Wylie, Allan

From: Koreny, John S. [John.Koreny@hdrinc.com]
Sent: Monday, November 07, 2011 3:31 PM
To: Raymondi, Rick; Wylie, Allan
Cc: marx.hintze@icp.doe.gov; marxhintze@hintze.net; Olenichak, Tony; kwogsland@spronkwater.com; marilyn@tflaw.com; jryu@uidaho.edu; shannula@eroresources.com; brian@waterwellconsultants.com; Wylie, Allan; Raymondi, Rick; Jennifer Johnson ; Brendecke, Chuck; Bryan Kenworthy; Bryce Contor; Chuck Brockway; Dar Crammond; David Blew ; David Hoekema; David Kampwerth; Gary Johnson; Greg Clark; Greg Sullivan; Gregg S. Ten Eyck ; Hal Anderson; J. D. May; Jack Harrison; Janak Timilsena; Jeff Sondrup; Jim Bartolino; Jim Brannon ; John Lindgren ; Jon Bowling; Ken Skinner; Linda Lemmon; McVay, Michael; Mike Beus; Rick Allen; Roger Warner; Sharon Parkinson; Stacey L Taylor; Sukow, Jennifer; Swank, Lyle; Thomas R Wood; Vincent, Sean; Willem Schreuder; Young Harvey Walker
Subject: RE: Predictive Uncertainty Memo

P.S. I also am opposed to the "model validation" exercise that is planned for version 2. I do not understand the reason for running the model through poorly-constrained old historic data (that was already determined to be insufficient for calibration) and I don't understand what we would do if the result would make us question the model calibration or results. I would like to have a formal vote on this so everyone's position is recorded and understood.

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From: Koreny, John S.
Sent: Monday, November 07, 2011 2:12 PM
To: Raymondi, Rick; 'Wylie, Allan'
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Subject: RE: Predictive Uncertainty Memo

Rick and Allan-

Thank you for the information.

This memo indicates that the ESHMC decided to proceed with the uncertainty analysis.

I am a member of the committee that does not agree with this uncertainty analysis approach. My input is that I think that an uncertainty analysis is properly used to identify weakness in data or approaches for model calibration. Once calibration is done the model is ready for use and the values that come out of an uncertainty analysis should not be used to constrain the predictive analysis of the model by applying some kind of "uncertainty factor". The reason is- an uncertainty analysis provides information on relative uncertainty in calibration data and approach. It does not provide an absolute value or a factor that can be used to numerically constrain predictions. There simply are too many degrees of freedom and any outcome that you get from an uncertainty analysis is dependent on how you constrain PEST to provide a solution.

If this document is going to say, "The ESHMC decided that . . .. " with respect to an uncertainty analysis than I request a formal vote on the matter and each committee members' position on this recorded.

If the committee decides to go ahead with this- than I think the uncertainty analysis documentation should specifically say that the results should NOT be used as a factor to numerically constrain model prediction.

Respectfully,

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From: Wylie, Allan [mailto:Allan.Wylie@idwr.idaho.gov]
Sent: Monday, November 07, 2011 10:34 AM
To: Raymondi, Rick; Jennifer Johnson ; Brendecke, Chuck; Bryan Kenworthy; Bryce Contor; Chuck Brockway; Dar Crammond; David Blew ; David Hoekema; David Kampwerth; Gary Johnson; Greg Clark; Greg Sullivan; Gregg S. Ten Eyck ; Hal Anderson; J. D. May; Jack Harrison; Janak Timilsena; Jeff Sondrup; Jim Bartolino; Jim Brannon ; Koreny, John S.; John Lindgren ; Jon Bowling; Ken Skinner; Linda Lemmon; McVay, Michael; Mike Beus; Rick Allen; Roger Warner; Sharon Parkinson; Stacey L Taylor; Sukow, Jennifer; Swank, Lyle; Thomas R Wood; Vincent, Sean; Willem Schreuder; Young Harvey Walker
Cc: marx.hintze@icp.doe.gov; marxhintze@hintze.net; Olenichak, Tony; kwogsland@spronkwater.com; marilyn@tflaw.com; jryu@uidaho.edu; shannula@eroresources.com; brian@waterwellconsultants.com
Subject: Predictive Uncertainty Memo

Hi
During our October 27 ESHMC meeting Greg Sullivan requested a memo discussing both why the ESHMC should conduct a predictive uncertainty analysis and how the analysis would be conducted. The attached memo represents my attempt to answer both questions. I am assuming that previous presentations and committee discussions adequate cover the strengths and weaknesses of our chosen approach. The file is also posted in the 'ESPA Model Uncertainty' section of the ESHMC web page. Your comments are welcome. If I don't receive any comments by 21 November 2011, I will consider the memo final.

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