

Protocol Development Committee Invitation

ADED Controlled Testing Protocol Development

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Colorado State University (CSU, PI Zimmerle) is developing protocols for controlled testing of leak detection solutions for the natural gas industry. The work is part of the Advancing Development of Emissions Detection (ADED) project funded by the U.S. Department of Energy. Controlled test protocols developed under this program will enable transparent and rigorous testing to evaluate key system-level metrics. Testing under this program will be performed at the CSU Methane Emissions Technology Evaluation Center (METEC), however protocols will be developed to allow adaption for testing to be completed at other locations.

This project will develop method-centric, rather than develop technology-centric, protocols for controlled testing. Methods focus more on how solutions are deployed as opposed to what technology a solution uses. The work will focus primarily on leak detection and quantification (LDAQ) methods. Protocols for continuous monitoring and survey methods will be developed first, and then extended to remote sensing and pipeline methods if there is operator and solution developer demand.

The organization of the project is shown in Figure 1. Protocol development will be led by the *Methods Core Team* which consists of researchers at CSU (PI Zimmerle, Bell), Harrisburg University (co-PI Ravikumar), University of Texas at Arlington (co-PI Smits) and University of Texas at Austin (co-PI Allen). Since outreach to all stakeholder groups is a key to project success, draft protocols will be circulated to a *Protocol Development Committee* (PDC) for review and comment. The anticipated project duration is 30 months, however **initial protocol development will occur in the next three months.**

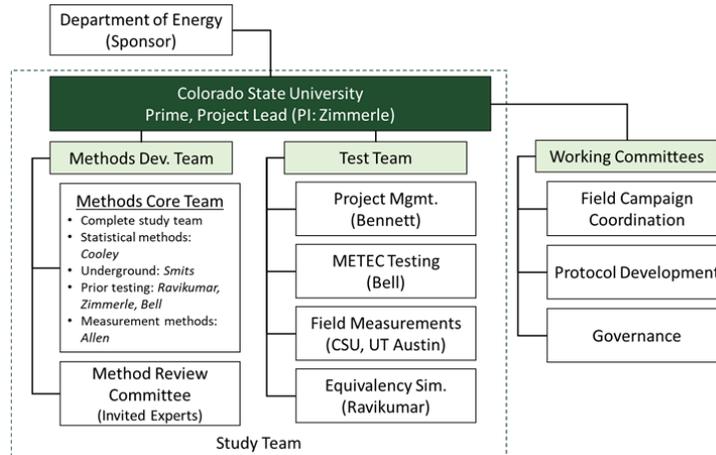


Figure 1: Organizational chart that describes the management of the ADED project

The role of the PDC will be to review draft protocols and return comments to the Methods Core Team during defined comment periods. This review cycle will provide the opportunity for all stakeholder groups including natural gas facility operators, service providers, technology companies, NGOs, academic institutions, and regulatory agencies to provide feedback on the proposed protocols for controlled testing.

Participation Requirements

In order to achieve broad engagement across stakeholders there are no restrictions on who may participate, however interested participants must register with CSU to become a PDC member. Participation in the PDC will be restricted to one member per company or major operating division of a company. Comments from additional reviewers within the same organization must be incorporated into a single response submitted by the PDC member. There will be no confidentiality agreements required, so participants should not disclose confidential information or intellectual property regarding their technology or operations in their review comments.

The PDC will be engaged in review cycles during the course of the project. Each protocol is expected to go through at least two review cycles. Review cycles will be operated as follows:

- 1) A draft protocol will be circulated to all registered PDC members with an established deadline for comments. (approximately 2 weeks)
- 2) PDC members may provide written comments to the Methods Core Team during the established comment period. Note, PDC members who do not wish to review a particular protocol are not required to provide comments. For example, a PDC member from a technology company developing continuous monitoring solutions may choose to not review draft protocols for survey methods.
- 3) The Methods Core Team will collect comments and incorporate revisions to the draft protocol. The team *will not* respond individually to each comment.
- 4) A finalized protocol will be utilized in controlled testing at METEC immediately after development.

Although participation is not restricted by affiliation or experience, comments during the protocol review cycles should be restricted to constructive remarks. PDC comments should address relevant questions such as:

- 1) Does the protocol establish a clear definition of what LDAQ solutions the protocol is designed to evaluate?
- 2) Does the protocol establish meaningful performance metrics for the relevant LDAQ methods?
- 3) Does the protocol provide sufficient detail of how experiments are to be performed?
- 4) Does the protocol provide sufficient detail of what data is to be collected?
- 5) Does the protocol provide sufficient detail of how data is to be collected?
- 6) Does the protocol plan to collect sufficient data to evaluate the established performance metrics?

To Register:

To register as a PDC member please email Clay Bell (clay.bell@colostate.edu) and provide the following:

- Name (First & Last)
- Affiliation (Company/Agency/NGO)
- Role at Company
- Email address