



National Enforcement Investigations Center Case Results – MarkWest Clean Air Act Violations Field Investigation & Analytical Support

NEIC's Support:

- Forensics-based field investigations and analytical support under ISO/IEC: 17025, General Requirements for the Competence of Testing and Calibration Laboratories
- CAA expertise
- Infrared (IR) camera utilization

NEIC's Other Capabilities:

- Statistical services
- Toxicological expertise
- CAA 112r, CWA, EPCRA, and RCRA expertise
- Training

Background: MarkWest and two of its subsidiaries (MarkWest Liberty Midstream Resources, LLC and Ohio Gathering Company, LLC) operate facilities in eastern Ohio and western Pennsylvania designed to gather and transport natural gas and natural gas condensates through pipelines. As part of regular maintenance activities, MarkWest uses devices called “pigs” in pipelines to remove debris and push through accumulated liquids, in an operation known as “pigging.” Pigging requires the operator to depressurize and vent pipeline gas from the equipment designed to launch and receive pigs.



NEIC's support: In July 2015, NEIC investigators provided field technical support for an investigation of a MarkWest facility in McDonald, Pennsylvania. NEIC investigators recorded infrared (IR) video footage of air emissions at the pig launching/receiving station, and collected air canister, liquid condensate, and soil samples for analysis at the NEIC laboratory. Chemical analysis identified volatile organic compounds (VOCs) and light hydrocarbons in the air samples.

NEIC's findings were instrumental in developing the enforcement action, which alleged that MarkWest had failed to apply for, and comply with, the required permits and/or recordkeeping requirements under the Clean Air Act (CAA) and the Pennsylvania Air Pollution Control Act for venting activities that release VOC emissions. The case was prosecuted by the U.S. Department of Justice (DOJ), and is the first environmental case to recognize and address the significant VOC emissions associated with pigging and other maintenance operations in shale gas formations.

Enforcement results: In April 2018, a settlement was reached with MarkWest resulting in:

- \$2.6 million in injunctive relief to install and operate technologies to reduce VOC emissions at MarkWest facilities in western Pennsylvania and eastern Ohio
- \$610,000 civil penalty
- \$2.4 million to implement three supplemental environmental projects to install and operate ambient air monitoring stations, and the implementation of a technology for reducing VOC emissions
- Emission reductions of 706 tons per year of VOCs and 91.5% annual emission reductions throughout the natural gas collection system

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 CID for support on criminal projects.