

South Philadelphia Passive Sampler and Sensor Study: Interim Report

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ABSTRACT

Starting in the June 2013, the U.S. EPA and the City of Philadelphia Air Measurements Services (AMS) began a collaborative research project to investigate how sensor-based, stand-alone air measurements (SAMs) and passive samplers (PSs) can help improve information on air pollutant concentrations in areas with many potential sources (like South Philadelphia). The study uses draft EPA method 325 time-integrated PSs deployed in novel ways near facilities and in neighborhoods. The project also explores time-resolved SAM technologies that use passive photoionization detectors and wind measurements to decipher the origin of emissions. Another aspect of the project is AMS's co-deployment of open-path UV and near-IR optical remote sensing systems in the area. This presentation provides a brief overview of the project and then explores results of the PS deployment for the compound benzene. Data on PS duplicate and inter lab comparison will be outlined and the results spatial gradients of benzene will be discussed. A separate presentation will describe data and analysis from the prototype SAM network.