Houston Regional Monitoring Corporation

Houston Area Air Monitoring Project

SEP No. 2011-013

Project Description:

Houston Regional Monitoring Corporation ("HRMC") currently operates a network of ambient air monitoring stations that continuously measure and record concentrations of ambient air pollutants. This network includes the HRM 617 Wallisville Road site, the HRM 615 Lynchburg Ferry site, and the HRM 3 Haden Road site, (the Sites). HRMC shall use SEP Funds to report data from these three existing sites in the HRMC ambient air quality monitoring network in the Houston-Galveston Air Quality Control Region Number 216.

Utilizing the Photochemical Assessment Monitoring Systems (PAMS) monitors at these three Sites, HRMC shall, as is current practice, monitor for a suite of 48 volatile organic compounds (VOCs) that are identified by EPA as the most significant VOC contributors to the formation of ozone. HRMC shall, as is also current practice, monitor nitrogen dioxide ($N0_2$) and ozone (0_3), which are criteria pollutants listed under the federal National Ambient Air Quality Standards (NAAQS).

The ambient air monitoring equipment at each of the three Sites currently measures air quality for a variety of parameters on both hourly and 5-minute averaged concentrations as described in this paragraph. HRMC shall continue to perform these measurements as described in this paragraph. Hourly measurements are reported for 48 individual VOCs that participate in the formation of ground level ozone and several of which are designated by EPA as Hazardous Air Pollutants (HAPs). The speciated VOC measurements are made using a sophisticated gas chromatograph capable of automated (continuous) operation, which results in one sampling and analysis cycle per hour. In addition, both 5-minute and hourly averaged measurements of oxides of nitrogen (i.e., NO_x, NO, $N0_2$), ozone (0_3), and meteorological parameters (e.g., wind speed, wind direction, horizontal wind standard deviation, wind gust and outside air temperature) currently may be measured and reported where applicable.

HRMC shall collect, validate and quality assure the data from this program using methodologies consistent with EPA guidance. Additionally, HRMC shall report the data to TCEQ from each continuous VOC monitor by uploading it within one hour of analysis via a web based portal directly to TCEQ's air quality information database, which will be available to the public via the TCEQ public web site.

HRMC shall maintain a Quality Assurance Project Plan containing all applicable EPA QA-R5 elements. HRMC shall ensure that analysis of all data collected from these Sites complies with standard operating procedures for the analysis and measurement of VOCs in ambient air. HRMC must also ensure that the laboratory data generated by this project is from a TCEQ accredited laboratory in compliance with state laws and rules regarding use of certified or accredited testing laboratories, where applicable. For example, data submitted by HRMC or its agents must comply with 30 Texas Administrative Code, Chapter 25, Subchapter A, relating to Environmental Testing Laboratory Accreditation and Certification, as amended, where applicable.

HRMC shall ensure that the data reported from these Sites is validated and sent to TCEQ's Leading Environmental Analysis and Display (LEADS) system. All costs associated with the collection, transfer, and formatting of the data to be compatible with the LEADS system is the responsibility of the HRMC.

The scope of this SEP is for twelve (12) months.

Environmental Benefit:

This SEP will provide TCEQ with near real-time access to high quality, short time resolution VOC, NO_x, ozone, and meteorological data sets that can be used to evaluate and track air pollution emission events as they occur, conduct source attribution studies, and to assess potential ambient community exposure to a limited number of hazardous air pollutants. Data from the monitors can be used with data from other monitors to provide critical information that can be used to evaluate the effectiveness of current and proposed emission control strategies aimed at achieving compliance with the 8-hr ozone NAAQS. It also provides a key source of information that is essential to furthering our overall understanding of those emission sources that contribute to ambient community exposure to toxic air contaminants. Because the information is available in near real-time, it can be used to provide both agency staff and industry personnel with time critical information to investigate emission events in a timely fashion. Another key benefit is the ability to measure the change in the ambient air concentration of the individual target species and quantify control measure effectiveness. Data from these monitors will be publicly accessible through the TCEQ's website and will be used in evaluating air quality in the area, in ozone forecasts, and ozone warnings. Thus, the public will directly benefit by having access to the data and the forecasting and notification tools which can be used for public awareness.

Eligible Areas and Counties:

This project may receive contributions from the following:

TCEQ Air Control Region 216 including Austin, Brazoria, Chambers, Colorado, Fort Bend, Galveston, Harris, Liberty, Matagorda, Montgomery, Walker, Waller, and Wharton Counties.

Minimum Contribution Amount

$1,000