eGC
environmental Gas Chromatograph
Community Montioring

The eGC is a highly effective solution for community monitoring of toxic organic chemical threats. It offers a unique combination of features that allow the eGC to detect for specific chemicals at sub-ppbv levels, which can be combined with metrological data and GIS position to provide near real-time information for threat mitigation.

INTRODUCTION

The potential for long-term low-level (ppbv) exposure to toxic chemicals is a growing health concern to communities in close proximity to certain industries. As we learn more about the long-term health effects of chronic trace level exposures, the demand for accurate field data has become critically important for industry and surrounding communities. However, reliable detection at sub-ppbv levels over long periods of time is difficult to achieve.

The traditional solution is to use laboratory instruments deployed in a mobile lab, as a point source collector or to use optical path technology covering limited areas along a specific region. Unfortunately, these solutions have significant limitations, including high cost, the need for highly skilled operators, and lack of mobility.

ENMET

Creative Gas Detection Solutions

SOLUTION

ENMET has created a solution designed for field use that overcomes these barriers with the environmental Gas Chromatograph or eGC. The eGC is a fully autonomous mobile instrument that uses gas chromatography as its primary method to identify trace level organic chemical threats with excellent specificity.

The eGC detects a select group of threats by limiting the complexity of trying to analyze everything, and focuses on critical or key hazards. The eGC is factory pre-configured for a specific application, which greatly reduces cost. It runs autonomously on a set analysis cycle and sends analysis data, wind speed, direction and GIS location, reports it to the Cloud, granting accessibility via any device with a Web connection.

As a result, the eGC provides the information to the user
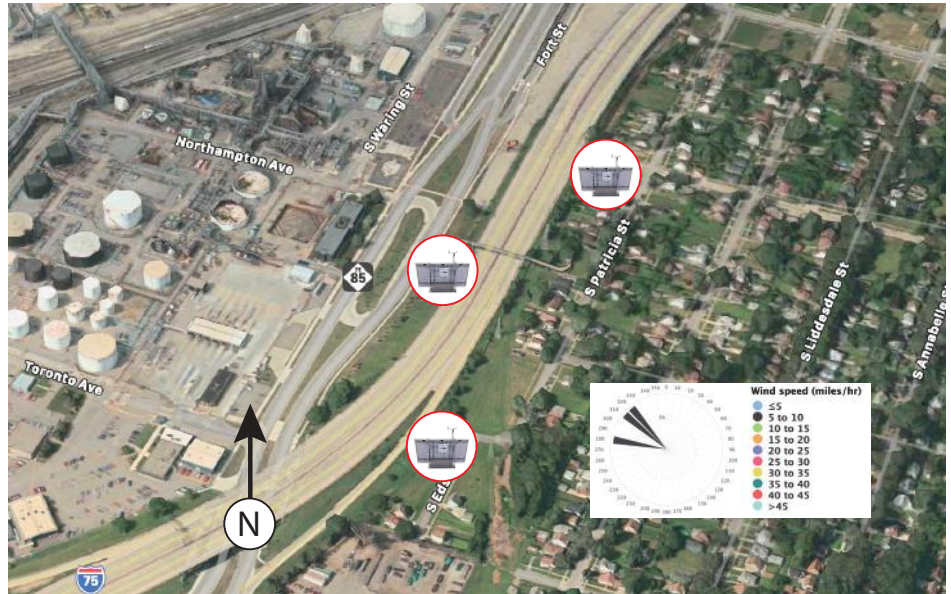
Example graphic of an eGC array along a residental commumity area.

about how much, when and where a chemical threat is present. The eGC user interface integrates this data over time which allows the operator to determine the exposure trends and helps identify probable source locations and corrective actions. This data stream can be combined with many software tools to pinpoint exposure using maps and graphics. Vector applications can be used for source triangulation and or plume applications to visualize the area of the hazard and the future areas of concern.

CONCLUSION

eGC is a powerful tool for community monitoring. As a low cost and mobile solution, it can be deployed to many areas of concern such as schools, residential housing, or other locations that can passively expose people to chronic low-level threats. This data is authoritative using the quality assurance of traceable calibration standards and bringing attention to environmental issues in a manner that leads to action and mitigation.

eGC ADVANTAGES

- Fully autonomous operation
- No shelter or wiring construction required
- Automatic calibration
- Laboratory level data quality assurance

- Analysis data fused with local weather conditions and GIS position
- Intuitive graphical data website
- E-mail and text alarm alerts

Contact ENMET's application team for additional information.

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