

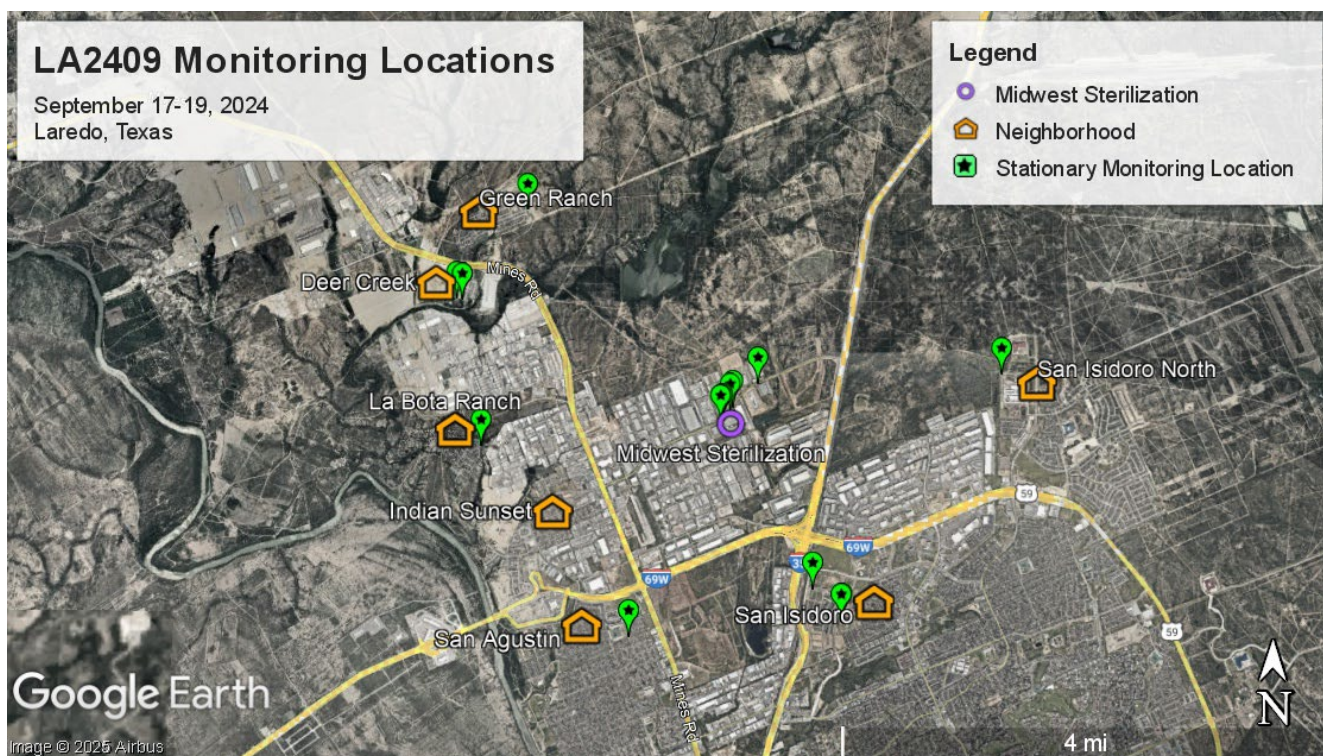


## **Summary of Mobile Monitoring Conducted in Laredo, Texas, Sept. 17-19, 2024**

The Texas Commission on Environmental Quality (TCEQ) conducted an ambient air monitoring project in Laredo, Texas on Sept. 17-19, 2024, to measure ethylene oxide (EtO) around Midwest Sterilization (TCEQ Regulated Entity No. RN103376901) and in nearby neighborhoods. Two mobile monitoring vans with instruments that can measure EtO were used to collect data during the project. Mobile surveys collected instantaneous data (collected every one to four seconds) while the vehicle was moving at slow speeds; these data help determine where the van should stop for stationary monitoring. Stationary monitoring was conducted when the vans remained parked at one location to collect data for a period of time based on the concentrations observed during mobile surveys. This allows for the collection of data that can be averaged over a period of time and compared to TCEQ ambient air monitoring comparison values (AMCVs). Stationary monitoring data are reported as instantaneous concentrations, 12-minute cycle averages, and/or one-hour averages. During this project, the team collected data during 19 stationary monitoring instances and 20 mobile surveys.

Tables 1 and 2 summarize the maximum concentrations observed during mobile surveys and stationary monitoring for each day of the project. The full technical report, which is available upon request, provides additional information for each mobile survey and stationary monitoring instance.

TCEQ's Toxicology, Risk Assessment, and Research Division conducted a human health evaluation of all data from this monitoring trip using short-term AMCVs, which is available upon request. AMCVs are safe levels of chemicals in ambient air, used to determine if monitored concentrations may cause negative health effects or odors. Short-term AMCVs are compared to data collected over a one-hour period. Instantaneous data are not appropriate for comparison to short-term AMCVs since they represent concentrations with a significantly smaller measurement duration than one-hour. The Toxicology, Risk Assessment, and Research Division concluded that all calculated hourly averages were below their respective short-term health- or odor-based AMCVs. Regarding EtO specifically, the highest one-hour average EtO concentration from this monitoring trip was 12.4 parts per billion by volume (ppbv), which is well below the one-hour health-based AMCV of 280 ppbv. Therefore, neither negative health effects nor odors would be expected due to exposure to the reported concentrations.



**Figure 1: Map of areas where mobile surveys and stationary monitoring were conducted in Laredo, Texas. Mobile surveys were conducted in the neighborhoods shown and around Midwest Sterilization. Stationary monitoring was conducted at the locations marked by the green balloons.** This map was generated by the Air Monitoring Division of the Texas Commission on Environmental Quality. This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries. For more information concerning this map, contact the Air Monitoring Division at 512-239-1716.

Table 1. Summary of Maximum Results from Neighborhood Monitoring

Date	Location	Mobile Survey or Stationary Monitoring	EtO Results	
			Maximum Instantaneous or 12-minute Cycle Concentration (ppbv)	Maximum Rolling One-hour Average Concentration (ppbv)
9/17/2024	Deer Creek	Survey	Below 3.00**	N/A
	Green Ranch	Survey		
	Indian Sunset	Survey		
	La Bota Ranch	Survey		
	Deer Creek	Stationary	Below 3.00**	Below 1.00*
	Green Ranch	Stationary		
9/18/2024	Deer Creek	Stationary	Below 0.20**	Below 0.10*
	Green Ranch	Stationary		
	La Bota Ranch	Stationary		
9/19/2024	La Bota Ranch	Stationary	Below 0.10*	Below 0.10*
	San Agustin	Stationary		
	San Isidro	Stationary		
	San Isidro North	Stationary		
	San Isidro	Stationary	Below 3.00**	Below 1.00*
	Indian Sunset	Survey	Below 3.00**	N/A

\*Concentrations were below the detection limit for the instrument used

\*\*Concentrations were below the level that can accurately be measured with the instrument used

EtO - Ethylene oxide

N/A - Not applicable; data are not averaged for mobile surveys but are reported as minimum and maximum concentrations

ppbv - parts per billion by volume

Table 2. Summary of Maximum Results from Monitoring Around Midwest Sterilization

Date	Location	Mobile Survey or Stationary Monitoring	EtO Results	
			Maximum Instantaneous or 12-minute Cycle Concentration (ppbv)	Maximum Rolling One-hour Average Concentration (ppbv)
9/17/2024	Roads surrounding Midwest Sterilization	Survey	17.93 (observed on Killam Industrial Boulevard)	N/A
	Killam Industrial Boulevard	Stationary	15.47	4.42
9/18/2024	Roads surrounding Midwest Sterilization	Survey	14.05 (observed on Killam Industrial Boulevard)	N/A
	Killam Industrial Boulevard	Stationary	35.99	12.45
9/19/2024	Roads surrounding Midwest Sterilization	Survey	17.18 (observed on Killam Industrial Boulevard)	N/A
	Killam Industrial Boulevard	Stationary	38.84	10.72

EtO - Ethylene oxide

N/A - Not applicable; data are not averaged for mobile surveys but are reported as minimum and maximum concentrations

ppbv - parts per billion by volume