

**WESTERN KENTUCKY SEQUESTRATION SUB-PROJECT
MEETING
October 2, 2008
KGS Well Sample and Core Library, Lexington, KY**

These people were present for the meeting:

KGS Staff

Jim Cobb
Dave Williams
Dave Harris
Rick Bowersox
Jim Drahovzal
John Kiefer
Marty Parris
Jerry Weisenfluh
Warren Anderson
Brandon Nuttall
Mike Lynch

ConocoPhillips

Scott Rennie
Paul Heard

E.ON US

Roger Medina
Doug Schetzel
Glenn Sundheimer

Smith Management

Karen Thompson

Sandia Technologies

Phil Papadeas

TVA

Ed Stephens

ECSI

Talina Mathews

Dave Williams called the meeting to order, and participants introduced themselves.

Jim Cobb opened the meeting with remarks on several topics. He recognized Talina Mathews, formerly director of the Governor's Office of Energy Policy and now with Engineering Consulting Services, Inc.

He told the meeting that he and Rodney Andrews, director of the Center for Applied Energy Research, were to meet with Gov. Steve Beshear in the afternoon to update the governor on energy research in each agency. He said that Brandon Nuttall and he are now working part time at the state Cabinet for Energy and the Environment, providing expertise on the technical questions which come to the cabinet. He said KGS can thus influence state policy on energy issues. They report directly to Secretary Lyn Peters.

Cobb reported that he had just returned from a meeting of the Midwest Geological Sequestration Consortium, where he made a presentation about Kentucky's efforts in carbon storage and found others in the MGSC surprised at the progress made here without federal money.

He had also made a presentation on September 22 about the progress on House Bill 1 projects before the state Appropriations and Revenue Committee. He told that committee future wells will be needed to continue the progress on this research.

He had also attended an Indiana conference on sequestration as well. Cobb added that he would like to get the energy-agency heads for the states in the Illinois Basin together to start a dialogue on cross-state issues in this arena.

Karen Thompson noted that the Governor's Conference on the Environment is set for next week, with some sessions on carbon storage topics. She asked for written comments from members of this group, to be sent to Dave Harris or Sara Smith for inclusion in their remarks at the conference. They will discuss legal issues related to carbon storage. Dave Harris noted that Sara Smith is trying to get the UK law school interested in the legal ramifications of geologic carbon storage.

Brandon Nuttall said a draft new state energy policy has been sent to the governor's office for review; he added that the research being spearheaded by this group is important in the policy.

Status of Data Sharing Agreement

Rick Bowersox said R & B Resources has agreed to all the terms of the data-sharing agreement, after some minor clarifications were added. Dave Harris added that R & B has granted this group an easement to do the research until February 8, 2010. That leaves R & B six months until their agreement with the property owner expires, allowing R & B to determine what action, if any, to take at the site if economic resources are encountered in the drilling. He added R & B is enthusiastic about this project.

Phase I environmental survey

Dave Williams said the Phase I assessment gave a clean bill of health to the project site.

Title opinion, balance of owner's farm

Dave Williams also reported that the second title opinion, this one on the remainder of the property parcel, should arrive soon, and there should be no problems noted on this opinion.

Seismic Program

Rick Bowersox told the group that he and Dave Harris had met with the UK attorney over a contract impasse on a couple of issues with the proposed WesternGeco deep seismic program. The company wants to limit its liability to the value of the contract only. Dave Harris added that KGS wants a higher limit, a multiple of the contract value. While the company's proposal is an industry standard, the parties involved are not comfortable with it.

Doug Schetzel commented that, if there's property damage, the private partners are concerned about whether state or insurance funds would be available to cover such possible damage in the absence of higher liability coverage from the company.

Dave Harris added that the other possibility is that KGS would purchase an insurance policy. He will wait for an answer from WesternGeco about higher liability coverage before deciding what to do.

Scott Rennie said that it's common to limit liability as WesternGeco has, and a client's relative negotiating position has a lot to do with how this works out. In the current marketing climate, he added, a service company can dictate such terms.

The participants discussed the issue of the project schedule becoming more critical now and that the seismic work needs to get done so the project can move on.

Dave Williams said that he and a representative of WesternGeco walked and drove the route of the planned seismic lines, talking to property owners, Judge/Executives of the two counties involved, Kentucky's Transportation Cabinet and property valuation administrators about the ownership and access issues. The deep seismic project should take about two weeks to complete, once a contract is signed.

Shallow Seismic Program

Rick Bowersox passed out the processed data from lines 2, 3, and 4 from Ed Woolery's shallow seismic work and said there are no apparent problems in the top 800 feet of the geology. He explained that this means no faults, caves, sinkholes or similar issues are visible in the data.

Soil gas monitoring

Marty Parris of KGS used a PowerPoint presentation to explain his plans for a soil gas monitoring program around the drilling site. He said he should be able to get into the area the following week to gather data for the first of his measurements. He explained the process of determining the rate of gas movement between the atmosphere and the soil, detecting anomalies in this activity to account for human- and natural-caused seepage, and the need to sample multiple times in different settings and at different times of the year. He showed examples from

eastern Kentucky sampling programs which demonstrate the kind of data he'll be gathering for carbon dioxide and methane.

He plans to return to the deep storage test site in March to do "winter" season sampling, when plant-related activity will be much lower.

Phase IVa funding

Dave Harris said he is close to determining the cost figures for Phase IVa of the project, including contract costs for Sandia, well-design costs, etc. He expects to have the final figures in the next week or so.

Drillsite preparations and drilling contractor

Paul Heard of ConocoPhillips reported that he had found two companies with rigs capable of doing the project, but only one of them, Les Wilson, is likely to be able to do the project. The contract will be a time and labor agreement, not a fixed cost contract. The rig is new, and the plan is to have it ready for a February project-start date. But he will check on a possible conflict because the same rig is expected to be used for another deep-hole project in this region.

The question came up as to whether drilling could actually start before the EPA injection permit is acquired. Phil Papadeas noted that EPA Region IV in Atlanta wants to be present to observe the initial drilling activities.

There was a discussion of whether EPA may expect a different, higher standard of operation because its proposed Class VI regulations have been drafted for public comment.

Paul Heard said the bid on the casing came in at \$207,000 on Chinese-made casing.

Final well design and costs

Scott Rennie outlined some changes in the well design from the previous report. He will send a printed copy of the changes to project participants.

EPA injection well permitting

Phil Papadeas gave a PowerPoint-assisted presentation on the progress of the permit application development. He believes it will take 3 – 5 days of additional work to complete it. He asked for guidance from the participants on who will make comments for the final version to be sent to EPA in Atlanta.

He listed the remaining items which need completion in each area of the application, and there was discussion of the total volume of injected carbon dioxide to list on the application.

Papadeas added that he believes the partnership can submit the original drilling plan, demonstrating and explaining the level of monitoring and safety to satisfy EPA, which had suggested an additional and costly well-testing packer design to be added to the plan.

He said he plans to have a draft next week of the EPA permit application and wants to get comments sent back within two days.

Dave Williams said state Department of Oil and Gas permit application is ready except for the bonding requirements. After some investigating, KGS found the correct office at UK to handle bonding requirements.

Phil Papadeas will talk to EPA about the amount of bond coverage needed, to help determine what bonding level to include in the DOG permit. He added that the EPA application can be sent in with a note that certain items like this are pending.

Dave Williams said he will find the exact location of a water well on the drilling site property; this is the well whose water will be tested during the project.

Deep gas contingency planning

Dave Harris told the meeting this item will be kept “on the radar” and discussed when there is more time to discuss how to address it, if it becomes an issue.

It was announced that TVA has become a funding member of the non-profit Foundation for the project.

There was some discussion of when to issue the next news release. It will be to announce the holding of another public meeting in Hancock County to update the fiscal court and general public on the project’s progress.

The next meeting was set for 9:00 a.m., November 6 at the same location.

ACTION ITEMS:

ALL:

All participants were asked to submit any comments they may have for a presentation to be given by Sara Smith and Dave Harris on carbon storage legal issues at the Governor's Conference on the Environment the following week in Lexington.

Provide guidance to Phil Papadeas on who should send in comments for the final draft of the EPA permit application and who should sign the application.

KGS:

Dave Harris will investigate the possibility of having KGS / UK buy an insurance policy to cover potential property damage during the drilling because WesternGeco's proposed liability is smaller than the partners want.

He will also provide Michelle Pittenger of ConocoPhillips with information he had earlier promised on a Knight Brothers well.

Dave will complete estimates on the Phase IVa project costs within a week or so.

Marty Parris will do his first set of soil gas measurements at the well site during the following week and his "winter" season measurements early in 2009.

Dave Williams will get the exact location of the water well near the drilling site. He will also talk to the Hancock County Judge/Executive about another public meeting on the project.

Mike Lynch will prepare a news release and ask for comments before the next public meeting.

ConocoPhillips:

Paul Heard will check into a possible schedule conflicts for the drill rig chosen for the project.

Scott Rennie will send the participants a printed copy of the last changes to the well design. He will also check with **Michelle Pittenger** on the status of the reprocessing of the "Line 7" seismic data.

Sandia Technologies:

Phil Papadeas will continue working on the final draft of the EPA permit application, add comments from partners and get the signatures needed for the final version. He will also talk to EPA / Atlanta about the expected bonding level, which will also go into the state DOG permit application.