

Lamar University

Flare Speciation and Air Quality Modeling

Project Description:

A flare operating under its designed conditions is assumed to achieve a 98% Destruction and Removal Efficiency ("DRE") for VOC emissions. However, basic combustion chemistry demonstrates the possibility that intermediate VOC species are formed during the combustion process, and these speciated VOC emissions are not accounted for in the DRE. This SEP will employ advanced modeling techniques to identify these speciated VOC emissions from the flaring operations of various chemical processes under various conditions, which will provide a more accurate estimate of VOC emissions that includes speciated VOC emissions.

Environmental Benefit :

This SEP will benefit the environment by identifying the VOC species generate and emitted at the flare under various operating and environmental conditions, as well as determine the CE and the DRE of the flares. This will allow better quantification of actual emissions from flaring operations and provide a more accurate emissions inventory. This will assist in identifying and developing strategies to reduce emission from industrial sources.

Eligible Areas and Counties:

This project may receive contributions from the following:

Jefferson County

Minimum Contribution Amount:

\$10,000