PHX WATER SMART

DROUGHT PIPELINE PROJECT

STYRENE ODOR FACT SHEET

March 2022

City of Phoenix

The City of Phoenix Water Services Department is rehabilitating small diameter sewers throughout the city. The rehabilitation process, known as cured-in-place pipe (CIPP), uses a felt liner soaked in a polyester resin. Phoenix's hired contractor will place the resin-soaked tube in the existing sewer line and inflate it against the inner surface of the pipe. Once the tube hardens, it creates a new structural pipe within the existing sewer line, which will extend the sewer's service life another 50+ years. This material has been used to rehabilitate aging sewer pipe in Phoenix—and throughout the United States—for over 20 years. Phoenix's contractor, SAK Construction LLC, and its subcontractor, Pro-Pipe—using construction vehicles and equipment bearing their names—will be rehabilitating sewers in your area. Styrene is a main component of the resin used in this process and can have a strong chemical odor.

Frequently Asked Questions:

- **Why do we smell the odor in our home?**
  Styrene's distinctive odor can be detected at extremely low concentrations in the air—similar to new plastic, vinyl, or chlorine. People living near or connected to sewers undergoing CIPP rehabilitation may notice a smell outside or even inside their house. Styrene materials will release a scent as they are installed and cured. This odor is emitted at very low, non-hazardous levels.
- **What can we do to remove the odor in our home?**
  This odor usually enters a home through the plumbing—particularly when drain traps under sinks and bathroom fixtures are dry—or through vent intakes and open windows. The scent usually dissipates within a short period of time, but **residents are encouraged to run water down all drains to fill traps with water** just prior to construction (or when the odor is first noticed) to block the smell, and also to open windows to ventilate the air in their homes.

- **Is styrene odor harmful to people, pets and/or the environment?** No, at least not at levels generated by the CIPP rehabilitation process. But some individuals may find the odor unpleasant. See "Styrene Information" section on this flyer.
- **Is this the same styrene used in solid foam products?**
  Yes, typical solid foam products such as disposable cups, coolers, and packaging material are made of expanded polystyrene beads. Styrene is also a component in many plastics and household products.

Styrene Information:

Styrene has a distinct odor at a very low threshold of 0.1 parts per million (ppm) and its scent is sensitive to the nose. This smell is noticeable, similar to new plastic, vinyl, or chlorine. In the United States, strict regulations are in place to protect workers' health. In 1989, the U.S. Occupational Safety and Health Administration (OSHA) established a safe exposure standard for styrene of 50 ppm over an eight-hour day. This standard protects workers who regularly work with and expose themselves to this material. The exposure levels in homes from adjacent CIPP installations is well below this safety standard.

The health of workers in plants making or using styrene has been monitored closely. Studies looking for long-term health effects related to styrene exposure have not shown any statistically significant increases in long-term health problems of any kind attributable to styrene exposure.

OSHA Exposure Limits:

- 50 ppm for 8-hour time weighted average (TWA)
- 100 ppm for short term exposure limit (STEL)

The release of styrene during typical styrene sewer rehabilitation does not pose a significant risk to human health or the surrounding environment, but exposure to high concentrations of styrene may be harmful and should be avoided. Please make sure that plumbing traps are filled with water in advance or as soon as odors are apparent. Common symptoms of exposure to styrene may include headache, nausea, dizziness, and lightheadedness. If you experience any of these symptoms, seek fresh air immediately and then ventilate your home. These symptoms should dissipate after the exposure ends. If symptoms persist, seek medical attention.

OSHA Standards for Styrene: nwww.osha.gov/dts/chemicalsampling/data/CH_268200.html

Please contact us if you are concerned about your home's styrene exposure: 480.766.8214. Phoenix's contractor has an airborne sampling monitor on-site that can quickly measure the exposure level in the air. SAK, the contractor, has additional information on their website at: **www.sakcon.com/installinfo**