

OFFICE OF AIR QUALITY PLANNING AND STANDARDS RESEARCH TRIANGLE PARK, NC 27711

## 1/14/2025

Oleg Mikhailov Exploration Robotics Technologies Inc. 333 West Loop North Freeway, Suite 130 Houston, TX 77024

Dear Oleg Mikhailov:

We are writing in response to your submission on behalf of Exploration Robotics Technologies Inc., located in Houston, TX, dated June 26, 2024 and follow-up correspondence dated October 11, 2024, and January 8, 2025, in which you request the approval of "Alternative Test Method for Methane Detection Technology" under the New Source Performance Standards of Performance for Crude Oil and Natural Gas Facilities for which construction, modification or reconstruction commenced after December 6, 2022 (40 CFR Part 60, Subpart OOOOb). We are considering this request under 40 CFR <u>60.5398b(d)</u>, based on the information you have submitted (as described below). The EPA's Office of Air Quality Planning and Standards has been delegated certain authorities under this provision, including authority to consider and/or approve alternative test methods for methane detection technology.

As we understand, Exploration Robotics Technologies has developed a measurement solution, Xplorobot Laser Gas Imager, that uses a tunable diode laser absorption spectrometer assimilated handheld device to image and quantify methane plumes from individual components. The spectrometer data is combined with visible imagery to generate a realtime "heat map" overlay used to identify and localize component-level leaks.

To support your submittal, you have provided the following documents associated with your submission:

 Executive Summary documents initially submitted June 26, 2024, and updated on October 11, 2024, which is a publicly facing portal submission that describes submission information, technical summary of the technology, summary of documents submitted and additional contextualizing information. See <u>§60.5398b(d)(2)</u> and <u>§60.5398b(d)(3)(i)-</u> (ii)

- Description of Technology document submitted on June 26, 2024, and revised July 1, 2024, which is a publicly facing portal submission that describes how the technology works, from the first principes through calculated data product. This document includes a description of measurement technology, description of conversion to mass emission rate, and description of data handling and storage. Xplorobot supplemented this document with Confidential Business Information (CBI) which described proprietary information regarding how the technology works. See §60.5398b(d)(3)(iii).
- METEC Xplorobot Laser OGI Detection and Quantification Report (October 11, 2023) and Xplorobot public document – "Methane Compliance Solution Designed for OGMP 2.0 Gold Standard" received on June 26, 2024, as supporting evidence that your solution can identify and localize methane emissions at the component-level. You also provided additional documents through CBI to further provide verification that the technology 1) meets the detection threshold, including demonstration as applied in the field; 2) how probability of detection is determined; 3) and additional data on operation, applicability, resilience, and spatial resolution. <u>§60.5398b(d)(3)(iv)</u>.
- A sampling protocol titled Xplorobot Laser Gas Imager: Component Level Fugitive Methane Emission Monitoring (Final Version received January 8, 2025), which includes all the required procedures and applicable quality assurance and control requirements, constant with your operation of the solution, and consistent with the requirements in §60.5398b(d)(3)(vi)(A)-(D).

Your submission was deemed complete on September 26, 2024.

Based on a review of the provided material and a recognition that Exploration Robotics Technologies Inc. meets the criteria found in  $\frac{60.5398b(d)(2)}{2}$ , we have determined that your Xplorobot Laser Gas Imager meets <1 kg/hr component level periodic solution using the protocol described above. Additionally, we are approving your solution and the associated protocol for use by an owner or operator of an affected facility provided the following caveats are met in the alternative periodic screening process as described in  $\frac{60.5398b(b)}{2}$ .

Furthermore, your Xplorobot Laser Gas Imager, may be used as an alternative to fugitive monitoring under the New Source Performance Standards for Crude Oil and Natural Gas Facilities for which construction, modification or reconstruction commenced after September 18, 2015 and on or before December 6, 2022 (40 CFR Part 60, Subpart OOOOa) provided the owner or operator using the solution complies with the requirements of <u>§60.5398b</u> and <u>§60.5416b</u>, including the notification, recordkeeping, and reporting requirements outlined in <u>§60.5424b</u>.

Because this alternative method may be used by owners or operators subject to the monitoring of fugitive emissions components, affected facilities, and inspection and monitoring of covers and closed vent systems subject to NSPS OOOOa and OOOOb, we will post this letter as **MATM**-

**003** on the EPA website at <u>https://www.epa.gov/emc/oil-and-gas-alternative-test-methods</u> for use by interested parties.

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If you should have any questions or require further information regarding this approval, please contact my staff at <u>MethaneATM@epa.gov</u>.

Sincerely,

Steffan M. Johnson, Group Leader Measurement Technology Group

cc: Ned Shappley, OAQPS/AQAD Karen Wesson, OAQPS/AQAD Elizabeth Leturgey, OECA/OC Greg Fried, OECA/AED Regional Testing Contacts

Attachments (1)

Exploration Robotics - Alternative Test Method (MATM-003).pdf