WESTERN KENTUCKY SEQUESTRATION SUB-PROJECT MEETING FEBRUARY 7, 2008 KGS Well Sample and Core Library

These people were present for the third meeting of this sub-project group:

KGS Staff

Dave Williams Jim Drahovzal

Rick Bowersox
Dave Harris
Jim Cobb
Mike Lynch

ECSI

Charlie Reeves

Sandia Technologies

Bill Armstrong Phil Papadeas

Schlulmberger

Dwight Peters

Core Minerals Operating

Jason Smith

UK CAER

Jim Hower

ConocoPhillips

Michelle Pittenger Scott Rrennie Carlos Gonzalez

Paul Heard

Peabody Energy

Dianna Tickner

Smith Management Group

Karen Thompson

Reynolds Resources

Doug Reynolds

E.ON US

Roger Medina Douglas Scherzel

Big Rivers Electric

John Talbert

GOEP

Talina Mathews

Geoconsultants, LLC

Jeff Douthitt

After welcoming and introductions of all attendees, Dave Harris handed out a draft version of a project timetable and requested that those in attendance send him any suggested changes.

Budget

There was discussion of seismic data-gathering for the project: timing, contractors, securing access to private property, etc. Dave Harris provided some estimates of cost he has received, amounting to \$53,500 for 4.5 miles. (Precision Geophysical of Millersburg, Oh.) He is also hoping for estimates from other companies.

He announced new Letters of Participation from Cash Creek Generation, LLC, Henderson, Ky. and Praxair, Inc. of Danbury, Ct. He also just received a letter from Sunshine Oil and Gas, but has not been able to read the letter in detail. He has been talking to Texas World Operations and Sandia Technologies about possible participation.

He also summarized core-screening and data-gathering activities so far related to the project.

Harris told the meeting that he hoped this project could be completed in two years, while the other two sub-projects may take longer to complete.

Paul Heard of ConocoPhillips presented a preliminary budget, which estimates a 46-day timetable for the drilling of a 7500' deep hole. It included -20% and +50% margins for contingencies, with a total ranging from \$5.5 million to \$10.3 million and a base cost of \$6.9 million.

There was a discussion of how much and what type of seismic data is actually needed. The preliminary budget includes a might higher estimate than those provided to Dave Harris, but the preliminary budget includes longer lines of seismic data. It was generally agreed that good data can be gathered at any site (rural vs. urban, developed vs. undeveloped, etc.); the circumstances of each sit simply have to be taken into account.

Dianna Tickner pointed out that the partnership is currently short of the funding needed to meet the estimated budget, and only E.ON, ConocoPhillips and Peabody are the larger current partners willing to contribute large amounts of funding.

Dave Harris pointed out that TVA may enter the project, but a decision may not come until March.

There was discussion about the potential availability of federal funds for carbon capture and storage due to the restructuring of the FutureGen project, though timing and any required match will be important.

There was discussion of asking the Kentucky General Assembly to consider allocating additional funding for the entire project, funding which might not be needed in the new biennial state budget.

Participants also decided to keep open the option of re-entering existing wells to save money, if necessary.

Dave Williams asked if there are other private partners who might be attracted to the project. Several people said that if the companies don't have a specific interest in this project or a "forward looking" corporate outlook, they probably do not want to participate.

Ms. Tickner noted that the industry partners are hoping for a 50 / 50 private / public cost share, which makes it easier to convince management to participate. She added that another major partner which will contribute funding is needed.

Status of formation of a 501(c)3 corporation

Diana Tickner said a draft document on the planned not-for-profit corporation for the private partners had been put together and was supposed to be e-mailed to all participants. This had not happened, and she will check on it.

Initial Site Screening

Jim Drahovzal provided a PowerPoint presentation, "Where to Drill in Western Kentucky?" using data from KGS with the assumptions that the well will be no deeper than 8,000' and at least two horizons will be explored.

He showed a series of slides depicting all the criteria factors for a list of 10 sites. See attached document, "Average Depth (ft) of the Knox and Deeper Formations by County (Based on Proprietary Seismic Data)."

Participants discussed the injectivity qualities of various zones in the Knox formation (Copper Ridge, etc.), the thin nature of the St. Peter formation, and the issue of carbon dioxide injection into carbonates.

Jason Smith of Core Minerals Operating made a presentation on a Camp Breckenridge site in Union, Henderson and Webster Counties. He suggested a location at this site in Webster County with contributions by Core of permitting, water, surface and down-hole facilities.

Dave Williams suggested that while the depth would be a lot deeper that the partnership has in its criteria, it does offer another option to consider.

There was a general discussion of what the final criteria for a test well should be and whether both the Knox and Mt. Simon formations should be studied as much as possible.

There was a consensus that the site will most likely be in Hancock, Breckenridge or northern Ohio County. Jim Cobb noted that if there is active coal mining in the county where the hole is drilled, coal severance funds would be potentially available for the project.

After lunch, Bill Armstrong and Philip Papadeas made a presentation showing what their company, Sandia Technologies, has done in other states and China.

Dave Williams noted that the KGS Laboratory will do as much of the testing of materials for the project as possible, and Jim Hower said he believes CAER would be willing to offer laboratory analyses as well.

Carlos Gonzalez made a presentation on four options for the testing of the Knox and Mt. Simon formations in the project. {This report is available on the web site}

Participants discussed the need and objectives of seismic studies of the site area. Three objectives were noted: 1. Insuring there is no major faulting; 2. Establishing baseline information for tracking the plume of CO_2 ; 3. Establishing the stratigraphic tops and casing points.

There was a discussion of how much seismic data will be needed, and it was agreed that two-dimensional data for a total of ten to fifteen miles would suffice.

Action Items

KGS will do more definition of the geology in the targeted project area and seek estimates from more seismic contractors, including an office associated with the University of Pittsburgh.

The partners will look more closely at the possibility of using existing well sites.

Sandia Technologies will gather available DuPont Well data from the Louisville drilling site and provide estimates of the cost for its services to the project.

Next Meeting

Attendees agreed to meet again at 9:00 a.m. at eh Well Sample and Core Library on Thursday, February 21, 2008.