

Close

- [JOURNALS](#)
- [CONFERENCES](#)
- [PUBLISHERS](#)
- [ABOUT](#)
- [CITATION MANAGER](#)

- [HOME](#)
  - [LATEST CONFERENCE](#)
  - [ALL YEARS](#)
  - [OTHER PROCEEDINGS](#)
  - [VISIT SPE](#)
  - [CITATION MANAGER](#)
- 

## **SPE Annual Technical Conference and Exhibition**

October 26–29, 2020

Virtual

[Day 3 Wed, October 28, 2020](#)

ISBN:

978-1-61399-723-9

- [Previous Paper](#)
- [Next Paper](#)

# **Development of a Realtime Gas Monitoring System Architecture for Manned and Unmanned Oil and Gas Processing Facilities**

[Francis Idachaba](#)

Paper presented at the SPE Annual Technical Conference and Exhibition, Virtual, October 2020.

Paper Number: SPE-201550-MS

<https://doi.org/10.2118/201550-MS>

Published: October 19 2020

- Cite
- Share IconShare

- [Get Permissions](#)

## Abstract

This paper presents the development of a real-time gas monitoring system with alerts transmitted to the office domain, and the team leads whenever the gases are detected. The system monitors the presence of the hazardous H<sub>2</sub>S gas. It sends signals to the control room in the manned plants so that operators can take the necessary precautions when stepping into these locations. It also sends alerts to the office domains when the permit to work is being prepared for any facility. It provides a continuous real-time update of the gas present in the location to a cloud-based platform. This is beneficial as it will enable plant operators to take the necessary precautions to both protect themselves and also protect the facilities if the gas discharge spreads across the plant's zone classifications

**Keywords:**

[corrosion inhibition](#), [production chemistry](#), [workplace hazard](#), [oilfield chemistry](#), [cloud computing](#), [real time system](#), [downstream oil & gas](#), [frequency](#), [thingspeak platform](#), [natural gas](#)

**Subjects:**

[Production Chemistry, Metallurgy and Biology](#), [Processing Systems and Design](#), [Health](#), [Asset and Portfolio Management](#), [Information Management and Systems](#), [Gas processing](#), [Noise, chemicals, and other workplace hazards](#), [Corrosion inhibition and management \(including H<sub>2</sub>S and CO<sub>2</sub>\)](#)

Copyright 2020, Society of Petroleum Engineers

You can access this article if you purchase or spend a download.

Pay-Per-View Access

\$28.00

[BUY THIS ARTICLE](#)

**Annual Article Package – 25**

\$200

[BUY DOWNLOADS:](#)

**Annual Article Package – 50**

\$300