

Contract No. G-018-036
“Bakken Water Opportunities Assessment”
Submitted by **Energy & Environmental Research Center**
Principal Investigator: Daniel J. Stepan

PARTICIPANTS

Sponsor	Cost Share
<u>Phase I</u>	
North Dakota Petroleum Council	\$10,000
EERC/DOE Funds	\$25,000
North Dakota Industrial Commission	<u>\$25,000</u>
	\$60,000
<u>Phase II*</u>	
Industry Match	\$ 85,000
North Dakota Industrial Commission	<u>\$ 85,000</u>
	\$170,000
 Total Project Cost	 <u>\$230,000</u>

Project Schedule – 12 months
Contract Date – June 19, 2009
Start Date – April 1, 2009
Completion Date Phase I – August 15, 2009
Completion Date Total Project – March 31, 2010

Project Deliverables:
Final Report Phase I: August 15, 2009
Status Report: October 31, 2009
Final Report: March 31, 2010

OBJECTIVE/STATEMENT OF WORK:

To investigate the recycling of water flowed-back after Bakken fracture stimulation. The project has the following two phases under the Northern Great Plains Water Consortium program:

- Phase 1: Assess the technical and economic potential of recycling frac flowback water.
- Phase 2: Field demonstration of a mobile frac flowback water recycling technology.

*The Council recommended and the Commission approved the funding of Phase I and stated that the applicant did not need to resubmit an application for the funding of Phase II. However, the applicant must show that Phase I has been successful and has obtained industry match funding for Phase II prior to the Council considering at a future meeting the funding for Phase II.

STATUS

The contract has been executed. EERC provided a report at the North Dakota Petroleum Council’s meeting in September, 2009 regarding the status of the project. Seven tasks were outlined under this project:

- Task 1 – Inventory Industry Freshwater Use
- Task 2 – Assess Flowback Quality with Time and Location
- Task 3 – Evaluate Current Water Handling Costs
- Task 4 – Evaluate Feasibility of Recycle/Reuse Technologies
- Task 5 – Assess Current State of Existing Recycling Technologies
- Task 6 – Develop Detailed Plans for Phase II
- Task 7 – Project coordination, outreach and reporting

As of the September 2009 Petroleum Council meeting the project status was:

- Samples have been analyzed and/or data has been collected from four of five producers participating in the assessment.
- Extensive, but not comprehensive, frac flowback water chemistry data has been analyzed.
- Technology review and capabilities assessment underway.
- Preliminary economic assessment underway.

1/15/10