Ultra-Deepwater Advisory Committee (UDAC)

October 14, 2009 Twelfth Meeting

Meeting Minutes

Ultra-Deepwater Advisory Committee

I hereby certify that this transcript constitutes an accurate record of the Ultra-Deepwater Advisory Committee meeting held on October 14, 2009.

Kent Abadie, Chair

Ultra-Deepwater Advisory Committee

Date

Minutes of the 12th Meeting of the Ultra-Deepwater Advisory Committee (Los Angeles, CA, October 14, 2009)

Call to Order

The meeting was called to order by Mr. Kent Abadie, Chair, who briefly outlined the agenda (Attachment 1). Mr. Abadie also defined the three work products that were expected from the Committee: (1) a letter from the Chair to the Secretary of Energy transmitting the (2) final report of recommendations, and (3) an executive summary to be included in the Committee's final written report.

Committee Business

Ms. Elena Melchert, DOE Committee Manager (CM), called the roll of committee members and confirmed that a quorum was present. It was determined that eight of 12 Ultra-Deepwater Advisory Committee (UDAC) members were present (Attachment 2).

The CM then described the contents of the meeting packet. She highlighted the specific items that had been requested by both¹ of the Federal Advisory Committees at the last meeting (Attachment 3).

Opening Remarks

Mr. Guido DeHoratiis, Designated Federal Officer (DFO) thanked everyone for making the effort to attend and for the work that Subcommittee members contributed between meetings. He confirmed that no members of the public had requested to speak at the meeting, and reported that he had approved the agenda. He reminded everyone of the October 22nd deadline for written recommendations and comments, that consensus was desired but not required and that all comments were valued. He also reminded everyone that their comments should be directed to the Secretary of Energy, that they were prohibited from making recommendations related to specific awards, and that they were responsible for notifying the DFO of any potential conflict of interest.

The DFO then provided an update of legislative activities related to Section 999². He explained that the Fiscal Year 2010 Budget conference report³ included a \$20 million unconventional oil-gas-coal program to "replace" the traditional DOE oil program. These funds, plus \$18.7 million for methane hydrate and other Congressionally-directed projects had resulted in a \$40 to 45 million research program for oil and gas at the DOE, in addition to the Section 999 funding. He described how DOE expected to work with stakeholders in determining how this money should be spent in order to achieve the goals of the legislation. He responded to a question about this funding stating that it was not part of the research on unconventional resources included Section 999 but an additional sum to focus on additional research on unconventional resources.

¹ The Ultra-Deepwater Advisory Committee (UDAC) and the Unconventional Resources Technology Advisory Committee (URTAC) share the responsibility for advising the Secretary of Energy on different aspects of the annual plan.

² Energy Policy Act of 2005 (EPAct), Title IX, Subtitle J, Section 999A-999H

³ This refers to the 'conference' process used by the US Senate and the House of Representatives to reconcile the differences between their respective appropriations or other bills.

He described three bills that would redirect all or part of the annual Section 999 funding: a Senate Energy Bill that calls for some UDW⁴ funds to be spent on an inventory of offshore resources (unlikely to see action on this bill in 2009, not moving very quickly); the House version of the Dept. of Interior Appropriations Bill that calls for deferring 2010 Section 999 funds (the Senate version does not include this language, should see final conference language on this bill soon); and a Defense Authorization Bill called for the use of Section 999 money to fund disabled retired military veterans (the final conference report includes the program but did not include language for funding it from Section 999 funds).

The DFO thanked everyone again, and reminded everyone that the deadline for their report was the conclusion of the October 22, 2009 teleconference.

The Chair asked if there had been any efforts to increase funding as a result of the Committee's advice to the Secretary in the previous report. Mr. DeHoratiis reminded everyone that repeal of Section 999 was part of the President's Fiscal Year 2010 budget.

The Chair reviewed the objectives of the day's meeting: to review and revise the work of the Process Subcommittee and the Portfolio Subcommittee and provide input to the editing subcommittee for its work in finalizing the report, executive summary, and cover letter. The Chair explained that the revised documents would be provided to the Editing Subcommittee, and after that group had compiled and formatted the final draft report, it would be provided to each member for final review. The teleconference meeting on October 22 would be a final opportunity for each member to register their agreement or disagreement with the report.

Subcommittee Reports

<u>Ultra-Deepwater R&D Process Subcommittee</u>

Ms. Mary Jane Wilson, Chair, provided an overview of the Subcommittee's findings. The Subcommittee found that the overall process from solicitation through award had improved dramatically in terms of reducing the time. She stated that the primary drivers for the improvement were the use of standard contracts and more frequent communication with stakeholders that have an interest in submitting proposals. The Subcommittee's first finding was that RPSEA should continue to work to improve the process further by following the actions it has initiated while identifying new opportunities for further improvements.

Finding number two was related to program metrics; it appears that RPSEA is on target to meet all of the goals related to solicitations and awards. The number of awards is down, but that is because some of the rewards are larger, but this is expected.

Another finding was that the environmental aspects of each award are not adequately described on the website. There needs to be more of a description of how each project

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⁴ Ultra-Deepwater research (UDW) funded under EPAct

might improve the environmental footprint of the activity involved. This situation could lead to an under-representation of the overall environmental impact of the portfolio. This was recognized as not really being a process-related issue, but was worthy of note.

Another finding was that the balance of industry/non-profit projects seemed to be shifting towards more industry involvement, which was interpreted as evidence that industry was starting to support the program, at least partially due to RPSEA's outreach efforts, and also due to industry's recognition of the value of the program.

In another finding, the Subcommittee suggested that an effort could be made to benchmark the process by comparing it with other similar programs. Questions regarding this point resulted in her further defining this recommendation as an attempt to find out if other programs returned comparable industry funding cost share, comparable numbers of project awards per solicitation, and comparable efficiency in terms of time between solicitation and award. Identified examples of programs for possible comparison were the traditional NETL oil and gas program and the Norwegian oil and gas R&D program.

A question was asked about the process committee's view on how well the program was doing as far as technology transfer was concerned. Cited was the presentation at the previous⁵ UDAC meeting, and the subsequent role-out of the KMD⁶ at the SPE⁷ Annual Technical Conference. He reported that he was very impressed with what had been accomplished and that SPE was considering a link to the site from the SPE site. There was general agreement that the Committee's final report should reflect the Committee's positive view of this "excellent" effort.

There was some further discussion regarding the need to quantify the shortening of time between solicitation and contract award. The discussion revisited the details of the various types of subcontracts and the fact that these focused, streamlined contracts and the training provided related to them, had played a big part in accelerating the contracting process. Mr. Gary Covatch, NETL, described how a comparison of 2007 and 2008 process activities was difficult because multiple changes to the process had been implemented; in addition to streamlining the process an additional step has been added.

Mr. Covatch pointed out that because previous to Section 999, the DOE had no offshore research program, the potential proposers are unfamiliar with the Federal procurement process, and the learning curve is steep. The Chair said that it was now 7-8 months versus the original 12 months; still room for improvement but much better. The discussion continued and then ended with general agreement that the report should reflect that substantial progress had been made.

Ms. Wilson continued that the Subcommittee's final finding was that the Committee should continue to monitor the process over the longer term.

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⁵ 11th Meeting of the UDAC held September 16-17, 2010

⁶ Knowledge Management Database (KMD) found at www.netl.doe.gov/kmd

⁷ Society of Petroleum Engineers (SPE)

<u>Ultra-Deepwater R&D Portfolio Subcommittee</u>

Mr. Quenton Dokken, Chair, provided an overview of the Subcommittee's work. The Subcommittee was tasked with evaluating four criteria: balance, barriers and opportunities, value, and diversity. He described a survey that they had developed and which was completed with input from NETL and RPSEA. This information was used to help perform an assessment of the portfolio of 2007 projects⁸, as to these criteria. RPSEA and NETL were applauded for their effort in facilitating this. One weakness they noted was the fact that there was only one year of data, but given that, the Subcommittee believes that the portfolio is generally balanced through 2010.

The issue of lack of environmental projects was raised. The Subcommittee recognized that there are two sides to the issue: what is the impact of the environment on the offshore infrastructure, and what is the impact of the infrastructure on the environment.

There was a question within the Subcommittee as to the issue of whether the portfolio is focused on increasing the size of the resource base versus conversion of recoverable resources. One Subcommittee commented that low permeability reservoirs in ultradeepwater deserved more attention.

The discussion then turned to the RPSEA Environmental Advisory Group (EAG). This group had been described at the last meeting⁹ during a presentation by Dr. Rich Haut, HARC¹⁰. Ms. Elena Melchert, DOE, explained that a description of the EAG was provided in the packet, and that it was an advisory group to all the other RPSEA advisory groups.

The question was raised: Does the EAG review the threats to the environment from exploration and production activities and recommend research to help mitigate those threats? Mr. Mike Ming, RPSEA, explained that, in general, the EAG does a substantial amount of work in terms of defining environmental issues for RPSEA, including the holding of forums in various regions (ecosystems), and also works to develop collaborative arrangements with other organizations and maintains an understanding of what is being done elsewhere (e.g., MMS, NOAA, USGS¹¹), and that it can specifically recommend research topics to the RPSEA Technical Advisory Committees (TAC) or Program Advisory Committees (PAC).

The question was asked: Is the fact that there are not a lot of environmental research projects in the current portfolio due to a lack of recognized need or the fact that others are already doing this work? Mr. Ming responded that the focus of the Section 999 program it is not on standalone environmental projects but on architecture projects that have an aspect of positive environmental impact.

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⁸ Projects funded with Fiscal Year 2007 funds are referred to as the "2007 Portfolio"

⁹ The 11th Meeting of the UDAC held September 16-17, 2009

¹⁰ Houston Advanced Research Center (HARC)

¹¹ Minerals Management Service (MMS), National Ocean and Atmospheric Administration (NOAA), U. S. Geological Survey (USGS)

The Chair highlighted the fact that there are members of the Committee who feel that part of the focus of the Section 999 project portfolio should be on stand-alone environmental projects that carry out research to evaluate or reduce the impact of the architecture on the environment. Mr. Ming responded that there is some middle ground that will be seen in upcoming solicitations.

Mr. Dokken stated that the EAG is not looking at the implications of environmental impacts from oil and gas exploration and production activities. He asked how RPSEA is finding out what is already being done by others in this area. Mr. Ming described how the EAG is planning on holding alternating meetings with these groups (next meeting is scheduled for Feb. 2010). The question was posed to Mr. Ming as to if RPSEA would make it possible for the EAG to be involved in the various TACs, and he answered that they could be encouraged to do so.

The question was posed as to whether or not RPSEA was considered doing engineering research focused on preventing major disasters (blowout prevention, spill prevention, etc., "if I have a disaster, how do I react to it?" types of studies ... should the industry have standby equipment?, etc.), and the answer was "no," that the wording of the Section 999 legislation reflecting the objectives of the program was "architecture." There was some further discussion about the focus of the Section 999 legislation as it is worded and the balance of environmental research versus non-environmental research. Ms. Melchert read the text out loud, pointing out the fact that the text refers to a general scope in one part of the law and a more specific scope in another part of the law.

There then ensued a discussion about a potential "narrowing" of the portfolio focus as the 2007 projects ended in 2010, and successful efforts were further funded and less successful efforts terminated. As the program matures, the Chair commented that he could foresee a situation where only 2 or 3 projects dominated and used up most of the funding when relatively expensive demonstrations became a larger part of the portfolio. The opportunity to maintain balance will become much more difficult over time. This will become a critical issue; with only \$15 million per year, the opportunity to maintain balance may disappear as demonstration projects are launched.

Others commented that there will still be an opportunity to maintain diversity, if not a perfect balance from the standpoint of funding allocation, but from a research topic standpoint especially via the smaller, university-targeted projects. The Committee recognized that the issue of fewer, larger, less diverse projects over time was something that needed to be addressed in the report. The question was considered: Is it the responsibility of the UDAC to prioritize needs given limited funding and the potential change in the number of projects? The Chair said that the committee could provide whatever advice to the Secretary it sees fit to provide.

Committee Discussion and Development of Recommendations

The Committee then reviewed each of the two Subcommittee reports in real time using a large screen display, working through each Finding. The Chair explained that the final products of this effort would be final tex that would be delivered to the Editing Subcommittee, which would meet the following day to finalize the report of written Recommendations, Executive Summary, and Cover letter.

After lunch, the Committee reconvened to continue its work of developing final recommendations. After completing the revision of the Process Subcommittee recommendations, the Portfolio Subcommittee recommendations were revised in a similar manner, with group discussion of the text and real-time reorganization and editing.

The Committee then moved to the Executive Summary and Cover letter. The Chair outlined the task of the Editing Subcommittee, scheduled to meet the following day to complete a final draft of the three work products.

Ms. Melchert presented a brief overview of the Committee Calendar and next steps, including instructions for the October 22, 2009 conference call to perform a final review and approval of the Committee's Report to the Secretary.

The meeting was then adjourned.

Attachments

	Presenter	Topic
1	For the Record	Meeting Agenda
2	For the Record	Committee Members and Meeting Participant Attendance
3	For the Record	Meeting Packet Contents

Attachment 1



Department of Energy

Washington, DC 20585

Ultra-Deepwater Advisory Committee
12th Meeting, October 14, 2009
Crowne Plaza Los Angeles Airport
5985 West Century Boulevard, Los Angeles, CA.
Meeting Room: Salon A

7:30 a.r 8:00		Members & Public Kent Abadie, Chair
8:10	Committee Business: Verify quorum for the DFO; Update of delivery on action items from last meeting; Review contents of meeting packet;	Elena Melchert, DOE Committee Manager
8:25	Opening Remarks Deadline for written recommendations and comments; Legislative and budget update;	Guido DeHoratiis Designated Federal Officer Acting Deputy Assistant Secretary for Oil and Natural Gas
8:35	Subcommittee Reports*	Kent Abadie
	Process Subcommittee Mary Jane Wilson Portfolio Subcommittee Quenton Dokken	
10:00	BREAK	
10:15	Discussion and Development of Recommendations	Kent Abadie and Facilitator
12:00 p	m LUNCH	
1:00	Continue Discussion and Development of Recommendation	ons
2:30	BREAK	
2:45	Continue Discussion and Development of Recommendation	ons
3:30	Executive Summary and Cover Letter	Kent Abadie
4:00	Instructions to the Editing Subcommittee	
4:15	Committee Calendar and Next Steps October 22, 2009 13 th Meeting	Elena Melchert
5:00	Adjourn	Kent Abadie

APPROVED:

Guido DeHoratiis, Designated Federal Officer

10/6/09 Date

Attachment 2

Ultra-Deepwater Advisory Committee Meeting Sign-In Sheet - October 14, 2009

Last Name	First Name	Organization	Sign
Abadie	Kent F.	Shell Exploration & Production Company	The Continue
Cicio	Paul N.	Industrial Energy Consumers of America	LABEROALEND
Daulton	Daniel J.	BJ Services Company	250
Dokken	Quenton R.	Gulf of Mexico Foundation	MED
Fowler*	Joe R.	Stress Engineering Services, Inc.	SKE
Ikelle*	Luc T.	Texas A&M University	(NABLE TO ALTEND
Judzis	Arnis	Schlumberger, Inc.	
Seamount, Jr.	Daniel T.	Alaska Oil & Gas Conservation Commission	
Sears*	Stephen	Louisiana State University	(NAME FOATTEND
Tranter	Paul T.	Transocean, Inc.	The second secon
Wiencke	Paul M.	Research Council of Norway	TABLE TO ALTEND
Wilson*	Mary Jane	WZI Inc.	V. 1/2 V

Total Members = 12

QUORUM = 7

Confirmed attendees = 8 Regrets = 4

Ultra-Deepwater Advisory Committee Meeting October 14, 2009

Staff Roster

U.S. Department of Energy - Office of Oil and Natural Gas

Has	Guido DeHoratiis	Designated Federal Officer
COM	Acting Deputy Assistant Secretary	
-44.4	Elena Melchert	Committee Manager
EM	Program Manager for Section 999	

National Energy Technology Laboratory

* New Proc. 1. The Control of the Co	Trational Energy Technology Europeacory	
Gary Covatch	Strategic Center for Natural Gas & Oil	
Ginny Weyland	Strategic Center for Natural Gas & Oil	
2 Loy Long	Strategic Center For Natural Gas + Oil	

Technology & Management Services, Inc.

Karl Lang Meeting Minutes Recorder/Facilitator

Rob Matey Meeting General Support

Giovanni Ferdinand Registration Support

Loren Bohannon UDAC Editing Subcommittee Support

Bub Siegfried RPSEA

Ultra-Deepwater Advisory Committee Meeting Sign-In Sheet - October 14, 2009

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E-mail	rsiegfriel erpsza. U.g		marine 6 PS Rail of	The second of th						
Phone	28/ 690-55-02	832-247-883	7-81-313-955							
Organization	RPSEA	RPSEM	RPSEA			,	F.			
Name	Bob Sieghiel	HANI SADEK	Mike Ming							

Attachment 3

Note 1: Addressed by various oil and gas R&D program areas: Subtitle J, Traditional Program, Complementary Program

EPAct 2005 UltraDeepwater Projects Timeline (Awarded 2007-2008 Projects)

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End R
End R
End B
End R
End
End R

Oil and Gas R&D Funding



Office of Fossil Energy

FY09: \$33 MM

Traditional

Program

- E&P
- Hydrate
- Environmental
- RMOTC
- Congressional Projects:
- Unconventional O&G
- Arctic

Consortium Program

• Ultra-Deepwater \$14.875

Unconventional Gas \$13.812

- Small Producer \$3.187
- RPSEA administration \$3.750
- NETL Oversight \$1.875

Complementary Program

\$12.5 MM

- Extreme Drilling
- Unconventional Oil and EOR
- Environmental
- Resource Assessment

Ultra-Deepwater and Unconventional Natural Gas and Other Petroleum Resources

2008 RP	2008 RPSEA SubContracting Awards							
	6/16/2010							
		something boot	ā	Project	RPSEA	Cost	Start	End
Unconventi	Unconventional Program	Lead Performer	ī	COST	COST	Snare	Date	Date
08122-05	Barnett and Appalachian Shale Water Management and Reuse Technologies	Gas Technology Institute	Dr. Thomas D. Hayes	\$3,140,000.00	\$2,500,000.00	\$640,000.00	8/11/2009	8/10/2011
08122-15	Novel Gas Isotope Interpretation Tools To Optimize Gas Shale Production	California Institute of Technology	William A Goddard	\$1,549,965.00	\$1,190,000.00	\$359,965.00	8/28/2009	8/27/2012
08122-35	The Environmentally Friendly Drilling Systems Program	Houston Advanced Research Center (HARC)	Richard C. Haut	\$2,800,071.02	\$2,199,895.02	\$600,176.00	7/24/2009	7/23/2012
08122-36	Pretreatment and Water Management for Frac Water Reuse and Salt Production	GE Global Research	James Silva					
08122-40	Stratgraphic Controls On Higher-Than- Average Permeability Zones In Tight-Gas Sands, Piceance Basin	Colorado School of Mines	Dr. Jennifer Aschoff	\$139,018.00	\$111,216.00	\$27,802.00	7/22/2009	7/21/2011
08122-45	Coupled Flow-Geomechanical- Geophysical-Geochemical (F3G) Analysis of Tight Gas Production	Lawrence Berkeley National Laboratory	George J. Moridis					
08122-48	Sustaining Fracture Area and Conductivity of Gas Shale Reservoirs for Enhancing Long-Term Production and Recovery	Texas Engineering Experiment Station/Texas A&M University System	Dr. Ghassemi, Ahmad	\$2,020,030.00	\$1,615,000.00	\$405,030.00	9/14/2009	9/13/2009
08122-53	Multiazimuth Seismic Diffraction Imaging for Fracture Characterization in Low-Permeability Gas Formations	University of Texas at Austin - Bureau of Economic Geology	S. Fomel					
08122-55	Evaluation of Fracture Systems and Stress Fields Within the Marcellus Shale and Utica Shale and Characterization of Associated Water-Disposal Reservoirs: Appalachian Basin	The Bureau of Economic Bob A. Hardage Geology, The University of Texas at Austin	: Bob A. Hardage					
			UR TOTAL	\$10,924,084.02	\$8,636,111.02	\$2,287,973.00	9/29/2009	3/23/2012
Small Prod	Small Producers Program							
08123-02	Field Demonstration Of Alkaline Surfactant Polymer Floods In Mature Oil Reservoirs Brookshire Dome, Texas	Layline Petroleum 1, LLC	Chris Lewis					
08123-07	Mini-Waterflood: A New Cost Effective Approach to Extend the Economic Life of Small, Mature Oil Reservoirs	New Mexico Institute of Mining and Technology	Thomas Engler	\$402,467.00	\$313,751.00	\$88,716.00	8/5/2009	8/4/2011
08123-10	Electrical Power Generation from Produced Water: Field Demonstration of Ways to Reduce Operating Costs of Small Producers	Gulf Coast Green Energy	Robin Dahlheim					
08123-12	Evaluation and Modeling of Stratigraphic Control on the Distribution of Hydrothermal Dolomite Reservoir away from Major Fault Planes	Western Michigan University	G. Michael Grammer					
08123-16	Development Strategies for Maximizing East Texas Oil Field Production	UT Austin - Bureau of Economic Geology	Fred Wang					
08123-19	Application to Improved Oil Recovery for Small Producers Commercial Exploitation and the Origin of Residual Oil Zones: Developing a Case History in the Permian Basin of New Mexico and West Texas	University of Texas of the Permian Basin	Dr Robert C.					
			Trentham SP Total	\$961,934.00 \$1,364,401.00	\$630,934.00 \$944,685.00	\$331,000.00 \$419,716.00	7/8/2009	7/7/2011

Ultra-Deepwater Research Funds Costed as of September 1, 2009 = \$2,814,119

The following statement is in response to the question from a member of the Ultra-Deepwater Advisory Committee (UDAC) inquiring about the amount of money that has been spent to date in the Ultra-Deepwater Program. The question was raised at the 11th Meeting of the UDAC held September 16-17, 2009 in San Antonio, TX.

As of September 1, 2009, subcontractors of the Program Consortium, Research Partnership to Secure Energy for America (RPSEA), have costed a total of \$2,814,199.

Almost ½ of these funds have been expended during the last three to four months, and spending is expected to continue to increase as additional projects are awarded and as work progresses on projects already started.