



National Enforcement Investigations Center Case Results – Vopak Terminal Deer Park Identification of CAA Emissions Sources Air Monitoring using Advanced Monitoring Equipment and Air Canister Sampling/Analysis

NEIC's Support:

- Forensics-based field investigations and laboratory analyses accredited under ISO/IEC: 17025
- Facility emission source assessments and identification
- CAA expertise

NEIC's Other Capabilities:

- Process-based investigations
- Interpretation of analytical results
- Statistical services
- Toxicological expertise
- Analytical consultations
- CAA 112r, CWA, EPCRA, and RCRA expertise
- Training

Background: Vopak North America Inc. stores and handles liquid chemicals, gases, and oil products in the United States and Canada. The company is based in Houston, Texas, and operates terminals in several other states. Vopak Terminal Deer Park, Texas, generates storm water and process wastewater that contain volatile organic compounds (VOCs), which is treated at an on-site wastewater plant.

NEIC's support: In April 2013, at the request of EPA Region 6, NEIC conducted mobile air monitoring in and around Deer Park and Texas City, Texas, using NEIC's Geospatial Measurement of Air Pollution mobile air monitoring vehicle (GMAP) and air canister sampling. GMAP detected elevated benzene levels adjacent to Vopak Terminal Deer Park, which was confirmed by analysis of air canister samples by the NEIC laboratory. GMAP also detected elevated benzene levels at the Vopak wastewater treatment plant.



The map at left shows GMAP's route of travel and locations where elevated benzene levels were detected at Vopak Terminal Deer Park.

Enforcement results: The data generated by NEIC were used to target subsequent EPA Region 6 inspections of Vopak Terminal Deer Park in 2014 and 2015. These inspections identified leaking tanks and inefficient flares and process equipment, such as open-top tanks and VOC/water separators, that were releasing excess VOC emissions. EPA Region 6 developed an enforcement case against Vopak Terminal Deer Park, which was settled in May 2017. This settlement included a civil penalty of \$2.5 million, which was split between the state of Texas and the United States. As part of the consent decree, Vopak Terminal Deer Park agreed to invest approximately \$5 million in capital upgrades at its facility, including enhanced operations procedures and improved tank covers. The company is also investing in advanced technologies such as optical gas imaging cameras to help identify emissions.

How to obtain NEIC's support

NEIC provides environmental forensics support for criminal and civil enforcement cases. If you would like more information on NEIC or to request laboratory analysis, toxicological support, an investigation, technical assistance, or training from NEIC, please contact us at neic_project_requests@epa.gov. You may also contact your regional enforcement coordinator for more information on requesting NEIC's support on civil projects and EPA's Criminal Investigation Division (CID) for support on criminal projects.