Technology Transfer

Available for Licensing

Field Deployabe Method for Sensing Wet Gases

Opportunity

Research is currently active on the patented technology "Field Deployable Method for Sensing Wet Gases." The technology is available for licensing and/or further collaborative research from the U.S. Department of Energy's National Energy Technology Laboratory.

Overview

Laser gas sensing is used for detecting important gases like CO_2, CH_4, NH_3, and HCl. These sensors perform well in a controlled laboratory or manufacturing environments, but the use of laser gas sensing in the field for environmental monitoring, is challenging. Problems such as moisture condensation can create inconsistency and irregularity in any form of measurement, particularly when laser gas sensors are used.

This innovation was developed to allow use of the laser gas sensor for unattended monitoring of gases in a humid environment, such as the headspace of a groundwater monitoring well, without jeopardizing the measurement integrity or requiring the substantial power and maintenance demands inherent in a vapor membrane drying system.

Significance

- Provides clean, low power drying method deployable in wellbores
- Adapts a drying method for discontinuous operation with checkvalve
- Allows unattended dry measurement of wet process gas
- Remains robust to atmospheric variation

Applications

- Unattended measurement of natural gas components at monitoring wells
- Unattended measurement of sub-surface carbon dioxide

(continued)

Contact **NETL Technology Transfer**
techtransfer@netl.doe.gov

Related Patents

U.S. Provisional Patent Application number **62/111,134** filed February 3, 2015, titled, "Field deployable method for sensing wet gases."
Inventor: Daniel J. Soeder

1450 Queen Avenue SW
Albany, OR 97321-2198
541-967-5892

3610 Collins Ferry Road
P.O. Box 880
Morgantown, WV 26507-0880
304-285-4764

626 Cochrans Mill Road
P.O. Box 10940
Pittsburgh, PA 15236-0940
412-386-4687

For more information:
Jessica Sosenko
Technology Transfer Manager
jessica.sosenko@netl.doe.gov
412-386-7417

Visit the NETL website at:
www.netl.doe.gov

Customer Service:
1-800-553-7681

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