for Toxic Substances and Disease Registry (ATSDR) Hydrogen Sulfide fact sheet [linked to this website]. For inquiries related to the hydrogen sulfide air quality monitoring, contact the ADH Office of Health Communications and Marketing at (501) 280-4768.

