

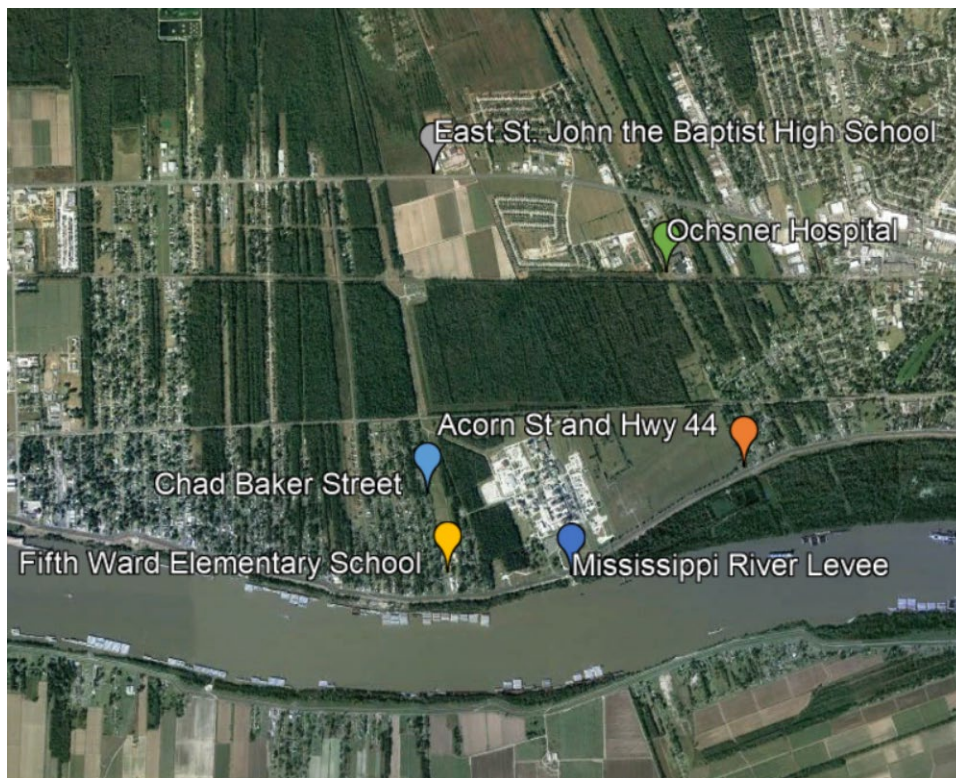
Initial Phase Report  
U.S. Environmental Protection Agency (EPA)  
Continuous Air Monitoring for Chloroprene Concentrations  
near the Denka Performance Elastomer LLC (DPE) Facility  
in LaPlace, Louisiana  
March 2020 through August 2020

*October 16, 2020*

**SUMMARY REPORT OF CONTINUOUS MONITORING – INITIAL PHASE  
Continuous Air Monitoring for Chloroprene Concentrations in LaPlace, LA**

EPA deployed a Continuous Air Monitoring Program in March 2020 intended to help EPA understand the magnitude and frequency of occasional, but recurring, elevated chloroprene measurements or “spikes” that contribute significantly to the long-term chloroprene averages. Another objective of the Continuous Air Monitoring Program is to help identify unknown or under characterized emissions sources or activities at the facility. This continuous monitoring approach may help EPA identify possible actions that Denka could take to further reduce chloroprene in the community. The new Continuous Air Monitoring Program uses six SPod monitoring stations (the “Continuous Air Monitors”) that consist of a stationary photoionization detector (PID), a meteorological station to record weather data, and one or more summa canisters for sampling. The PID continuously measures for total volatile organic compounds (VOC) in the ambient air and, when VOC concentrations reach a certain threshold, a canister will collect an air sample that will be measured for chloroprene in a laboratory.

During the initial deployment, Continuous Air Monitors were placed near existing community ambient air monitors at four of six monitoring locations. These locations are at Chad Baker Street, East St. John High School, 5<sup>th</sup> Ward Elementary School, and Ochsner Hospital. During the initial deployment, the 5<sup>th</sup> Ward Elementary School and Ochsner Hospital locations were equipped with two co-located Continuous Air Monitors. Once the property owner granted access to the Mississippi River Levee and the Acorn and Highway 44 locations, the Continuous Air Monitors co-located at the 5<sup>th</sup> Ward Elementary School and Ochsner Hospital locations were relocated and installed at the Mississippi River Levee and the Acorn and Highway 44 locations on July 1, 2020. See map below of the six existing monitoring locations.



The Continuous Air Monitoring Program was designed with two monitoring phases: the Initial Phase and the Operational Phase. The Initial Phase of the project began with the deployment of the Continuous Air Monitors and continued through August 2020. The Initial Phase included instrumentation quality checks, collection and processing of data to assess the sampling equipment performance, and development of VOC trigger concentrations and averaging periods for canister samples at each monitoring location. The Initial Phase of the Continuous Air Monitoring Program was longer than expected due to necessary equipment adjustments. During the Initial Phase of the program, at each monitoring location, the monitor's detection of a total VOC measurement above a set, static trigger level should trigger the collection of a 24-hour average canister sample. The chloroprene sampling results from the Initial Phase of the Continuous Air Monitoring Program are posted to the Denka Air Monitoring Data Summary Page at: <https://www.epa.gov/la/denka-air-monitoring-data-summary>.

The Continuous Air Monitoring Program entered the Operational Phase (second phase) of the program in September 2020. During this phase of the program, all Continuous Air Monitors are using a dynamic triggering approach for collection of air canister samples. Also, during the Operational Phase of the project, EPA may seek detailed operational and maintenance information from Denka that could be used to assist with the assessment of canister-collected chloroprene results. Any secondary or supporting data gathered will be used to help identify possible actions to further reduce chloroprene in the community. Examples of relevant secondary or supporting data include information about Denka's operations, scheduled or unscheduled maintenance, Denka's monthly ambient air monitoring reports, and EPA's community ambient air monitoring results. The chloroprene sampling results from the Operational Phase of the Continuous Air Monitoring Program are also posted to the Denka Air Monitoring Data Summary Page.

From March 10, 2020, to August 31, 2020, a total of 55 canister samples from Continuous Air Monitors were collected. Of the 55 total canister samples, two canister samples were invalid, and two canister samples were replicate samples (a second analysis done from the same canister). Eleven samples were below the method detection limit or characterized as non-detect for chloroprene. There have been seven total samples greater than  $1 \mu\text{g}/\text{m}^3$ , with the highest chloroprene sample of  $4.684 \mu\text{g}/\text{m}^3$ . The overall average for all Continuous Air Monitor locations during the Initial Phase is  $0.376 \mu\text{g}/\text{m}^3$ .

Barring unforeseen circumstances, the Operational Phase of the Continuous Air Monitoring Program will operate until December 2020.