

Department of Energy, National Energy and Technology Laboratory

Award number DE-FE0024357

Utica Shale Energy and Environmental Laboratory

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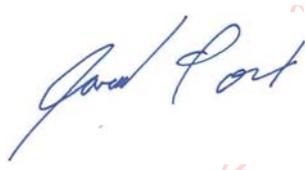
Submission Date: 2/27/2015

DUNS: 832127323

The Ohio State University
1960 Kenny Road
Columbus, OH 43210-1016

Project Period: 10/01/2014 – 09/30/2015

Quarterly Reporting Period: 10/01/2014-12/31/2014



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2. Accomplishments

a.) Major goals/milestones. The major project milestones are summarized in Table 1. All project milestones are listed, but information is provided only for those scheduled during the current reporting period (10/1/2014-12/31/2014). While all proposed milestones are presently unchanged, unanticipated delays in the initiation of the proposed project have occurred that will impact planned and actual milestones and completion dates. (See Section 6. Changes/Problems.)

Milestone Title/Description	Planned Completion Date	Actual Completion Date	Verification Method	Comments (progress toward achieving milestone, explanation of deviation from plan, etc.)
Project management and planning	12/18/2014	TBD	Approval of final PMP	See Section 6. Changes/Problems
Develop site	1/16/2015	TBD	Approved site access plan	See Section 6. Changes/Problems
Socioeconomic & outreach	--	--	--	--
Community engagement	--	--	--	--
Regional impact analysis	--	--	--	--
Infrastructure impact analysis	--	--	--	--
Regional & site baseline	--	--	--	--
Surface environmental assessment	--	--	--	--
Groundwater analysis	--	--	--	--
Background seismic monitoring	--	--	--	--
3D seismic	--	--	--	--
Drilling vertical offset well	--	--	--	--
Environmental monitoring	--	--	--	--
Borehole geophysics	--	--	--	--
Core acquisition & assessment	--	--	--	--
Drill cuttings, mud, & fluids	--	--	--	--
Wellbore methane migration	--	--	--	--
Surface & subsurface data	--	--	--	--
Surface environmental monitoring	--	--	--	--
Microseismic measurements	--	--	--	--
Fluid & gas sampling	--	--	--	--
Cuttings acquisition	--	--	--	--
Drill fluid acquisition	--	--	--	--
Borehole geophysics	--	--	--	--
Design of optimal cement	--	--	--	--

Table 1. Milestone status report

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b.) Major goals/milestone accomplishments. Major activities for this reporting period consisted of project management and planning. In addition, GIS data collection and compilation were initiated. (See Section 3. Products.)

c.) Opportunities for training and professional development. Nothing to Report.

d.) Dissemination of results to communities of interest. Nothing to Report.

e.) Plans to accomplish goals/milestones during next reporting period. (See Section 6. Changes/Problems.)

3. Products

a.) Publications, conferences papers, and presentations. Nothing to Report.

b.) Website(s) or other Internet site(s). Nothing to Report.

c.) Technologies or techniques. Nothing to Report.

d.) Inventions, patent applications, and/or licenses. Nothing to Report.

e.) Other products. An essential initial activity in any comprehensive environmental and geotechnical project is the collection and compilation of available data, especially GIS geospatial data and datasets. These are necessary for establishing an accurate and consistent format for the presentation of all data generated during completion of project tasks. During this reporting period, shapefile, raster, and tabulated GIS files were downloaded from U.S. Geological Survey (USGS), U.S. Environmental Protection Agency (USEPA), U.S. Department of Agriculture-Natural Resources Conservation Service (USDA-NRCS), U.S. Fish & Wildlife Service (USF&WS), Ohio Department of Natural Resources (ODNR), and county auditor websites. Available data files include information on hydrography, topography and elevation, geology and structure, soils, land use and land cover, cadastre, and orthophotographs. GIS data have been compiled via ESRI® ArcGIS-ArcMAP™ software to produce various topical maps for the original 760 acre EARS site; region (10,000 km²), counties, and USGS hydrologic unit code (HUC) watersheds surrounding the EARS site; and the State of Ohio.

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4. Participants & Other Collaborating Organizations

a.) Individuals who have worked on the project.

Name: Dr. Jeffrey Daniels

Project Role: Director

Nearest person month worked: 3

Contribution to project: Dr. Daniels has been involved in overall project management, planning, and administration.

Foreign collaboration: No

Name: Dr. Jeffrey Melaragno

Project Role: Project Manager

Nearest person month worked: 3

Contribution to project: Mr. Melaragno has been involved in overall project management, planning, and administration.

Foreign collaboration: No

Name: Dr. Gerald Allen

Project Role: Ohio State Operations Manager

Nearest person month worked: 3

Contribution to the project: Dr. Allen has been involved in the initial study planning and delineation, including collection and compilation of site, regional, and state GIS data.

Foreign collaboration: No

b.) Other organizations involved as partners. Nothing to Report.

c.) Involvement of collaborators or contacts. Nothing to Report.

5. Impact – Nothing to Report.

6. Changes/Problems

a.) Changes in approach and reasons for change. Changes in approach may occur as the result of unanticipated delays in the initiation of the proposed project. (See Section 6b.)

b.) Actual or anticipated problems or delays and resolution. Initially, the USEEL was to be hosted at the 760 acre OSU-EARS site in Noble County Ohio. Subsequent to the award, the Kasich Administration's opposition to drilling on Ohio public lands excluded the EARS site as a location for the USEEL. We are confident that EARS site will eventually be viable, but in the meantime alternative sites are being pursued. While maintaining EARS as our base field lab, we are seeking cooperation from landowners and oil and gas operators to identify additional sites. Currently, we are evaluating potential sites that are

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associated with directional oil and gas well activity in northern Noble, eastern Belmont, western Guernsey, or Harrison counties. Several opportunities are being pursued, including cooperation on land owned by the Muskingum Water Conservancy District and significant land holdings of selected OSU alumni. NETL leadership is encouraging and strongly supportive of this effort.

c.) Changes that have significant impact on expenditures. Nothing to Report.

d.) Significant changes in use or care of human subjects, vertebrate animals, and/or Biohazards. Nothing to Report.

e.) Change of primary performance site location from that originally proposed. (See Section 6b.)

7. Special Reporting Requirements – Nothing to Report.

8. Budgetary Information – The following financial report was sent on 2/13/2015 and has been filed with NETL.