

This document describes the analysis of air monitoring and other data collected from a late summer through fall of 2012 under EPA's initiative Natural Gas Ambient Air Monitoring Initiative (NGAAMI) to assess potentially elevated levels of air toxics and PM<sub>2.5</sub> concentrations around natural gas extraction facilities. The document has been prepared for technical audiences (e.g., risk assessors, meteorologists) and their management. It is intended to describe the technical analysis of data collected for this in clear, but generally technical, terms.

## Executive Summary

- Air monitoring has been conducted at three residential properties around the Brigich Compressor Station in Washington County, Pennsylvania as part of the EPA Region 3 initiative to monitor specific air toxic compounds in the outdoor air around natural gas extraction facilities.
- The Brigich location was selected for monitoring based on residential homes in close proximity (<0.5 miles) to the facility, the premise that the facility was in operation "long-term" more than five years, topography and availability of monitoring site access.
- Air monitoring was performed from (August 4, 2012 to November 25, 2012) for the following pollutants: Volatile Organic Compounds (VOCs) also commonly referred to as Hazardous Air Pollutants (HAPs) & Particulate Matter less than 2.5 microns aerodynamic diameter (PM<sub>2.5</sub>)
- Measured levels of VOCs (i.e. 1,3-butadiene and benzene) were compared to associated longer-term concentration estimates to determine if concentrations exceeded the long-term and/or short term risk levels calculated by EPA and Agency for Toxic Substance and Disease Registry (ATSDR).

- Results from the VOC monitoring did not indicate any level of concern.
- PM<sub>2.5</sub> data was compared to the 24 hour National Ambient Air Quality Standards (NAAQS) because there was not enough sample days during the initiative to compare to the Annual NAAQS.
- Results from PM<sub>2.5</sub> data did not indicate any level of concern.

Based on the sampling results from the (NGAAMI), EPA Region 3 recommends that no additional VOC and PM<sub>2.5</sub> monitoring is necessary at the sampling locations around the Brigich Compressor Station. However, EPA's ongoing research and national air toxics monitoring programs will continue to collect information on natural gas source impacts on outdoor air.