



**Plains CO<sub>2</sub> Reduction (PCOR) Partnership Monthly Update  
April 1–30, 2007**

**Task 1 – Project Management and Reporting (Edward N. Steadman/John A. Harju)**

**Highlights**

- Blue Source, LLC, joined the PCOR Partnership on April 3, 2007.
- North American Coal Company joined the PCOR Partnership on April 20, 2007.
- The updated PCOR Public Web site went live on April 16, 2007. An E-mail blast to partners introducing the premiere was sent in conjunction with the release.
- Updated PCOR Partnership CO<sub>2</sub> Sequestration Outreach PowerPoint Presentation. It has been updated on the “Partners-Only” Web site.
- Semiannual was submitted on April 30, 2007, and quarterly reports were submitted on April 25, 2007.

**Travel/Meetings**

- April 11–12, 2007: Pittsburgh, Pennsylvania, to discuss Phase III activities with Headquarters and other partnerships.
- April 29–May 1, 2007: Williston Basin Symposium in Regina, Saskatchewan.
- May 6–8, 2007: Interstate Oil and Gas Compact Commission Conference in Point Clear, Alabama.

**Task 2 – Field Validation Test at Beaver Lodge, North Dakota (James A. Sorensen)**

**Highlights**

- Continuing to evaluate the Class II injection well data from North Dakota, South Dakota, Montana, Nebraska, Wyoming, and Iowa.

**Travel/Meetings**

- April 2–4, 2007: AAPG Annual Conference in Long Beach, California.
- April 29–May 1, 2007: Williston Basin Symposium in Regina, Saskatchewan.

**Task 3 – Field Validation Test at Zama, Alberta (Steven A. Smith)**

**Highlights**

- Currently 4000 tons of acid gas has been injected into the reservoir. There has been no response with regard to gas or oil production at this point. Daily injection is just shy of 400 mcf, which is balancing the reservoir voidage and pressures.

**Travel/Meetings**

- April 2–4, 2007: American Association of Petroleum Geologists Annual Conference in Long Beach, California.

- April 29–May 1, 2007: Williston Basin Symposium in Regina, Saskatchewan.

#### **Task 4 – Field Validation Test of Lignite Coal in North Dakota (Lisa S. Botnen)**

##### **Highlights**

- Several discussions were held with John M. Seil of Penkota Wireline Services to discuss the cement bond logging that will be required on the lignite task.
- The numerical model has been updated.
- A lignite structure map has been created.
- The applicability of various monitoring, mitigation, and verification (MMV) technologies (tiltmeter survey, gravity survey, tracer study, and seismic survey) to the lignite test was evaluated.
- The Outreach Action Plan was submitted on April 27, 2007.
- Baseline characterization is continuing.
- Discussions are ongoing with Schlumberger with regard to the logging suite that will be used on the lignite task. Acoustical logging techniques are now being evaluated.
- Discussions are continuing with Eagle Operating with regard to the logistics of the project and potential start dates.
- The cementing and perfing proposals are being finalized.
- A meeting will be held in the next month or so with the State Land Department to go over the experimental design and drilling plans.
- Once we have finalized the drilling plans and anticipated logging package, we plan to meet with local officials in Burke County to provide them with more details regarding the research project.
- Drilling is anticipated for June, as load restrictions are on local roads and the land needs to dry before pad setup and drilling can commence.

##### **Travel/Meetings**

- Trip to Minot or Bismarck to discuss drilling with drilling partner and state officials sometime late this spring.

#### **Task 5 – Terrestrial Validation Test (Barry W. Botnen)**

##### **Highlights**

- Wetland sampling at South Dakota sites were initiated in late March 2007.
  - Two sample events to date have been completed.
  - Photo stations for each treatment have been established.
  - Will introduce cattle for grazing study on May 1, 2007.
  - The vegetation study is currently under way.
- Grassland samples from 2006 are currently being analyzed at two sites (South Dakota and Minnesota). 2007 sampling will commence in May 2007.
- Continue to refine the Business Requirements document for the carbon-tracking database.
- Continue to refine the first draft of the Best Management Practices fact sheet.
- Continue to work on finalizing business flow processes:
  - Completed the prospectus for grassland carbon offset sale in the Prairie Pothole Region.
  - Completed the carbon sequestration fact sheet for investors.

- Evaluation of state and regional greenhouse gases (GHG) or cap and trade programs (in process).
- Completed the private carbon/easement document.
- Working on a draft of the landowner agreement document for carbon marketing.
- Working on a draft of the legal document to transfer carbon rights from landowner to aggregator.
- Completed the Business Model and Term Sheet for packaged carbon offsets.
- Continuing to review the U.S. Department of Energy's (DOE) technical guidelines (1605b).
- Continue to update Ducks Unlimited (DU)/PCOR terrestrial project Web site.
- Working on characterization inputs and the terrestrial portion of the Decision Support System (DSS).
- Continue to conduct presentations on terrestrial carbon sequestration at a variety of meetings and conferences.

#### Travel/Meetings

- May 7–10, 2007: Sixth Annual Conference on Carbon Capture & Sequestration in Pittsburgh, Pennsylvania.
- May 2007: Travel to sampling sites in South Dakota.

### **Task 6 – Continued Characterization of Regional Sequestration Opportunities** **(Erin M. O'Leary)**

#### Highlights

##### **Characterization**

- Reviewed the gas analysis Web site and set a deadline for this to be completed by the first week in May. We are developing some graphs that we will be able to use in the DSS.
- Continued working on the geologic characterization of the strata in a nearly 40-mile radius of Washburn, North Dakota. We are currently working on picking formation tops in selected wells to augment existing data sets.
- Worked on the gas analysis Web site development. A page displaying a graphical representation of gas analysis data is now functional.
- Work continues on design changes to the gas analysis application. A page displaying a graphical representation of gas analysis data is now functional.

##### **Class II Wells Project**

- Held a project update meeting on Class II wells. Things are going well and according to schedule and budget. No changes to the deliverables.
- Wyoming Class II wells database has been completed.
- Lignite numerical model is updated and a structure map has been created.
- Class II wells database for Montana was completed.
- Isopach maps of Nebraska formations for Class II wells study have been created. Capacity calculations for those formations are done.

## **DSS**

- The latest version of the DSS was released. This version contains updates to the terrestrial section, and a new geographic information system (GIS) layer was added for the pipeline dataset leased from PennWell.
- Reclassified some of the source types in the DSS. Ethanol Production, Sugar Production, Agricultural Processing, and Animal & Animal By-product Processing are all now classified as Ag-Related Processing.
- Working on capture technology information within the DSS based on a spreadsheet of information.

## **Other**

- Working on a map/poster to be presented at the Environmental Systems Research Institute International Users Group meeting in mid-June.

## Travel/Meetings

- May 7–10, 2007: Sixth Annual Conference on Carbon Capture & Sequestration in Pittsburgh, Pennsylvania.

## **Task 7 – Research, Safety, Regulatory, and Permitting Issues (Lisa S. Botnen)**

### Highlights

- Reviewed Supreme Court ruling that EPA has the authority to regulate carbon dioxide. Also, researched potential implications of this ruling.
- Updated internal documents that relate to RGGI, California Climate Action Registry, and the Western Regional Climate Action Initiative (WRCAI). Recently, Massachusetts, Rhode Island, and Maryland have joined RGGI, and British Columbia has joined the WRCAI.
- The California Climate Action Registry is expanding. More than 30 states and tribes are planning to form a new GHG registry that would standardize best practices in GHG emissions data reporting and management, establish a set of common protocols, and support a common reporting system. The new registry, called The Climate Registry, was incorporated in Washington, D.C., in March 2007. Packages outlining the operation of the new registry and invitations to join were sent to all 50 states and many tribes in March 2007.
- Continued writing an analysis of carbon market strategies.
- Developed and now permitting punch list for the Lignite Field Validation Test.
- Continued review of recent publications relating to regulating CO<sub>2</sub> sequestration and MMV issues.

### Travel/Meetings

- May 21–23, 2007: Carbon Finance and Investment Summit in New York, New York.

## **Task 8 – Public Outreach and Education (Daniel J. Daly)**

### Highlights

#### **Videos**

- We put together a schedule for filming the PCOR DU site in South Dakota.

- “Nature in the Balance” video has been shown more than 108 times in markets ranging from North Dakota to Washington, D.C.
- Initiated a rewrite of the “Carbon Market” script to reflect the new direction that will feature more on private transactions and the market influence overall.
- Talking with Rich Myre of WestCarb to set up filming of the terrestrial projects in California; discussions are still in progress.

### **Fact Sheet 9**

- Due the end of May.

### Travel/Meetings

- Nothing to note at this time.

### **Task 9 – Identification of Commercially Available Sequestration Techniques Ready for Large-Scale Deployment (Melanie D. Jensen/Michael L. Jones)**

### Highlights

- Met with Aaron Koopman of Ramgen and Jarlath Hume of GPS, Inc., on April 2, 2007, to discuss various issues. We also took them on a tour of the technology development facility and gasification facilities during their visit to the EERC.
- On April 3, 2007, we took Aaron Koopman to the Dakota Gasification Company (DGC) Great Plains Synfuels plant to tour the CO<sub>2</sub> capture plant and compressors. Following the tour, plant engineers and operations managers met with Aaron to answer questions and find out more about the Ramgen Rampressor technology.

### **Web site**

- Generated new regional CO<sub>2</sub> emissions statistics for the PCOR Partnership public Web site, based on Environment Canada data from 2004 and EPA data from 2002. These match the values in the newest version of the PCOR Partnership Atlas and will be included in the first Web site revision as the public Web site has already gone live.
- Met internally to discuss how to link the CO<sub>2</sub> capture technologies block diagram with the appropriate entries on the capture technologies summary table when they are both added to the Partners-Only PCOR Partnership Web site.

### **Working Group Meeting**

- Participated in conference calls with José Figueroa of DOE to discuss various details for the PCOR Partnerships’ Capture Working Group Workshop that will be held at the EERC June 18–20.
- Working with various DGC personnel to develop the facility tour for the working group workshop.

### Travel/Meetings

- Nothing to note at this time.

## **Task 10 – Regional Partnership Program Integration (Edward N. Steadman)**

### **Highlights**

- Working on details for Air Quality VI: Mercury, Trace Elements, SO<sub>3</sub>, Particulate Matter, and Greenhouse Gases,” taking place September 24–27, 2007, in Arlington, Virginia.
  - Ed Steadman, PCOR Partnership Project Manager is the session chair for Session B6: “CO<sub>2</sub> Sequestration and Monitoring, Mitigation, and Verification,” taking place on Wednesday, September 26.
- The PCOR Partnership Regional Atlas update is being reviewed internally.
- Working on survey for PCOR Phase II partners. Some of the questions will pertain to better ways to serve our partners (i.e., Web site, reports, and meetings).

### **Travel/Meetings**

- Formulating details on 2007 PCOR Partnership Annual Meeting for October 18 and 19. Location will be at the Energy & Environmental Research Center, Grand Forks, North Dakota.