

Kuva Alternative Test Method Application

Executive Summary

Date: January 22, 2025



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1. Alternative Test Method Submission Details

Alternative Test Method Submission Details	
Request ID	ALTTECH-87
Company Name	Kuva Systems (MultiSensor Scientific Inc.)
Product Name	Kuva GCI360
Application Type	Periodic Screening
Target Applicability	Broadly Applicable Across Sector
Technology Type	Stationary Remote Sensor
Target Emission Leak Rate Threshold	15 kg/hr
Spatial Resolution	Area Level
Request Numbers of Any Connected Submitted Requests	N/A

2. Technical Summary

Kuva's shortwave infrared (SWIR) camera uses proprietary spectroscopic imaging to provide actionable insight with colorized images of gas plumes and process equipment for root cause determination, leading to expedient emission elimination. The Kuva System has been commercially available since July 2021 as a first-generation solution and since January 2024 as a second-generation solution. This application refers to the second-generation solution.

The Kuva System operates in two modes - a periodic screening mode and a custom operating mode (available to operators once the monthly periodic screening has been completed). Site monitoring is performed from the top of a mounting structure (such as a utility pole or Kuva provided tower) scanning the site in a "sweep". The sweep covers a vertical field of view of 54 degrees and up to 8 freely selectable, 46-degree horizontal fields of view. During each sweep and for each field of view, the camera collects one image. The camera is connected to a cloud via an integrated cellular connection or Ethernet for image delivery and device management.

Designated users are notified by email that an event has occurred, and they are provided with a link to the event image series. The Kuva dashboard presents a series of images of detected sources, wind speed, and direction. Pictures showing relative plume size and source provide certainty to operators, aiding their diagnostic efforts.

Kuva cameras have been operated in most US onshore basins including Eagle Ford, Permian, Anadarko, Williston, DJ, Appalachian and Uinta as well as the provinces of Alberta, British Columbia and Saskatchewan in Canada since 2020.

3. Notes for the Review Team

Kuva has been approved for regulatory use in Colorado through the [Colorado Alternative Approved Instrument Monitoring Method \(CO-AAIMM\)](#) process. The approval letter has been submitted as supplemental documentation SI3.

Kuva Systems is the “doing business as” name of MultiSensor Scientific Inc., a US company that is incorporated in the state of Delaware.

4. Updates to the Application

Date	Update
01/22/2025	Initial submission

5. Summary of Documents Submitted

Below, Kuva provides a list of all submitted documents, separated by website submission bucket, with a brief description of each document.

5.1. Technology Description

File	Document Title	Description
Kuva_Description_of_Technology.pdf	Kuva ATM Application: Description of Technology	A comprehensive description of how the Kuva System works.

5.2. Formal Alternative Test Method

File	Document Title	Description
Kuva_Formal_ATM.pdf	Kuva ATM Application: Formal ATM	ATM description following EPA template

5.3. Supporting Information

File	Document Title	Description
SI1_TTU.pdf	Texas Tech University controlled release testing results letter	A letter describing outcomes from controlled release blind testing completed at Texas Tech University in 2024.
SI2_METEC.pdf	METEC, Colorado State evaluation of continuous monitoring solutions under a single-blind test protocol	Bell et al. published study of continuous monitoring technologies at the METEC facility
SI3_CO_AIMM.pdf	CO AIMM Program Approval	Approval document from CDPHE in Colorado for Kuva GC1360

5.4. Confidential Business Information

Confidential Business Information can be found in a single file named “Kuva_CBI.pdf.” This document complements the information provided in the Description of Technology document and section headings match the section headings of the Description of Technology.

Document ID	Document Title	Description
Kuva_CBI1.pdf	Kuva Systems MATM Application - Confidential Business Information	Confidential business information is provided to supplement each chapter of the technology description and is intended to be read in conjunction. It also includes visual workflow diagrams