



# ENERGY INSTITUTE

Colorado State University



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**METEC<sub>H4</sub>**

Methane Emissions Technology Evaluation Center

## March 30, 2017 Update

**METEC Site is Ready for Round 1 Testing!** After an extremely productive first few months of 2017, the METEC Team is happy to announce that its first three pads are ready for use. Originally designed to provide Round 1 testing for MONITOR teams, these pads are capable of that and more. This first phase of construction is focused on dry gas emissions, small wellpads, and small equipment groups. The Team is now beginning to move forward on its second construction phase to expand the site's capacity to represent a variety of real-world scenarios and provide the best possible testing experience.

### METEC Round 1 Pads Ready.

Round 1 pads consist of three mock well pad configurations. Each provides multiple emission points and opportunities to test a range of gas emission rates from 0-150 SCFH. Emission points and rates are networked, and can be fully controlled remotely from an on-site Command Center. Specific test scenarios, based on individual equipment purposes can be programmed to run over the course of several hours, or teams can specify specific emissions in real-



time. The system logs all test conditions and can provide this data to clients for comparison with their own equipment readings. Pad 1 consists of a wellhead, horizontal separator, and a 150 bbl tank. Pad 2 consists of a wellhead, horizontal separator, and 80 bbl tank. Well Pad 3 is representative of recently constructed smaller well pads: three wellheads, two horizontal separators, and two 300 bbl tanks. Spacing between equipment is similar to recent pad construction with 50' between wells, separators and tanks. The wider separation also allows teams to test in locations with "only tanks" or "only well heads."

Initial ad-hoc testing by several MONITOR performers has been highly successful, providing performers data to improve their technologies as well as giving the METEC team a chance to run and improve the site.

**METEC Hosts Site Visits.** On 16 February, ARPA-E visited the test site to review progress. The METEC team provided a successful gas release demonstration on pad 1.



On 1 March, representatives from Kinder Morgan visited to tour the facility. The METEC team continues to see

these visits as extremely useful in providing input and insight into the needs of its partners in the energy industry. We appreciate the time our Partners spend helping us make the site as representative and useful as possible.



## Equipment Donations Continue to Arrive.

We are fortunate to have very generous allies in the oil and gas industry. Large equipment for the first three pads was donated as was our natural gas transport vehicle. We received more 300

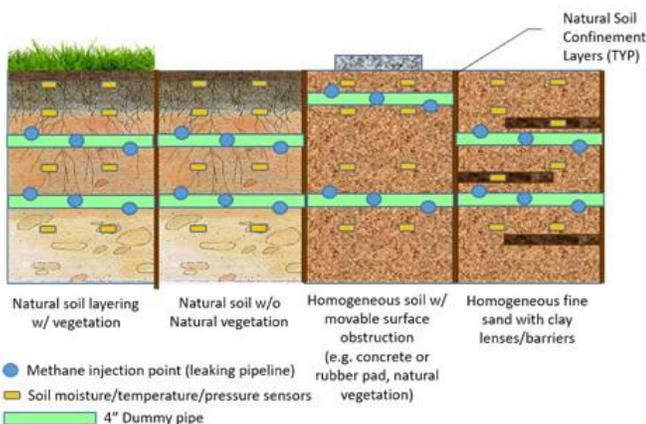
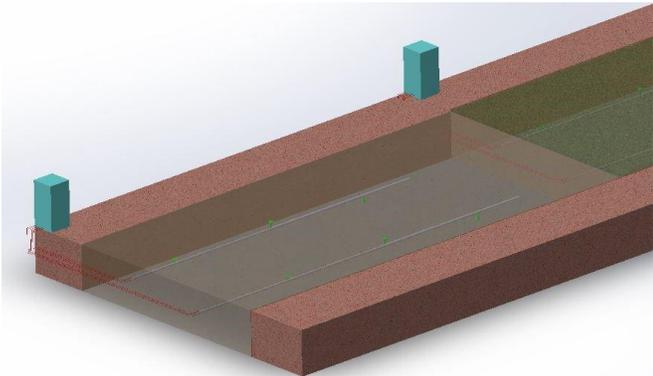


bbl tanks from Pioneer Natural Resources for phase 2 construction. We are still looking for donations of:

- 4 vertical separators
- 2-3 horizontal separators
- 6-8 well heads
- 2 enclosed flares
- A small dehydration unit
- An inlet separator from a small gathering station

Don't hesitate to suggest other production or gathering equipment you have available that could be useful for the site.

**Round 2 Development is Underway.** The second phase of construction on the METEC site will establish testing



configurations that include larger well pads, a mock-mid-stream compression facility and a subsurface pipeline test bed that will allow for simulation of wet gas and mid-stream operations. Phase 2 of construction is expected to be complete in late September, and available for use in October, 2017.

Design for the subsurface test bed is underway, with the Colorado School of Mines taking the lead on this effort. During the design phase, METEC is working closely with its Industry Advisory Board to ensure that the test bed provides the best possible model for real-world situations.

**Data Request:** To support the Round 2 wet-gas system, we are looking for gas composition data from wet-gas well sites that is specific to locations on the site – well head, separator, tanks, etc. Contact Clay or Kristine.

**Good Neighbors.** The METEC team will be scheduling a meet-and-greet to host its neighbors and answer questions. Once a date and time have been established, we will send an invitation. If you are in the area, feel free to stop by.

## METEC Key Staffing and Responsibilities.

Dan Zimmerle – Director and PI for METEC

Kristine Bennett – Project coordination & communication

Clay Bell – Overall design and construction oversight

Tim Vaughn – Measurement systems oversight

We would like to extend a hearty welcome to Mike McGuire, who has accepted the position of field site manager. He will be running the day to day operations on the site starting in March.

The METEC team is also supported by several undergraduate students helping to outfit the test site.

**Timeline and Site Scheduling.** METEC is accepting requests to schedule testing at the site. MONITOR testing will currently take priority, and we anticipate that non-MONITOR teams will be able to schedule time after May, 2017. We are still in the process of establishing a fee structure that we can distribute for non-MONITOR testing. Prior to accessing the site, all users must have a CDA and Site Access Agreement in place. Please contact us for further information on this.

**Contact Us.** The METEC team would love to hear from you, and we are happy to answer questions. We can best be reached via email until we can set up an interactive website to schedule your testing at the METEC field site.

**Email:** METEC@colostate.edu

## Website:

<http://www.energy.colostate.edu/p/metec-program>