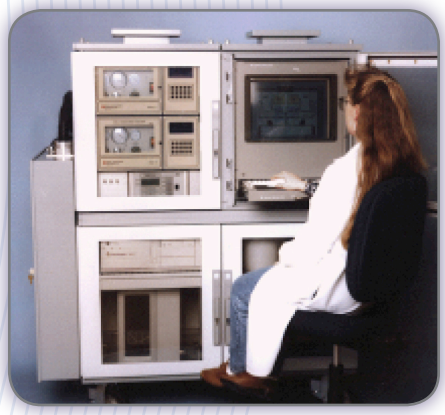
CH2MHILL
Applied Sciences Laboratory

Case Study

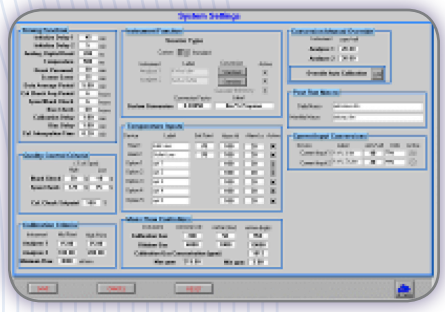
Custom Emissions Monitoring System



Emissions monitoring components, including calibration and detector gases, were integrated into a single, enclosure which could easily be moved to different monitoring sites.

While providing emissions source testing services for a client, the client expressed interest in purchasing continuous emissions monitoring (CEM) equipment which would require little maintenance, could easily be moved from one location to another, would perform its own quality control checks, calibrate itself if needed, and store and summarize data in spreadsheet format. The client had researched available CEMs and believed that such a request was only wishful thinking. However, ASL scientists knew that they had the background and skills to develop such a custom system for the client. After additional discussions, ASL developed the exact system to meet the client's monitoring requirements.

The core of the system included two total hydrocarbon analyzers. On-demand gas generators supplied hydrogen and ultra-pure air to the analyzers. An on-board calibration gas and dilution system allowed the analyzers to be calibrated at a user-defined mid and high range at specified intervals, or whenever automated quality control checks did not pass the user-defined requirements.



A software application was developed to meet the client's requirements for collecting and reporting emissions data.

A custom software application controlled the calibration of the analyzers, quality control checks, heated sample lines, user-definable sampling intervals, and the automated generation of summary spreadsheets and charts. The entire system was mounted into an industrial enclosure fitted with heavy-duty casters to allow the client to relocate the system anywhere in the plant.

With this new monitoring tool, the client began to not only look at continuous monitoring of their plant emissions, but they also were now free to monitor their pollution control equipment, main exhaust lines, assembly areas, and individual process tools. This allowed the client to better understand their own processes and make changes to reduce exposure risks to employees, reduce overall emissions, and maintain their pollution abatement equipment. Within the course of 3 years, the client purchased three of these custom monitoring systems for use in their production plants.

Contacts

For more information on this and other services CH2M HILL's ASL can provide, please contact:

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