

YUCCA MOUNTAIN PROJECT: DIGGING FOR THE TRUTH?

HEARING

BEFORE THE
SUBCOMMITTEE ON THE FEDERAL WORKFORCE
AND AGENCY ORGANIZATION

OF THE

COMMITTEE ON
GOVERNMENT REFORM

HOUSE OF REPRESENTATIVES

ONE HUNDRED NINTH CONGRESS

FIRST SESSION

JUNE 29, 2005

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YUCCA MOUNTAIN PROJECT: DIGGING FOR THE TRUTH?

WEDNESDAY, JUNE 29, 2005

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON FEDERAL WORKFORCE AND AGENCY
ORGANIZATION,
COMMITTEE ON GOVERNMENT REFORM,
Washington, DC.

The subcommittee met, pursuant to notice, at 10:12 a.m., in room 2154, Rayburn House Office Building, Hon. Jon C. Porter (chairman of the subcommittee) presiding.

Present: Representatives Porter, Davis, Marchant, Mica, Issa, Cummings, and Norton.

Staff present: Ron Martinson, staff director; Chad Bungard, deputy staff director and chief counsel; Shannon Meade, professional staff member; Patrick Jennings, senior counsel and OPM detailee; Reid Voss, clerk/legislative assistant; Mark Stephenson and Tania Shand, minority professional staff members; and Teresa Coufal, minority assistant clerk.

Mr. PORTER. We welcome everyone here today. As you know, there is a quorum present. The subcommittee on the Federal Workforce and Agency Organization will come to order.

Today marks the second hearing this subcommittee has held with regard to its investigation into allegations that Federal employees have falsified documents relating to the Yucca Mountain Project, a major public works project that carries with it the possibility of wide-ranging ramifications.

As I have highlighted before, there is no question that issues surrounding the Yucca Mountain Project are of paramount importance to my constituents and the rest of the citizens of Nevada.

My critical feelings about the project in and of itself from day one are well known. I do not need to repeat them at this point. But as chairman of the subcommittee, my constituency now reaches a much broader scope. In my role as chairman I represent the Nation's concerns when it comes to Federal employee issues and it is the subcommittee's responsibility to examine all aspects of Federal employee behavior and management issues.

Under this responsibility, the subcommittee has recently examined allegations of management and ethics concerns among high level Federal scientists at the National Institute of Health and allegations of mismanagement at the Office of Special Counsel.

We are now faced with a similar challenge. The investigation of alleged misconduct and mismanagement at the Yucca Mountain Project is particularly important in that it carries potential cata-

strophic consequences and therefore demands close subcommittee attention.

At the last hearing I noted in my opening statement that there are many questions yet to be answered. Since that time the subcommittee has launched into a full and thorough investigation into the allegations of employee misconduct and agency mismanagement.

Staff has interviewed many of the key Department of Interior employees involved and has pored over many documents, spending literally hundreds of hours.

I wish I could say that the investigation of this matter is going smoothly and the investigative staff is getting to the bottom of the truth. There are, however, still a lot of questions yet to be answered.

The main reason for the continued unanswered questions is that an employee at the center of the allegations, Joseph Hevesi, has refused to meet with the investigators. Countless efforts have been made to meet privately with Mr. Hevesi to examine the context and intent of the e-mails he authored that seemed to call into question the legitimacy of the science surrounding the storage of nuclear waste at Yucca Mountain.

Without access to Mr. Hevesi, the investigation into the truth of what took place has been hampered. To say that Mr. Hevesi is a critical component of the subcommittee's investigation is an understatement.

Please allow me to highlight a few of the e-mails that Mr. Hevesi has drafted.

E-mail dated 12-17-1998, "Like you've said all along, the Yucca Mountain Project has now reached a point where they need to have certain items work, no matter what. The infiltration maps are on that list. If the USGS can't find a way to make it work, Sandia will. But for now they are definitely counting on us to do the job."

E-mail dated 12-18-1998, "The bottom line is forget about the money. We need a product or we're screwed and will take the blame. Everybody will say that they told us to go ahead without a plan or budget in place. This is now CYA and we had better be good at it."

E-mail dated 10-29-1998, "Wait till they figure out that nothing I've provided them is QA,"—quality assured. "If they really want the stuff they'll have to pay to do it right."

E-mail dated 3-15-99, "Now I'm going to give you the inside scoop. I'm going to continue the regional modeling, even if it means ignoring direct orders from Yucca Mountain Project management. I have a pretty clear vision of the type of work that needs to be done to stay alive for the long haul and it very definitely involves getting product out there for the user and the public to see."

E-mail dated April 22, 1999, "Here's the weird news: To get this milestone through Quality Assurance, I must state that I've arbitrarily selected the analog sites. So, for the record, seven analog sites have been arbitrarily randomly selected. Hopefully, these sites will, by coincidence, match the sites you have identified. P.S., please destroy this memo."

E-mail dated April 23, 1999. "I am thinking that if I want to remain a viable player on the Yucca Mountain Project, which may

translate to continued funding, I need to show that we can get the job done and provide the modelers with the results that they need.”

E-mail dated November 15, 1999, “In the end I keep track of two sets of files: The ones that will keep Quality Assurance happy and the ones that were actually used.”

A plain reading of the e-mails not only suggests that Mr. Hevesi falsified data used in water infiltration modeling at the project, but also casts reasonable doubt on the soundness of the science relied upon to justify the project’s continued existence.

That is why it is absolutely essential that the subcommittee be able to examine Mr. Hevesi and find out the truth behind the e-mails he has authored.

Mr. Hevesi is here today, but unfortunately not voluntarily. He was compelled to be here today by a congressional subpoena.

This is not the way I like to conduct business. However when an individual, especially a central figure in our investigation, refuses to meet with congressional staff privately, there is no other alternative without shutting down the investigation.

With so much at stake in terms of the safety of Americans and billions of taxpayers’ dollars, this investigation must go on without delay and without further interference.

I sincerely hope that Mr. Hevesi will do the right thing today and answer all of the questions directed to him by the members of the subcommittee and not choose to invoke his fifth amendment privilege during questioning.

I am also looking forward to hearing the Department of Energy witness, Mr. John Arthur, today. Since the subcommittee’s first hearing, the Department has been uncooperative in the subcommittee’s efforts to obtain documents relating to the investigation. It has consistently denied the subcommittee’s requests to meet with key Department officials for their interviews.

Almost 3 months after one of the subcommittee’s various requests, the Department of Energy made a halfhearted last-ditch effort last Friday to appease the subcommittee, stating that the requested documents would not be transmitted; rather they would be available for review in the Department’s headquarters. This is not cooperation. This is unacceptable.

The Department claims no privilege that justifies withholding the requested documents from Congress. Meeting the Department officials and getting the relevant documents concerning potential employee misconduct is essential in light of DOE’s own admission in an internal document that these e-mails may create a substantial vulnerability for the program.

I also find DOE’s lack of cooperation particularly disturbing since at the last hearing a DOE official testified that, “The critical importance of this issue requires action to ensure the scientific basis of Yucca Mountain Repository Project is sound. The safe handling and the disposal of nuclear waste and maintaining public confidence in the safety of the repository are essential.”

Assuming that the statement was more than just lip service as believed by the Department, I find it curious that the Department is not bending over backward to assist this Congress and this congressional investigation so the truth may come out.

The 19th Century American author and lawyer, Christian Astell Bouvier, once said, "Truth like the sun, submits to be obscured, but like the sun only for a time."

The subcommittee will not be deterred and will continue to seek the truth behind these allegations. The truth will be told.

Again, I want to thank you all for being here. I want to thank our witnesses for being here. I look forward to our discussion.

I would now like to recognize the ranking member of the subcommittee, Mr. Danny Davis. Welcome, Mr. Davis.

[The prepared statement of Hon. Jon C. Porter follows:]

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Opening Statement of Chairman Jon Porter
Hearing of the House Government Reform Subcommittee on
the Federal Workforce and Agency Organization

Hearing on

“Yucca Mountain Project: Digging for the Truth”

June 29, 2005

Today marks the second hearing this Subcommittee has held with regard to its investigation into allegations that Federal employees have falsified documents relating to the Yucca Mountain project – a major public works project that carries with it the possibility of wide-ranging ramifications. As I have highlighted before, there is no question that issues surrounding the Yucca Mountain project are of paramount importance to my constituents and the rest of the citizens of Nevada. My critical feelings about the Project in and of itself from day one are well known and I do not need to repeat them here.

But as Chairman of this Subcommittee, my constituency now reaches a much broader scope. In my role as Chairman, I represent the Nation’s concerns when it comes to Federal employee issues and it is the Subcommittee’s responsibility to examine all aspects of Federal employee behavior and management issues. Under this responsibility, the Subcommittee has recently examined allegations of management and ethics concerns among high-level Federal scientists at the National Institutes of Health, and allegations of mismanagement at the Office of Special Counsel. We are now faced with a similar challenge. The investigation of alleged misconduct and mismanagement at the Yucca Mountain project is particularly important in that it carries potential catastrophic consequences, and, therefore, demands close Subcommittee attention.

At the last hearing, I noted in my opening statement that “there are many questions yet to be answered.” Since that time, the Subcommittee has launched into a full and thorough

investigation into the allegations of employee misconduct and agency mismanagement and staff has interviewed many of the key Department of Interior employees involved and have poured over many documents. I wish I could say that the investigation into this matter is going smoothly and that the investigative staff is getting to the bottom of the truth. There are, however, still a lot of questions yet to be answered.

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Mr. Hevesi is here today, but not voluntarily. He was compelled to be here today by a Congressional subpoena. This is not the way I like to conduct business. However, when an individual, especially a central figure of the investigation, refuses to meet with Congressional staff privately, there is no other alternative without shutting down the investigation. With so much at stake, in terms of the safety of Americans and billions of taxpayer dollars, this investigation must go on without delay and without interference. I sincerely hope that Mr. Hevesi will do the right thing today and answer all of the questions directed to him by members of the Subcommittee and not choose to invoke his Fifth Amendment privilege during questioning.

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Meeting with the Department officials and getting the relevant documents concerning potential employee misconduct is essential in light of DOE's own admission in an internal document that "these e-mails may create a substantial vulnerability for the program." I also find DOE's lack of cooperation particularly disturbing since at the last hearing a DOE official testified that "[t]he critical importance of this issue requires action to ensure that the scientific basis of the Yucca Mountain repository project is sound. The safe handling and disposal of nuclear waste and maintaining public confidence in the safety of the repository are essential."

Assuming that the statement was more than lip service and is believed by the Department, I find it curious that the Department is not bending over backwards to assist this Congressional investigation so that the truth may come out. Nineteenth Century American author and lawyer Christian Nestell Bovee once wrote, "Truth like the sun, submits to be obscured; but like the sun, only for a time." The Subcommittee will not be deterred and will continue to seek the truth behind the allegations. The truth will be told.

I thank our witnesses for being here, and I look forward to the discussion

Mr. DAVIS. Thank you, Mr. Chairman.

Mr. Chairman, I was unable to attend the first hearing on Yucca Mountain regarding the discovery by Department of Energy contractors that e-mails written by a U.S. Geological Survey hydrologist suggested that some quality assurance documents related to water infiltration and climate studies had been falsified. While a very important issue, the debate as to whether or not Yucca Mountain is an appropriate site to store nuclear waste is not within the jurisdiction of this subcommittee.

However, it is alleged that Federal employees, USGS scientists to be specific, falsified documents to support the very sensitive and politically charged notion that Yucca Mountain is an appropriate site to store nuclear waste. These are very serious charges. However, these scientists must be afforded the same rights that even a common criminal would be afforded in our justice system: the presumption that a person is innocent until proven guilty.

It is important that we obtain the facts and understand the context in which these e-mails were written before we pass judgment on these employees.

It is interesting to note that these same scientists are referenced in a March 10, 2004, article in the Las Vegas Sun entitled, "Scientists Detail Yucca Water Threat." Mr. Chairman, I would ask unanimous consent to have this article inserted as a part of the record.

Mr. PORTER. No objection.

[The information referred to follows:]

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Las Vegas SUN

March 10, 2004

Scientists detail Yucca water threat

More water will travel through mountain than thought, panel is told

By Launce Rake <lrake@lasvegassun.com>

LAS VEGAS SUN

Reports issued Tuesday to an independent federal review board could spell troubling news for backers of a nuclear waste dump at Yucca Mountain.

Scientists told the U.S. Nuclear Waste Technical Review Board that the climate at Yucca Mountain, 90 miles northwest of Las Vegas, has been and will again be cooler and wetter than it is today, providing more water to corrode metal canisters holding the highly radioactive waste.

Another scientist told the board's panel on the natural systems at Yucca Mountain that old Energy Department models of the rate that water seeps through the mountain's rock were inadequate, meaning that much more water may penetrate the mountain than once thought.

The issues discussed Tuesday shed light on potentially problematic issues for the Energy Department, which plans to begin storing 77,000 tons of nuclear waste in Yucca Mountain by 2010. The Energy Department plans to submit a license application with the Nuclear Regulatory Commission by December that would allow the agency to move forward with the plan to dump the waste.

The Energy Department is trying to answer hundreds of technical questions raised by the NRC before submitting the license application.

The Nuclear Waste Technical Review Board is charged with analyzing the Energy Department's scientific and technical activities related to the Yucca Mountain program.

The Energy Department's long-standing flow models said water traveled a millimeter or less through the rock. At the review board's panel discussion, Alan L. Flint, a research hydrologist with the U.S. Geological Survey, said the flow could be 5 millimeters to 80 millimeters in some locations.

Flint said the government's early models showed a high degree of lateral movement of the water. That model would indicate that much of the water flowed off Yucca Mountain.

But Flint, referring to numerous studies, said evidence now shows much of the water can move vertically through fractures or fissures in the rock.

Robert Loux, executive director for the Nevada Agency for Nuclear Projects, said the research presented Tuesday backs long-standing concerns among scientists and Nevada policymakers.

"The state has always believed that the infiltration of ground water is the big problem," Loux said. "The

Energy Department knows it has a big problem with ground water and how to manage it, and that's the big problem with Yucca Mountain."

Steve Frishman, technical policy coordinator for the Nevada Agency for Nuclear Projects, said the Energy Department "vastly underestimated" the flow through the rock.

"It's a model that we had been telling them for years is wrong," he said. "The fracture flow is very important to the system. ... We're looking at something that was a millimeter or less a year to a minimum of 5 millimeters to as high as 80 millimeters a year.

"If they had known in 1987 that the more correct hydrologic flow included fractured flow, they probably would never have continued with this site," Frishman said.

The Energy Department now has the tough job of finding ways to reduce the movement of water through Yucca Mountain and must also address the possible flow of radioactive particles into the ground water if and when the storage canisters leak, Frishman said. Engineering a solution is difficult because the time frame to deal with is in the tens or hundreds of thousands of years, he said.

"No matter how you tweak the model, you can't make the mountain better than what it is," Frishman said. "As soon as you lose the metal container, the mountain takes over."

Another issue that the federal government has to handle is the weather -- or more precisely, the long-term climate change that some scientists now believe is inevitable.

Saxon Sharpe, a climatologist with the Desert Research Institute in Reno, looked at the climate 500,000 years in the past and in the future, and found broad cycles corresponding to the movement of the solar system.

One implication of those cycles is that the earth generally is moving from an intermediary stage to a colder, wetter glacial stage, which means more water falling on and moving through Yucca Mountain.

"The last 400,000 years encompassed higher, sometimes much higher, effective moisture relative to today," Sharpe said. "Climate is cyclical."

The cooler, wetter period that the earth is entering should last more than 75,000 years, she said.

Sharpe discounted global warming as a counteragent to the long-term trend because fossil fuels, the suspected trigger for global warming, will eventually run out. One model, she said, shows the man-made effects on the climate dissipating after 10,000 years.

"There is a lot of controversy in terms of whom you talk to about long-term climate, but I would argue that the past is the key to the future," Sharpe told the panel.

Irene Navis, planning manager for Clark County's Nuclear Waste Division, said the reports Tuesday reinforced suspicions that earlier studies on the suitability of Yucca Mountain as a waste site were "inadequate."

"We are watching carefully the Nuclear Regulatory Commission's handling of the key technical issues to be sure that the technical matters such as how fast water travels through the repository are properly handled," she said. "One of the things we need to be sure of is if we have addressed all the variables."

Yucca Project spokesman Allen Benson said the department's performance assessment models took into account water on small areas of the waste containers.

"That employs as conservative an approach as possible," he said.

As for Sharpe's studies, Benson said the department has incorporated her studies and even referenced her work in the performance models.

Overall he said thousands of tests have been conducted during the 20 years of research on the program and most of the study had been on hydrology and geology of the site. About 450 bore holes have been drilled into the mountain for the tests.

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[Las Vegas SUN main page](#)

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Mr. DAVIS. The article states that USGS scientists challenged early DOE scientific models that Yucca Mountain is a suitable site, suitable nuclear waste repository, due to the small quantities of water that infiltrated the mountain. The USGS scientists found that much more water flows through the mountain and hence there is the potential for the water to reach and erode the canisters that will hold the nuclear waste. It would appear from the article that the USGS scientists who are now being accused of falsifying documents just a year ago provided the science to support longstanding concerns raised by Nevada policymakers.

Mr. Hevesi, one of the scientists in question, will be testifying before us today. It is his opportunity to put his e-mails into context and an opportunity for us Members to educate ourselves about what these employees may or may not have done as it pertains to falsifying scientific documents.

I want to thank you, Mr. Chairman, for calling this hearing and your continuous pursuit of information so that we can all know the truth and hopefully be guided by the truth and nothing but the truth.

I thank you and look forward to the testimony of the witnesses and yield back the balance of my time.

Mr. PORTER. Thank you, Mr. Davis.

Mr. Mica, do you have an opening statement today?

Mr. MICA. First of all, let me thank you for conducting this hearing. I think this does followup a previous hearing on the question of whether Federal employees have been involved in falsifying documents.

Those are very serious charges. I think they are particularly serious because it does deal with a very sensitive issue and that is the storage of our nuclear waste.

As everyone knows, this is a controversial program and it also does pose a certain risk. I guess Nevada is the repository and the people of Nevada have great need to be concerned if in fact some of the data has been modified or falsified.

I think it is incumbent on the subcommittee to monitor the activities of our Federal employees and agencies.

I am pleased to see that this is also initiated. I think we will hear about that. I have read about additional investigations being conducted both by DOE in the Office of Inspector and also the Secretary is ordering a technical review of water infiltration modeling and analysis and also conducting other reviews into the records system.

All of these actions, I think, are positive. I thank you, Mr. Chairman, for helping initiate this. As a former chair of this subcommittee, I think oversight is one of our most important responsibilities, particularly where it does deal with the health, safety and welfare of our people.

So, I look forward to hearing the testimony. I, too, hope that this won't be an exercise in the witness just taking the fifth amendment. If he does, I think that we will find other ways to get answers and get to the bottom of whether or not documents have been falsified and improperly handled by the agency.

Again, I am pleased to participate and I thank you for your leadership again on the issue. I yield back.

Mr. PORTER. Thank you, Mr. Mica.

To get into procedural matters at this time, I would like to ask unanimous consent that all Members have 5 legislative days to submit written statements and questions for the hearing record. Any answers to written questions provided by the witnesses will also be included in the record.

Without objection, it is so ordered.

I also ask unanimous consent that all exhibits including an original subpoena which acknowledged the meeting time to be 2 p.m. today be included. No. 2, a letter to Mr. Hevesi agreeing to appear at the 10 a.m. meeting this morning, and also a document which showed the additional subpoena that was issued for the change of time for today's hearing at 10 a.m. I would like to ask unanimous consent.

Hearing no objection, it is so ordered.

I also ask unanimous consent that all exhibits, documents and other materials referred to by Members and the witnesses may be included in the hearing record and that all Members be permitted to revise and extend their remarks. Without objection, it is so ordered.

It is the practice of the committee to administer the oath to all witnesses. Would you please stand, Mr. Hevesi and Mr. Arthur, and raise your right hands?

[Witnesses sworn.]

Mr. PORTER. Let the record reflect that all witnesses have answered in the affirmative. Please be seated. Thank you.

In our first panel today we will hear from Mr. Joseph Hevesi, scientist, U.S. Geological Survey, Department of Interior. You are recognized for 5 minutes, Mr. Hevesi.

STATEMENT OF JOSEPH HEVESI, U.S. GEOLOGICAL SURVEY

Mr. HEVESI. My only opening statement is that I have not been completely uncooperative as you characterized. I have responded to all document requests and will continue to do so.

Mr. PORTER. Thank you, Mr. Hevesi, we appreciate that. I would now like to move into the question and answer segment. We appreciate your being here today. I understand that this is a very major project impacting the country. Again, we appreciate you attending our meeting.

I would like to begin the questioning by first asking you, have you ever falsified any documents relating to the Yucca Mountain Project?

Mr. HEVESI. I have never falsified any documents relating to the Yucca Mountain or any other project.

Mr. PORTER. Did you ever feel pressure from any of your superiors to produce specific model results?

Mr. HEVESI. No, I never did.

Mr. PORTER. In one of your e-mails, exhibit 12 if you would like to see it, what did you mean when you said "The YMP or Yucca Mountain Project has now reached a point where they need to have certain items work, no matter what?" Could you explain that?

Mr. HEVESI. I am meaning that the models need to function numerically. They need to perform the calculations. I am not referencing any other meaning beyond that.

Mr. PORTER. Well, in the next sentence you state, "If the USGS can't find a way to make it work Sandia will." In the last sentence of the paragraph you said, "But they fully realize the problems we are having with the Director's approval thing."

Can you explain what that means? Again, "If you can't find a way to make it work, Sandia will." And then you went on to say, "But they fully realize the problems we are having with the Director's approval thing."

Mr. HEVESI. Well, pertaining to making it work, again, that refers to having the models actually function. A model needs an input file to work and to perform its task, so that had to work.

In terms of Director's approval, the USGS normally requires Director's approval to OK results or data for public release. The USGS is required to release findings to the general public.

Mr. PORTER. "If you can't find a way to make it work Sandia will." Could you explain Sandia's role in the oversight of the project?

Mr. HEVESI. I was working with Sandia scientists. We were on a team.

Mr. PORTER. Did Sandia have a role of oversight? Were they contracted to work on the project as a subcontractor?

Mr. HEVESI. They were in the same position as USGS in terms of performing scientific studies.

Mr. PORTER. But they fully realized the problems you were having with the Director's approval thing. So, would you say Sandia was aware of some of the challenges you were having in trying to find a way to make it work?

Mr. HEVESI. Yes.

Mr. PORTER. In the last sentence of the second paragraph you state, "I can no longer wait for USGS to figure this out. I'm moving ahead according to the PA-Sandia work plan we put together this week." Does this mean that you were going to work on something without approval from USGS?

Mr. HEVESI. No, that is not what that means.

Mr. PORTER. Can you explain what that means?

Mr. HEVESI. Could you repeat the question again to make sure I understand it?

Mr. PORTER. No problem. In the last sentence of the second paragraph you state, "I can no longer wait for USGS to figure this out. I'm moving ahead according to the PA-Sandia work plan we put together this week."

Does this mean that you were going to work on something without proper approval?

Mr. HEVESI. No, it does not.

Mr. PORTER. What does it mean?

Mr. HEVESI. It means that I am going to move ahead with the work that I was already doing.

Mr. PORTER. Even without approval from management?

Mr. HEVESI. No, it does not mean that.

Mr. PORTER. I am sorry. I guess I am confused. So, you are saying that you weren't going to wait for management, you were going to move ahead anyway and that is not in a direct contrary order to your management?

Mr. HEVESI. Could you be specific as to what e-mail you are referencing?

Mr. PORTER. I would be happy to. It is E-mail No. 12 in your material there.

Mr. HEVESI. We were in the proposal phase of the work plan, so the work was being set up and I was in the process of waiting for the formal account to be set up through the USGS.

Mr. PORTER. Let me move on from this one. You state in the next to the last sentence, "What I really need now are some warm bodies to review the work I've been doing."

Does this mean that you didn't receive support from management at that time?

Mr. HEVESI. The proposal that I put forward was asking for more resources.

Mr. PORTER. "What I really need now are some warm bodies to review the work I've been doing." What you are saying, your proposal was for additional moneys?

Mr. HEVESI. It was for additional resources to move forward efficiently with the work.

Mr. PORTER. Is that referring to money, funding?

Mr. HEVESI. I believe so. I don't recall exactly, but in terms of resources I am referring to people to help with the QA and to help with the program development.

Mr. PORTER. What do you mean in the last sentence when you quoted, "Live by the sword, die by the sword?"

Mr. HEVESI. I do not recall what I meant by that statement.

Mr. PORTER. "Live by the sword, die by the sword." It is quite interesting that would be in an e-mail regarding finding a way to make the project work and you don't remember why you said, "Live by the sword, die by the sword."

Mr. HEVESI. No, sir. This e-mail is dated 1998 and I place things in e-mails out of emotional response and I do not recall what I meant by the statement.

Mr. PORTER. Then in general you state the emotional response. What was happening at that point in time? Maybe you can't remember why you used those words, but you do remember the emotion.

What was happening to create this emotion for you to feel that you might need to say something like this?

Mr. HEVESI. During this time there was one opportunity and a final opportunity in a way that had developed that I was a part of encouraging to develop a better version of the model to handle the future climate inputs.

To me and to my colleagues assigned to working on this it was very important that we complete that improved version. The timeline for doing that was very tight.

Mr. PORTER. Did you find that there was a problem accomplishing the goal because of the time constraints that you were put under? Is that why it was an emotional time?

Mr. HEVESI. We knew that we could accomplish the goal, but we also knew it was going to be tight. We knew there was not going to be much leeway in the timeline.

Mr. PORTER. So you were feeling pressure at that point to get the job done?

Mr. HEVESI. Yes.

Mr. PORTER. OK. Mr. Davis, do you have questions?

Mr. DAVIS. Thank you very much, Mr. Chairman.

Mr. Hevesi, did you falsify scientific measurements for the Yucca Mountain Project?

Mr. HEVESI. No, I did not.

Mr. DAVIS. To your knowledge, did any other USGS scientist falsify any documents?

Mr. HEVESI. To my knowledge they did not.

Mr. DAVIS. Were quality assurance procedures clearly outlined and defined for scientists to follow?

Mr. HEVESI. In some cases the quality assurances procedures were evolving, so they would change at times at that point in the project.

Mr. DAVIS. Were they always specific in writing or were there times when there was verbal communication relative to these assurances?

Mr. HEVESI. They were specific in writing. In some cases there were several revisions or versions of the procedure.

Mr. DAVIS. So there were combinations of communication relative to the procedures which were used?

Mr. HEVESI. That is my recollection, yes.

Mr. DAVIS. Last March USGS scientists testified before the U.S. Nuclear Waste Technical Review Board that the Government's early models showed a high degree of lateral movement of water. That model indicated that much of the water flowed off the Yucca Mountain.

The USGS scientists noted that more recent studies showed that much of the water moved vertically through fractures in the rock. The implication of the scientists' findings was that water can penetrate the mountain and possibly corrode the canisters containing the nuclear waste.

What role did you play in developing the models that found that more water flows through the mountain than originally thought?

Mr. HEVESI. The models themselves do not find or not find that there is more water in the current climate flowing through the site. That comes from field measurements and field data. The models are calibrated or they are made to be consistent with that field data.

My role was to develop the model itself, the Fortran programming, the inputs, to process the outputs and to supply that to end users. It was my role to try to make this model consistent with the field data. My role in the field data collection itself was more limited.

Mr. DAVIS. Do you do e-mails in code? I mean do you have some kind of code that you use? You mentioned that sometimes you respond emotionally. Of course, code would indicate that somebody on the receiving end of whatever one was sending would have to be able to decipher or what that was. I mean, do you have any codes?

Mr. HEVESI. There was no code. What you see are raw, emotional responses.

Mr. DAVIS. So there would not be a recipient on the other end who would be able to pick out and derive a meaning specifically related to something that you had indicated?

Mr. HEVESI. No, not to my knowledge. It is plain English, no code.

Mr. DAVIS. Could you explain why you kept two sets of files?

Mr. HEVESI. Yes. The program that I ran had in some cases input files that could not use header information. So, these are just columns of numbers with no identifiers in the first row.

The QA requirements did require those identifiers. It is easier to decipher the input files. So, the two sets of files are one set that has the header line and the other set does not have the header line. All the numbers in those files are identical. So, in essence, they are identical files.

Mr. DAVIS. And would someone who accessed those files be able to delineate or understand clearly the meaning of the material?

Mr. HEVESI. The header information does add meaning to the files, but not to the degree where an outside individual would readily understand these files.

Mr. DAVIS. Thank you.

Thank you very much, Mr. Chairman.

Mr. PORTER. Mr. Marchant.

Mr. MARCHANT. Why were you called back a few months ago to work on the project?

Mr. HEVESI. Excuse me, would you repeat the question?

Mr. MARCHANT. Why were you called back to work on the project a few months ago?

Mr. HEVESI. There were several reasons. I was providing consultation support to colleagues that were revising the AMR document. They were working to improve the document.

Mr. MARCHANT. Who contacted you to come back?

Mr. HEVESI. I was initially contacted by Ron McCurley, I believe, either Ron McCurley or Dan Levin.

Mr. MARCHANT. Specifically, what missing computer files were you brought back to retrieve?

Mr. HEVESI. There are control files for the models. It is part of the model inputs. I had thought that these were already in the TDMS system. In 2004 it became evident that maybe they were not in the system and this was the request.

Mr. MARCHANT. Were you able to find them?

Mr. HEVESI. Yes.

Mr. MARCHANT. What was the significance of your finding those files?

Mr. HEVESI. I am not sure how significant that was because the files, it would be possible to recreate these files even if the files did not exist. But it is more work to recreate them. It is more efficient to just have the original file.

Mr. MARCHANT. Prior to DOE's public announcement of the e-mails of mid-March did anyone from DOE or USGS management in headquarters contact you in an effort to solicit your insights as to the context of the e-mails you authored and if so, would you identify the official or agency.

Mr. HEVESI. Prior to what date?

Mr. MARCHANT. Mid-March.

Mr. HEVESI. No, I received no contact. I believe my initial contact was March 16th or 17th. I don't recall exactly.

Mr. MARCHANT. At that time, did either of those agencies go through the e-mails with you and ask for explanations of the e-mails and what you meant by the e-mails?

Mr. HEVESI. At my initial contact, a couple of days after I initially became aware of the situation, there was a USGS meeting to discuss the e-mails.

Mr. MARCHANT. Do you think you were given a reasonable time to explain? Do you think that they handled it reasonably and you were able to fully explain what the meaning of the e-mails from your perspective were?

Mr. HEVESI. Yes, I do.

Mr. MARCHANT. Have you felt supported by the agency in confronting the allegations?

Mr. HEVESI. Yes.

Mr. MARCHANT. I understand USGS has referred you and others to the USGS Solicitor's Office in California for guidance. Have you ever felt misguided or misinformed by anyone within the agency or the Solicitor's Office?

Mr. HEVESI. No, I have not.

Mr. MARCHANT. Did anyone other than your attorneys advise you not to speak to us?

Mr. HEVESI. Repeat the question, please.

Mr. MARCHANT. Did anyone other than your attorneys advise you not to speak to this committee?

Mr. HEVESI. No, not in terms of the direct advice, no.

Mr. MARCHANT. Thank you.

Mr. PORTER. Mr. Issa.

Mr. ISSA. Thank you, Mr. Chairman.

I want to commend you for coming here. I have been on the other side, many years ago, and it was only trying to talk about the promise of free trade with Mexico.

The grueling was enough that I didn't think I wanted to come back again. I can only imagine what it feels like to be here to discuss a few e-mails out of 10 million e-mails and then be told this must be the epicenter of all that is important.

I wanted to ask you just briefly, throughout the e-mail in question and the whole QA program, were you given policies and procedures and guidelines that allowed you to go through this process effectively or were there some frustrations and if so, what were they?

Mr. HEVESI. There were very definitely policies and guidelines. The Yucca Mountain Project and the studies I was involved in are unique in that we were undertaking in some cases the model development studies that have not been performed before. So, we were doing unique procedures that were being developed as we were doing the work.

Mr. ISSA. Do you feel that you were given adequate training for this? Is there such a thing as adequate training to prepare you for this zero failure sort of environment that you were put in?

Mr. HEVESI. Yes, I had adequate training. I had Fortran training programming and course work, college course work on the science and continued that training through my employment.

Mr. ISSA. How would you characterize the, if you will, the level of scrutiny, including here today? Do you think it has been fair considering the seriousness of a nuclear storage facility or do you think that candidly we are looking for the proverbial needle in the haystack, even if it is the shortest needle you ever saw?

Mr. HEVESI. I believe this level of scrutiny is 100 percent warranted.

Mr. ISSA. I appreciate that. I appreciate your dedication.

Can you explain for us what were the tiger teams, how they were implemented in the quality process and perhaps educate us a little bit on how you achieved the level of detail in scrutiny that you had to be part of?

Mr. HEVESI. I am somewhat reluctant to define the tiger teams because I am not sure I ever really knew 100 percent what they were. It was part of a review process. My recollection is an action of PVAR procedures.

But it is difficult for me to answer that exactly because I am just going by memory on that.

Mr. ISSA. I will try to close with the question that I like to give people who we put in the hottest light of our country. What should we be doing here in this committee or in the Congress to further the process both of obviously a successful nuclear storage facility and perhaps less of this time-consuming outside the ordinary process type activity?

What could we do different to prevent in the future exactly what you are going through today and perhaps some of the stumbling points that have confused people as to whether or not Yucca Mountain is safe or whether there was a cover-up?

Mr. HEVESI. Perhaps a higher degree of public involvement. Part of the frustration that I was having was not being able to produce the public literature that I was hoping to produce through this process.

The USGS tries to put the information or it has to, it is required to put the information and the findings out to the public in the form of reports and maps. I would have liked to have seen that process to be more efficient.

Mr. ISSA. Thank you.

Mr. Chairman, I yield back.

Mr. PORTER. On E-mail No. 30, Mr. Hevesi, you state that "The model was to be consistent with field observations and had to reflect reality."

You stated that, "Here's the weird news. To get to this milestone through Quality Assurance I must state that I have arbitrarily selected the analog sites. At first I was going to include your e-mail as supporting information in the data package and discuss the work we had used in the worksheets consisting of candidate sites, but since there is no DTM for the results, the message I am getting from Quality Assurance is that I can't use or refer to those results."

How do you explain the e-mail concerning these seven analog sites and why you didn't pick the analog sites randomly?

Mr. HEVESI. I used the sites that Rick Forester was recommending. This e-mail is just discussing the technicality of how we reference that work. The e-mail itself is not 100 percent accurate be-

cause at the time I am writing this I am not aware of leeway in terms of using a to-be-verified status for this type of an input.

Mr. PORTER. You said that the model was to be consistent with field observations and it had to reflect reality. So what you are saying is that you were not aware of all the circumstances at the time you wrote this e-mail?

Mr. HEVESI. Are you discussing the data inputs or the procedures?

Mr. PORTER. Actually, both.

Mr. HEVESI. The procedures on the to-be-verified status of data were going through a stage of development at that time.

Mr. PORTER. The procedures?

Mr. HEVESI. I believe. That is to the best of my recollection.

Mr. PORTER. Did you say procedures for what?

Mr. HEVESI. Data inputs or data that was being used for a model or a process that was not referenceable directly to the TDMS at that point in time.

Mr. PORTER. So you didn't have a procedure at that time? Do I misunderstand?

Mr. HEVESI. I don't recall if it was a written procedure or if it was undergoing development at that point in time.

Mr. PORTER. In E-mail No. 16, we recognize that you didn't write this e-mail, but it was addressed to you. Please explain the best you can. For example, the first couple of sentences, "The bottom line is forget about the money. We need a product or we're screwed and will take the blame. Everybody will say that they told us to go ahead without a plan or budget in place. This is now CYA and we had better be good at it."

How often did you and your colleagues conduct work without a plan or a budget in place?

Mr. HEVESI. In science, you need to develop or perform some level of scoping exercise in order to judge whether what you are proposing to do has a possibility of occurring or concluding. So, it is something that you have to do as a scientist.

Mr. PORTER. You have to move forward without a plan as a scientist; is that what you are saying?

Mr. HEVESI. No. You have to perform scoping exercises.

Mr. PORTER. Your e-mail said, "In all honesty, I've never felt well managed or helped by the USGS Yucca Mountain folks. In fact, as you know, I've often felt abandoned. This time it's no different or worse and we have to work together to get out of this one. I'm still overwhelmed trying to protect the rest of the program from the ravages of what's happening in Denver (funding, which we seem to be blamed for because we got funding) and the current HDP fiascos in the ESF."

Would you please explain what the HDP and ESF mean?

Mr. HEVESI. I am not sure I recall what that means. I don't even see it in the memo. Could you point that out?

Mr. PORTER. Yes. It is in E-mail No. 16. Let me grab the original here. It is signed Allen. On the bottom line it says, "Forget about the money. We need a product or we're screwed."

Do you find that paragraph? It is down toward the bottom.

Mr. HEVESI. And you are asking specifically about the HDP fiascoes and the ESF?

Mr. PORTER. Yes. What does that mean?

Mr. HEVESI. I do not know what that means. My involvement in the program at this point was very limited in the ESF. I was primarily working with the Fortran codes at this point in time.

Mr. PORTER. Does this then reflect that you and your colleagues were managed poorly? Do you think you were managed poorly at this time?

Mr. HEVESI. I do not believe we were managed poorly. Can you define exactly what you mean by managed poorly?

Mr. PORTER. Well, it seems to be consistent throughout regard the e-mails regarding poor management and quality assurance problems. This is another one where it said, "In all honesty I've never felt well managed or helped by the USGS folks. In fact, as you know, I've often felt abandoned."

Do you feel that is the sense of the employees, that they weren't being managed properly?

Mr. HEVESI. I think at certain points in time there is a sense of that, but in general I would not characterize it that way. In certain points in time, and this includes myself, you have a limited perspective or you may have a limited perspective on a situation so you may not know the full story and that resolves itself.

Mr. PORTER. So, you are stating that there are points in time. Do you think then that these points in time could affect the quality of the work on the project and the ability to meet deadlines?

Mr. HEVESI. Not to my awareness, not in terms of the quality of the science, no.

Mr. PORTER. Now, this particular e-mail which was No. 16, did you write this e-mail?

Mr. HEVESI. Are we discussing No. 16?

Mr. PORTER. That is correct, the second paragraph.

Mr. HEVESI. I did not write E-mail 16.

Mr. PORTER. Again, in my summary or overview of some of the e-mails, it talks about management and your frustration with management. You mention the emotional side at times.

Did you ever make any formal complaints to the USGS or DOE project management on any problems with management or with the project?

Mr. HEVESI. I never made formal complaints.

Mr. PORTER. Thank you.

Mr. Davis.

Mr. DAVIS. Mr. Hevesi, do you know how DOE came to realize the Yucca Mountain had to be engineered to safely contain the nuclear waste canisters?

Mr. HEVESI. Could you be more specific with that?

Mr. DAVIS. Well, to arrive at the decision that Yucca Mountain had to be engineered, that is to be scientifically analyzed and studied in order to safely contain or hold the canisters.

Mr. HEVESI. I believe it was always an engineering problem. I believe the site was selected out of the three in 1984 and it has always been an engineering problem.

Mr. DAVIS. Were you involved in any of that science?

Mr. HEVESI. I was involved in collecting some of the field measurements. Are you discussing primarily drip shields? I am not sure I understand what specifically you are referring to.

Mr. DAVIS. I guess what I am trying to determine is how much work had to be done to arrive at the feeling or the understanding or the recognition that this is a safe place to store the waste.

Mr. HEVESI. When I first joined the program we were involved with developing a site characterization plan that was all-encompassing. As the project moved forward, that plan was narrowed down and focused.

Mr. DAVIS. In your opening comment you indicated to the chairman that you had in fact been responsive and that you had responded to document requests. Was there any particular reason that you didn't respond to the invitation to personally meet with staff?

Mr. HEVESI. Yes. I had indicated to the subcommittee staff that I preferred to have these meetings after the investigations that are still ongoing were concluded.

Mr. DAVIS. You indicated that you wanted the investigations to have taken place and then you would be prepared or willing to have further discussions or meetings?

Mr. HEVESI. I was trying to focus on one situation at a time rather than having two parallel situations.

Mr. DAVIS. There have been some notions and you may have or may not have an opinion about this, but you may have, that there had not been enough resources allocated or generated to fully do the work that needed to be done and that perhaps there was not as much as consistency with the scientists involved in the project.

Do you think that Congress has actually made enough resources available for you and your colleagues to do the kind of work that you need to do?

Mr. HEVESI. I don't think I am at a level to have the knowledge to answer in general terms. In a specific sense, and this is my answer as a hydrologist specifically involved with the surface-based studies, I would have liked to have seen a little more resources being put into the surface water studies.

It is a desert. There is not much surface water. But from a hydrologic standpoint, it is still important.

Mr. DAVIS. Would you say it is not unusual for you to express sometimes a bit of frustration about something that I am working on and maybe feel that I am not getting to where I want to be quickly enough or that there are some impediments that I can't get around?

Mr. HEVESI. I tend to have those frustrations more than most, yes.

Mr. DAVIS. Thank you. Thank you very much, Mr. Chairman.

Mr. PORTER. Mr. Marchant.

Mr. MARCHANT. Based on your work experience, how do you view DOE's management of the Yucca Mountain project?

Mr. HEVESI. Again, I am not certain—I am not at a level, I do not feel that I am at a level to really answer that question.

Mr. MARCHANT. How would you characterize the overall management culture and work environment of the project while you were there?

Mr. HEVESI. From a scientific point of view, it was a very good environment in terms of having the opportunity to study hydrologic issues that in another sense may not be studied. This project is

unique in terms of making a 10,000 year or 1 million year prediction.

Mr. MARCHANT. At any time during your career at Yucca Mountain did you feel the management pressure to complete your work? Did they give you unreasonable deadlines?

Mr. HEVESI. There were deadlines that would require a more simplified approach to solving a scientific issue, but that is always going to be the case. As a scientist we have the tendency to put too many resources into a problem because we are after the right answer, which is the true answer. In often cases you can never get to that point.

Mr. MARCHANT. So they would basically come in and say is this good or bad and you would feel like they needed more of a black and white answer and a scientist is really not ever prepared to give that kind of an answer?

Mr. HEVESI. Could you repeat that? I am not sure I understand that question.

Mr. MARCHANT. Well, in the business I work in, I go to my engineers all the time and say is this good soil or bad soil, if I go out to a project. I feel like sometimes to them that is too black and white a question because they want to give me a much more complex answer than that.

Is that the way it is at DOE; they come in and say is everything OK out there or is it not OK. The scientist is more likely to want to give a more detailed answer than that.

Mr. HEVESI. The scientist has a tendency to give too much detail. I definitely had that tendency and it was the role of oversight to decide when an answer was adequate for the intended use. So, there were reviews to get to that point.

Mr. MARCHANT. Did you ever feel like the incentives, the bonus incentives that were offered by the DOE or its outside contractors were pushing things along faster than you were comfortable with?

Mr. HEVESI. Those incentives never pushed me directly. I was aware of the schedule being potentially affected, but I directly never benefited from that.

Mr. MARCHANT. Did you feel like that was what was pushing you? When you felt pushed and you felt like you were under time constraints, did you feel like it was the bonus system that might have been doing that?

Mr. HEVESI. I knew the schedules were tight. I have no specific information that I can answer that question with 100 percent sureness.

Mr. MARCHANT. In the latter years of your work at Yucca, did DOE allocate more funding toward the engineering efforts rather than to scientific studies on the modeling work?

Mr. HEVESI. I believe so, but again, I am not at a level to ensure 100 percent accuracy with that. I needed the funding for the surface-based studies and the infiltration modeling was diminishing. That is as far as I can really answer that question.

Mr. MARCHANT. Thank you very much.

Mr. PORTER. We will go back to the e-mails again. Will you look at E-mail No. 8? Can you give us some background and context to the statement regarding working with the engineers because that is where the funding was going?

Also, please explain the last two sentences, “Wait till they figure out that nothing I’ve provided them is quality assured. If they really want this stuff they will have to pay to do it right.”

Mr. HEVESI. I would like to answer the second part of that first.

Mr. PORTER. Certainly.

Mr. HEVESI. This had started out as a scoping exercise. I believe it was being referred to as an engineering calculation. When we initiated the work it was very unclear whether this would lead to something that would need to be qualified or not.

So, the need to have this qualified came in after I had performed the work.

Mr. PORTER. And then background and context regarding your working with the engineers and where the funding was going.

Mr. HEVESI. The funding in my circle of colleagues and the people I was working with, we knew that the funding was being directed more toward the underground work and also toward the engineering work.

Mr. PORTER. You said, “Enjoyed the ranting and raving. We are trying to work with the engineers because that’s where the funding is going. Leveling the top of the mountain seemed humorous, but it gave me the chance to make some more cool figures. This little task is history. Wait till they figure out that nothing I’ve provided them is quality assured. If they really want the stuff they’ll have to pay to do it right.”

Again, would you explain to me what you were saying? I guess I don’t understand.

Mr. HEVESI. I had performed the engineering calculation with the model. I finished that and I was happy to provide that information to the engineers. It was never clear to me that this work would need to be quality assured.

When it became evident that there would be a possibility that it would need to be quality assured, I did not see the resources there to do that because I knew that would require a lot more resources.

So, I was concerned that an assumption was being made that the quality assurance could move on without having the resources in place to do so.

Mr. PORTER. It just seems—and I appreciate what you are saying, that you didn’t think this needed to be quality assured. You know, it is almost like, you know, I could be wrong, but it is almost like when you said, “Wait till they figure out that nothing I provided them was quality assured,” it is like is that a surprise? Was that going to be a surprise?

Mr. HEVESI. That is very poor wording on my part in this e-mail. I did not intend, I had no intention of this coming across as a surprise to the engineers. I am simply stating that there may be some miscommunication in terms of assumptions that work was being supported as being quality assured.

Mr. PORTER. Do you and did you feel that the quality assurance program was adequate?

Mr. HEVESI. When a product needed to be quality assured, then yes. But when we were doing work that may or may not need that quality assurance, then it was not there and that was the case in this case.

Mr. PORTER. Bear with me. This is science, so I am asking you from your professional perspective. What you are saying is that not all work was quality assured. Did you have to go back and redo it if it needed to be quality assured?

Mr. HEVESI. No. The work was sound. It is just a matter of the documentation of whether those results would need to go to the TDMS or not.

Mr. PORTER. Let us move on to E-mail No. 21. You said, "I'm going to continue the regional modeling, even if it means ignoring direct orders from Yucca Mountain management."

You need to explain this to us, please.

Mr. HEVESI. What I am saying in this e-mail is actually not really correct. I have a limited perspective on what management knows or doesn't know at the time I am writing this e-mail and I was corrected on that perspective.

So, the e-mails are only reflecting a process of doing the work. They are not reflecting final outcome.

Mr. PORTER. "I'm going to continue the regional modeling, even if it means ignoring direct orders."

What were their direct orders?

Mr. HEVESI. I don't recall what their direct orders are.

Mr. PORTER. So, do you think you ignored their direct orders? It sounds that way, whatever they were.

Mr. HEVESI. It would not be possible for me to ignore their direct orders because management was aware of all the work that I was doing through my supervisor and then through his managers.

Mr. PORTER. Then I must ask why at the end did you state, "So delete this memo after you've read it?"

Mr. HEVESI. This was a personal correspondence between myself and my colleague, so the discussion here is on a personal level. Often we—it is just on a personal level.

Mr. PORTER. So, what did you determine what was going to be personal and what was going to be professional? It seems to me this whole e-mail has to do with the project.

Mr. HEVESI. I am not sure I understand.

Mr. PORTER. We are looking at E-mail 21, correct?

Mr. HEVESI. Correct.

Mr. PORTER. "I've been trying to figure out what's really coming at us with the Tiger Team." I know that you were asked that question earlier and you didn't know what the Tiger Team was.

"So far we have learned that they don't have a solid plan of action," whoever the Tiger Team is. I am adding that editorial comment even though you don't know who they are.

"I have formulated a potential impact list." Now you continue in the e-mail, "Now I'm going to give you the inside scoop. I'm going to continue the regional modeling, even if it means ignoring direct orders."

You refer to the Tiger Team again. "In the end, it's going to be reports that move anything else forward. Tiger Team efforts will just be vaporized. So, the work may be slowed, but I will not let it stop. At this point I am still working to the plan that we've all spent a significant amount of time on to make things happen for 1999. That's the inside scoop. The position we will take for the M&O planners may be much different. So delete this memo."

Why is this a personal memo that you would say to delete? This looks like it all has to do with your job.

Mr. HEVESI. Well, our concern as scientists was to solve the technical problem of the science, of the work itself.

Mr. PORTER. And?

Mr. HEVESI. And we were ensuring that would move forward.

Mr. PORTER. By deleting the document?

Mr. HEVESI. By deleting what?

Mr. PORTER. "So delete this memo." What on this memo was on a personal nature that was not related to your job?

Mr. HEVESI. Just my level of communication is at a personal level. I realize that this is a non-professional memo.

Mr. PORTER. You had answered earlier to my colleague that you didn't know about the Tiger Team, who they were, but you referenced them a couple of times. Are you sure you don't know who the Tiger Team is?

Mr. HEVESI. I knew it had to do with the QA review. I didn't know specifically how that review would be conducted.

Mr. PORTER. Who is the Tiger Team?

Mr. HEVESI. I believe it had to do with the quality assurance review.

Mr. PORTER. They are a team of folks that do the Q&A review?

Mr. HEVESI. I believe so and I believe it was added on as part of the evolving PVAR procedures, what were referred to as PVAR procedures, but I don't have a very good recollection of that.

Mr. PORTER. "In the end it's going to be the reports that move everything else. Tiger Team efforts will just be vaporized."

Doesn't that seem kind of odd that you have no recollection of who they are?

Mr. HEVESI. Well, what I am referring to, to that part of being vaporized, is that it is important for us to do work that becomes a report, that is referenceable and that is out into the public domain.

Oftentimes the reviews, the Tiger Team reviews, would not result in a report that would go out in the public domain necessarily.

Mr. PORTER. Would you please answer one more time? You do not know who the Tiger Team is? You can't remember?

Mr. HEVESI. Specifically, I cannot. I have a vague memory that it had to do with the QA effort. That is as far as I can go with that.

Mr. PORTER. Mr. Davis.

Mr. DAVIS. One additional question, Mr. Hevesi. Has this experience generated any particular feelings that you have about your work and its relationship to decisions that have to be made?

Mr. HEVESI. By feelings, what do you mean by that?

Mr. DAVIS. I mean the process, the fact that you have been compelled to come and function as a witness, the allegations of misconduct, the whole environment surrounding the issue.

Mr. HEVESI. Well, we felt the work was important, certainly. I am not sure I can answer what you mean by feelings.

Mr. DAVIS. Well, if you have no additional, then you have no additional. It hasn't generated any additional thoughts or feelings. You still feel the same way about it that you did beforehand and you still feel the same way about doing what you do.

Mr. HEVESI. I feel that the work is sound. I know it doesn't seem that way with these e-mails. If I can use a quote, the e-mails I characterize myself as being water cooler talk. I would not do that again in hindsight.

Mr. DAVIS. I have no further questions, Mr. Chairman.

Mr. PORTER. Mr. Cummings.

Mr. CUMMINGS. Thank you very much, Mr. Chairman.

Mr. Hevesi, thank you very much for your testimony. You know, as I looked over these e-mails and I listened to your testimony, there is one that really interested me and that is No. 25. As you turn to that, let me say this: As one who has been on this committee for 9 years, more than 9 years, I have seen many people come before this committee, some of them by choice; some of them by force.

In many instances, this committee has, through the mere bringing people here and questioning them in certain ways in the past, and I am not talking about subcommittees, I am talking about the overall committee, it has brought quite a bit of harm to a number of people. This is the same committee that did the Clinton hearings. So, we went through a lot.

As I listen to you and as one who has practiced law for now over 30 years now, I want us to be very fair to you. E-mail No. 25 caught my interest after listening to the excellent questions by my colleagues. This e-mail seems to kind of verify a number of things that you have already said. It sounds like you were just terribly frustrated.

I would like to read parts of it very quickly. "Some nights I have had a hard time going to sleep because I realize the importance of trying to get the right answer and I know how many serious unknowns are still out there and how many quick fixes are still holding things together.

"I'm just trying the best I can with three equations and fifteen unknowns. It seems odd that we have had to push so hard just to get even a little support for this work and, at the same time we end up being the ones most responsible for whether the PA predictions are right or wrong."

Could you explain that to me, please?

Mr. HEVESI. Well, I did feel the work was important, but I can't say, because I am not at that level of knowledge in the project to tell anyone here exactly how important it was relative to all the things that PA has to look at when it runs the entire model that looks at site suitability.

Mr. CUMMINGS. You sounded like a very frustrated person.

Mr. HEVESI. I had my heart in my work and I was intent on doing the best I could to find the correct answer for net infiltration. That is a spatially and temporarily varying number. It is not even a single number. It is a moving target. It is very difficult to measure and it is difficult to model.

My heart was in my work to do the best I could to provide the project with, in essence, a series of maps that characterize net infiltration.

Mr. CUMMINGS. It is interesting that, I would imagine, even Members of Congress, if someone had to look at all our e-mails they might have a field day. I take it that a number of these e-

mails, as you said before in hindsight, you might not have done it the way you did it. But I am sure you didn't expect people to be looking over your shoulder.

I just want to thank you for your testimony and I want to thank you for your service. Sometimes we find ourselves in difficult circumstances. It seems as if it is the worse situation that we have ever been in, but sometimes it opens the light of day so that things can get better. So, I just want to thank you for your testimony.

[The prepared statement of Hon. Elijah E. Cummings follows:]

Opening Statement

Representative Elijah E. Cummings, D-Maryland

Hearing of the Subcommittee on the Federal Workforce and Agency Organization:
"Yucca Mountain Project: Digging for the Truth"

Committee on Government Reform
U.S. House of Representatives
109th Congress

June 29, 2005 at 10 a.m. in 2154 Rayburn

Mr. Chairman,

Thank you for calling this critically important hearing to continue our investigation into the alleged fabrication of scientific data relating to the Yucca Mountain nuclear waste disposal project.

For years, Congress, the President, and the American people have relied in good faith on the Department of Energy (DOE) to provide an objective scientific evaluation of the suitability of Yucca Mountain to function as a nuclear waste repository. In 2002, despite some reservations, Congress voted to support the President's recommendation to approve the Yucca Mountain Project. Congressional approval was ultimately based upon what we believed was sound science demonstrating that a nuclear waste repository at Yucca Mountain would be both safe and effective.

Unfortunately, this Committee obtained documents that seem to indicate the scientific foundation behind the Yucca Mountain Project may have been falsified. Specifically, the emails in question relate to computer modeling in water infiltration and climate studies. However, before we draw any conclusions of our own it is important that we permit a thorough and fair investigation, and accurately assess the context of the documents we reviewed. All citizens be they federal employees or otherwise deserve to be considered innocent until proven guilty.

With that said, it is important that we get to the bottom of these emails. Experts indicate that water infiltration is a central consideration in determining the overall safety of a potential nuclear waste repository at Yucca Mountain. Water permeation at the repository site could corrode containers holding nuclear waste resulting in radioactive leakage.

Mr. Chairman, we must demand that any investigation into this matter distinguishes between those scientists who potentially falsified data and those scientists who were potentially conveying a sense of dissatisfaction with the Yucca Mountain Project in the emails at issue. We owe it to the American people to be thorough in this investigation,

we owe it to our democratic principles to be just, and we especially owe our due diligence to the citizens of Nevada who may be most adversely affected by Yucca Mountain's nuclear waste.

I yield back the balance of my time and look forward to the testimony of today's witnesses.

Mr. HEVESI. Thank you.

Mr. PORTER. Thank you, Mr. Cummings.

E-mail No. 26 I would like to talk about for a moment. Do you know what the writer means by the statement, "Science by peer pressure is dangerous, but sometimes it is necessary."

Mr. HEVESI. I do not. I know that peer reviews of scientific work is always important. It is required.

Mr. PORTER. It had to do with precipitation estimates, correct? According to this memo it was actually to you from Mr. Flint, correct?

Mr. HEVESI. I do not recall the specific memo.

Mr. PORTER. E-mail No. 3, "Our infiltration model has virtually no infiltration in washes; what infiltration there is in washes is basically put there as a fudge factor. I don't want to be too critical here—I could probably tear apart any of our models. Did somebody say seepage? And Joe Hevesi did us a great favor in helping us out for the VA."

Can you explain what they are talking about? They are talking about you. Do you know what they are talking about?

Mr. HEVESI. The original models had a simplified accounting for stream flow in the washes and we knew this. We made it clear with the people that were using results from this model that the stream flow part was simplified.

The term "fudge" refers to that simplification. It does not mean falsification. Scientists use fudge factors in models all the time as a simplified approach to account for something that we would like to have a more sophisticated approach, but for that level of modeling a simplified approach is sufficient.

Mr. PORTER. Again, this has to do with the very genesis of the project and of course that is whether there is any water seepage. Based on the scope of your professional knowledge, do you think that the site is safe for storage of nuclear waste?

Mr. HEVESI. I am not at a level to comment onsite suitability at this point. I can tell you that what I pushed for and what put me in a position to be frustrated with what you see in these e-mails is my desire to improve on that stream flow component.

That became my job and that is what I was pushing forward, a model that accounted for the stream flow component in a much more representative fashion that was representing the physical processes that are out there, not as a simplified fudge factor.

I believe that was important. I continue to believe that is important. As a citizen, I would recommend taking a look at the stream flow component of the hydrology that is out there.

Mr. PORTER. You had commented earlier about the choice of sites had been narrowed prior to your being employed at the site. Certainly, that was a decision made by a lot of other people. I would assume that as you did your research you recognized that filtration or infiltration was a key element in the choice of Yucca Mountain.

I am trying to summarize for those in the audience. Initially the site was picked because there was a limit of any leakage or seepage.

It would seem to me that is your expertise in this area. Aside from the e-mails for a moment, and I appreciate that you are say-

ing that more study needs to happen and whether that means from a funding or a managerial position.

But with your expertise, and if I can maybe narrow the question, is there enough seepage to cause a problem for the storage of nuclear waste?

Mr. HEVESI. I cannot answer that. I know that increased stream flow increases the potential for seepage and with some of the future climate predictions these are just potential future climates because you are asking us to make predictions of from 10,000 to a million years.

There is a lot of uncertainty associated with that. But we do know that with more precipitation there is more stream flow and that has to be considered, especially in terms of focused flow.

Mr. PORTER. In other words, there is seepage and there is a flow and you would like to have more research done on the flow that is there, correct?

Mr. HEVESI. One of the difficulties in working in a desert is that there is no flowing water. The stream flow that we are discussing now are episodic events that may occur, one every 10 years or whatever, once every 5 years.

You need an adequate window of time when working in desert environments to fully characterize that component of the hydrology because of the episodic nature of it.

Mr. PORTER. But you have found certain isotopes in the site from different parts?

Mr. HEVESI. I have not, but I am aware of those studies, yes.

Mr. PORTER. E-mail No. 43, in this e-mail you wrote, "Please do not tell anyone how this was done because then we'll need to get this whole thing through software quality assurance."

Could you explain to us what you are referring to there?

Mr. HEVESI. I am referring to a check I am doing, not on the model itself, not on the pre-processing or post-processing of the results. I am using software to check something else. I was attempting to be humorous in this e-mail.

Mr. PORTER. Thank you.

Mr. HEVESI. I did not believe at all that it would need to go through quality assurance. I am making what I believed at the time to be a humorous comment.

Mr. PORTER. You say, "Please do not tell anyone how this was done." Of course it sends a message that you were hiding something.

Mr. HEVESI. Yes. I am making a joke out of it to the person I am sending the e-mail to.

Mr. PORTER. Thank you.

Congresswoman, do you have any questions today?

Ms. NORTON. No, thank you.

Mr. Davis.

Mr. DAVIS. No.

Mr. PORTER. E-mail No. 44, at the end of this e-mail you wrote, "I can fudge the attachment for BLOCKR7 for now but eventually someone may want to run BLOCKR7 to see what numbers come out and at that point there will be problems."

What were you attempting under the fudge definition regarding this project and what is the significance of the BLOCKR7?

Mr. HEVESI. The BLOCKR7 processes the digital elevation model to generate inputs that are required by the solar radiation sub-routine. By fudge I am referring to putting in the document itself wording and filling holes in the document so that we know as we are developing the document where the placeholders are.

I am not in any way referring to making something up or falsifying it. This is just the development of the document and by “fudge” I mean I am submitting a real rough draft that likely will need to be revised in that part of the document.

Mr. PORTER. So, you are saying, using the definition of “fudge” that this may not be accurate information because we haven’t done all the quality tests of whatever?

Mr. HEVESI. It was ongoing work, yes.

Mr. PORTER. And in E-mail No. 47 you are referring to programs installed at the AMR indicating your lack of knowledge of when these programs were actually installed.

You wrote, “So, I’ve made up the dates and names. This is as good as it’s going to get. If they need more proof, I’ll be happy to make up more stuff, as long as it’s not a video recording of the software being installed.”

Why were you feeling compelled to make up names and dates?

Mr. HEVESI. The programs in question here are again non-essential programs that were being used for checking and visualization. They are not at the heart of the model itself.

It was never apparent to me that the QA requirements would specifically affect these programs. This was the case for the project where it wasn’t always apparent exactly what software would need to be qualified if it was just being used for visualization, for example, or if it is a standard software that is off the shelf and widely available.

Mr. PORTER. Again, you wrote, “So I made up dates and names. That’s as good as it’s going to get. If they need more proof I will be happy to make up more stuff.” So, did you in fact falsify information here?

Mr. HEVESI. This is just a quick, off-the-cuff response on my part to a sudden request coming at me that I did not believe was going to be requested from me at any time.

So, I was actually surprised to get this request. I am making an off-the-cuff remark to identify that I may not know the exact date. My wording here is poor and I should have used an educated guess.

Mr. PORTER. Explain to us what your role was then at the site. What was your position? Were you just doing research or did you have any authority in your capacity?

Mr. HEVESI. My authority was limited. I was primarily doing the research, developing the code and running the model.

Mr. PORTER. So in your emotional responses and maybe flippant responses at times, based on frustration, whatever, are we then to assume that all of your colleagues understood what you were saying, that you were either joking or you were flippant or you were having a bad day? Did they understand that when you would send these type memos?

Mr. HEVESI. I believe so. I believe I had a reputation for being flippant in my e-mails. I am trying to bring attention to the fact

that I am not sure how to respond here and this is my way of doing it.

Mr. PORTER. Why not just report that you didn't know the names and dates of installation rather than make up information?

Mr. HEVESI. That is exactly what I should have done. Can you repeat? Why didn't I report that I didn't know the names? Yes, that is what I am doing here in my own way.

Mr. PORTER. I would like to talk now a little bit about the quality assurance questions. You may not be aware, but there has been substantial questions with the project through the years as to the quality assurance program.

But throughout the e-mails in question you exhibit a great deal of cynicism toward the QA program, policy and procedures. To what or whom did you attribute your frustrations with the quality assurance program?

Mr. HEVESI. To what or whom did I attribute the frustration?

Mr. PORTER. Yes.

Mr. HEVESI. Do you mean to whom did I direct the frustrations or why did I have the frustrations?

Mr. PORTER. Well, actually, both.

Mr. HEVESI. Everyone was well aware of my frustrations. I openly discussed that with colleagues and supervisors and managers.

Mr. PORTER. So you openly discussed it with managers and colleagues? So, you have expressed formally then to management that there are some problems with the quality assurance program?

Mr. HEVESI. I discussed it in terms of characterizing it as now that the procedures are being developed, when we are seeing exactly what the procedures are, there seems to be more work here than what we initially thought. So, our workloads were increasing as the procedures were being developed for quality assurance.

Mr. PORTER. This may have been asked earlier, but I want to ask it again: Do you feel that you received adequate training and guidance on the quality assurance programs?

Mr. HEVESI. I would always read the required quality assurance documentation and yes, I had the training.

Mr. PORTER. Did you consistently follow the quality assurance guidelines and procedures or did you ever deviate from these procedures?

Mr. HEVESI. I consistently followed the procedures.

Mr. PORTER. Did you ever receive a deficiency report based upon the audits of the quality assurance programs?

Mr. HEVESI. I cannot answer that specifically on recollection. I have a vague memory of deficiency reports, but I have no specific recollection.

Mr. PORTER. Did you feel that the quality assurance requirements and procedures unnecessarily delayed other important work on the project?

Mr. HEVESI. Could you repeat that again, please?

Mr. PORTER. Did you feel that the QA requirements and procedures unnecessarily delayed other important work on the project?

Mr. HEVESI. By defining important, my characterization of important is addressing technical issues, for example, how stream flow is being handled in the washes. Yes, that was part of my frustration, was that at times I had the perspective that I wasn't able

to solve the stream flow problem, for example, because I was busy quality assuring another component of the model.

Mr. PORTER. Earlier in the questioning you had stated in an answer to one of the questions, and I don't want to take it out of context, so I will need your help. I believe it had to do with the scientific study and engineering and whether there was enough funds going into the study as opposed to finding an engineering answer to the infiltration problem.

You said there has always been an engineering problem. Do you know what you were talking about a little bit earlier about there always has been an engineering problem?

Mr. HEVESI. For an underground repository you are always going to have to engineer to dig the tunnels and the caverns and to in-place the canisters. I assumed that would be the case.

Mr. PORTER. For laymen, which we are, the bulk of those in this room, including this panel, can you explain the high flux, low flux debate in the scientific community as it relates to water infiltration at Yucca Mountain?

Mr. HEVESI. How do you mean discuss?

Mr. PORTER. Can you explain the debate? Tell us what is happening with the high flux and low flux debate in the scientific community.

Mr. HEVESI. The flux issue is complicated because it depends on where you are in time and space on the mountain. It can have high variability. So, depending on how you are measuring it and in what location you are measuring it and what point in time you are measuring it or modeling, you can have very different answers.

So, it is a complicated issue that received a lot of discussion in the scientific community.

Mr. PORTER. Based on your infiltration and climate studies, what are your conclusions with regard to water and movement inside the mountain? What is your conclusion?

Mr. HEVESI. The studies I was performing were limited to the ground surface and the shallow subsurface. I was providing results to downstream modelers that were modeling the deeper, unsaturated zone. I cannot speak to that specifically.

Mr. PORTER. But your studies, were they accepted by DOE?

Mr. HEVESI. Were they accepted?

Mr. PORTER. Yes, the studies that you performed were accepted.

Mr. HEVESI. Yes.

Mr. PORTER. Did the findings of your studies or the conclusions of any other workers on the project, infiltration and climate studies, in any way contribute to DOE's effort in altering their original plan and vision of Yucca Mountain as a natural barrier toward more engineering modification and measures?

Mr. HEVESI. I believe so, yes. I was working under Dr. Flint. I came on the program and part of my task in 1988 was to help out with the field monitoring of natural infiltration through a network of approximately 100 neutron access bore holes that were logged once a month.

Initially, these appeared to be dry because we were in a drought phase in the studies. In the early 1990's we had a series of wet winters that did completely change our thinking on the hydrology of Yucca Mountain.

The data collected from the neutron bore holes was one of the reasons why the thinking was being changed. But there was a wide variety of studies that were starting to come in at about that time and they were supporting each other in terms of higher net infiltration than originally thought was the case.

Mr. PORTER. I am going to ask this question a different way than I asked it earlier. But based upon your knowledge and findings pursuant to the water infiltration studies and future climate scenarios you conducted at Yucca Mountain, what is your assessment of Yucca Mountain as a repository for safe storage of nuclear waste?

Mr. HEVESI. I am not in a position to answer that. The USGS was never in a position and our job was never such to make a recommendation onsite suitability. We were specific in collecting field data, performing the studies, developing the models to develop results, but not to make decisions onsite suitability.

Mr. PORTER. Didn't you also do work on future climate scenarios?

Mr. HEVESI. I did not specifically work on those scenarios in terms of studying the likelihood or doing the actual studies of what a future climate might be. I was involved with the researchers doing that type of work because they were supplying me their results as input to the model that I was running.

Mr. PORTER. You had mentioned earlier, for those that haven't visited the deserts of Nevada, that there is not necessarily flows, but there can be, every 5 years or 10 years or however you want to categorize it, water that is unusual to the area.

Mr. HEVESI. They are dry washes, but you can actually have a flash flood occur.

Mr. PORTER. So, you mention these future possible flash floods, the 5-year or 10-year. Did you take into consideration the effects of global warming in your studies?

Mr. HEVESI. At one point we were and then we were redirected not to account for that and I can't answer specifically why that occurred. But at some point in the study the global warming issue was being taken into consideration.

Mr. PORTER. And then you were advised not to use that for some reason?

Mr. HEVESI. I don't know how to characterize it. I wouldn't say advise, but I believe that other scientists working on that issue concluded that it may not be significant relative to longer terms changes in climate, glaciations, etc.

Mr. PORTER. Do you feel that the USGS is an advocate for the project?

Mr. HEVESI. The USGS does not take a position pro or con.

Mr. PORTER. Mr. Hevesi, you know we are almost concluded, so I appreciate your being here this morning.

In E-mail No. 18 please explain when you say, "The Yucca Mountain Project is looking for the fall guys and we are high on the list. I got a strong feeling at the PA meeting that the high level folks are starting to pay very close attention to who they will come after when things hit the fan. Who got how much funding and at what time will all be long made clear that this will be like the O.J. trial where results are completely thrown out because of minor procedural flaws or personal attacks on credibility."

Who are these high level folks?

Mr. HEVESI. I am not sure I recall what I mean specifically by high level folks. What I am conveying in this e-mail is that I had the feeling that—I am trying to recall what my thoughts were in this e-mail and it is a little bit difficult because——

Mr. PORTER. “The Yucca Mountain Project is looking for the fall guy.” As a layman it seems to me that is saying that——

Mr. HEVESI. Well, I was concerned that decisions were being made at a high level where as scientists we had done the work we could within the funding limitations or time limitations, so we just did the best job we could.

In terms of the quality assurance, we were documenting specifically what was done at certain points in time.

Whether that was the best product possible given unlimited funding, we could not say. If it turned out that was not the best product, then it would still be our responsibility. So, I had a concern about that.

Mr. PORTER. So, your concern is that you would be held responsible. If you didn't have enough time or even enough funding, that you may well be responsible if they didn't get the results that they were looking for.

Mr. HEVESI. Well, specifically in terms of the model that I was developing and running, this net infiltration model, I felt that it was fully adequate in 1999 to support the whole PA process and to feed into the downstream modelers.

I was hoping for the opportunity to improve on that model because as a scientist I wanted to bring in more detail and make model improvements. I was concerned that if at some future point, as more information comes in, because 6 years have gone by now, so more information is known and the adequacy of the model may turn out to be not as high as we thought at that point in time and it would be my responsibility for having made the decision that the model was adequate.

But I did not feel that I ever made that decision alone because there were reviews of the scientific work and a decision on whether the results were adequate or not were being made at a higher level.

Mr. PORTER. Mr. Hevesi, we appreciate your being here today. Thank you for your testimony. I would like to ask, No. 1, we will be sending you some additional questions. We would appreciate if you would answer those questions.

Also, would you be willing to meet with our staff in the future to cover any additional questions that they might have?

Mr. HEVESI. Yes.

Mr. PORTER. Again, we appreciate your being here. Thank you. I'm sorry, before you leave, is there anything you would like to add before you conclude?

Mr. HEVESI. I would just like to say that I, too, am somewhat horrified when I look at my own e-mails. This whole process has been a learning process for me where I realize that an e-mail is actually an official documentation.

I was not perceiving e-mail that way. I perceived it as an outlet medium, in essence water cooler talk. I have completely rethought how I used the whole e-mail system and how I communicate with others.

Mr. PORTER. Thank you very much.

Now, I would like to invite our second panel witness to please come forward to the witness table. Our second panel will be Mr. W. John Arthur III, Deputy Director, Office of Repository Development, Office of Civilian Radioactive Waste Management, Department of Energy.

Mr. Arthur, we are pleased to have you here today. You will have 5 minutes.

STATEMENT OF W. JOHN ARTHUR III, DEPUTY DIRECTOR, OFFICE OF REPOSITORY DEVELOPMENT, OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT, DEPARTMENT OF ENERGY

Mr. ARTHUR. Thank you, Mr. Chairman and members of the committee. I am John Arthur, Deputy Director of the Office of Civilian Radioactive Waste Management for Repository Development.

My office is located in Las Vegas, NV and I have been with this program for the last 2½ years.

We are here today because of a series of e-mails by a few people that suggests an intentional failure to comply with quality assurance requirements.

Let me first say how disappointed I am with the circumstances that have brought us here today. I take this matter very seriously and, as you are aware, the Department of Energy has disclosed it forthrightly and freely. Any falsification of records or data or other misconduct is completely unacceptable and inexcusable. We conduct our work at the Yucca Mountain repository project with our first priority on ensuring the health and safety of the public and workers, while protecting and safeguarding the environment.

These objectives have been guided by more than 20 years of scientific study by some of the best scientists and engineers in the world. These scientists and engineers have come from our own national laboratories, the international scientific community, universities including the university and community college system of Nevada, Federal agencies, as well as numerous government contractors.

The expertise assembled to work on this project is truly world class and their work is the basis for the Yucca Mountain repository safety analysis.

During our internal cataloging of materials for the Nuclear Regulatory Commission license application process, specifically the license support network, Yucca Mountain Project employees discovered a series of e-mails written between 1998 and 2000 by a few U.S. Geological Survey employees. These e-mails appear to indicate an intention to falsify quality assurance information and willful misconduct or non-compliance with quality assurance requirements associated with water or moisture infiltration modeling at Yucca Mountain.

Shortly after I was briefed on this matter on March 11, 2005, the Department of Energy's Office of Inspector General and the Secretary's office were notified. Additionally, we notified the Department of Energy, the Nuclear Regulatory Commission, Congress and also the State of Nevada.

On March 16, 2005, the Secretary of Energy ordered an immediate scientific investigation of the data and documentation that was part of this modeling activity as well as a thorough review of all the work completed by individuals to determine whether any other work was effected.

I would like to put this matter into perspective. Out of more than 10 million e-mails, the object of this hearing is a handful of e-mails that indicate a possible intentional circumvention or misrepresentation of compliance with the Yucca Mountain Project quality assurance requirements by these same USGS employees.

The Department of Energy has used USGS since 1983 and has invested approximately \$380 million in USGS research to support the repository program, pursuant to an interagency agreement.

Under this agreement, the USGS was required to comply with applicable quality assurance requirements. The safety analysis established by the work products are prepared and peer reviewed by qualified scientists and engineers from our country's national labs and top technical institutions to ensure a sound and quality technical safety basis.

Through the licensing process, the Nuclear Regulatory Commission will ultimately decide whether the repository receives a license.

Our quality assurance expectations are spelled out in a work agreement between the Department of Energy and USGS, clearly and unambiguously. Problems with Mr. Hevesi's adherence to QA requirements were first identified in a DOE quality assurance audit in January 2000.

Corrective actions were implemented and verified in mid-2000. DOE conducted a followup quality assurance audit in February 2001 and concluded that the USGS had made improvements and was effectively implementing the quality assurance program.

The e-mails themselves did not suggest that any scientific measurements were falsified. However, because our quality assurance requirements were not met, no matter how good Mr. Hevesi's work products and modeling may be, these products cannot be used in the licensing proceeding without re-verification or replication of the specific work.

Fortunately, our regulator, the Nuclear Regulatory Commission, has a procedure on how to deal with information that has been qualified through other procedures. That is NRC NUREG Document 1298, Qualification of Existing Data for High-Level Nuclear Waste Repositories.

We are currently evaluating the data in question using this protocol. Preliminarily, we believe there is ample corroborating data from non-USGS sources, including the State of Nevada itself and extensive peer review of the infiltration model that validates the technical basis for the project.

In addition to the processes I have described above, the Department of Energy is taking other actions. First, an investigation is being conducted by the DOE Office of Inspector General.

Second, the Secretary of Energy ordered a technical review of water infiltration modeling and analysis.

Third, the Department is conducting a number of reviews into our records system to determine whether similar behavior has been exhibited by others.

Over the next several months, summary reports of these evaluations will be issued.

In summary, the Yucca Mountain Project is very important to the energy security of the United States. This project has been and will always be based on sound science and engineering.

We are currently in a process to reevaluate data that has come under question on the infiltration model because our quality assurance requirements may not have been met. We will take whatever action is required to ensure that we have a sound technical basis going forward.

Thank you.

[The prepared statement of Mr. Arthur follows:]

**Statement of
W. John Arthur III, Deputy Director
Office of Civilian Radioactive Waste Management
Office of Repository Development
U.S. Department of Energy
Subcommittee on Federal Workforce and Agency Organization
Committee on Government Reform
U.S. House of Representatives
June 29, 2005**

Mr. Chairman and members of the Committee, I am John Arthur, Deputy Director of the Office of Civilian Radioactive Waste Management for Repository Development. My office is located in Las Vegas, Nevada and I have been with this program for the past two and one half years.

We are here today because of a series of e-mails by a few people that suggests an intentional failure to comply with quality assurance requirements. Let me first say how disappointed I am with the circumstances that have brought us here today. I take this matter very seriously, and as you are aware, the Energy Department has disclosed it forthrightly and freely. Any falsification of records or data or other misconduct is completely unacceptable and inexcusable.

We conduct our work at the Yucca Mountain repository project with our first priority on ensuring the health and safety of the public and workers, while protecting and safeguarding the environment. These objectives have guided more than twenty years of scientific study by some of the best scientists and engineers in the world.

These scientists and engineers have come from our own national laboratories, the international scientific community, universities, including the University and Community College System of Nevada, Federal agencies, as well as numerous government contractors. The expertise assembled to work on this project is truly world class and their work is the basis for the Yucca Mountain repository safety analysis.

Specifics of the Issue

During our internal cataloging of materials for the Nuclear Regulatory Commission (NRC) License Application process, specifically in the Licensing Support Network (LSN), Yucca Mountain Project employees discovered a series of e-mails written between 1998 and 2000 by a few U. S. Geological Survey employees. These e-mails appear to indicate an intention to falsify quality assurance information and willful misconduct or non-compliance with quality assurance requirements associated with water infiltration modeling at Yucca Mountain

Shortly after I was briefed on this matter on March 11, 2005, the Department of Energy's Office of Inspector General and the Secretary's Office were notified. Additionally, we notified the Department of the Interior, the NRC, Congress, and the state of Nevada.

On March 16, 2005, the Secretary of Energy ordered an immediate scientific investigation of the data and documentation that was part of this modeling activity as well as a thorough review of all the work completed by the individuals to determine whether other work was affected.

I would like to put this matter in perspective. Out of more than ten million e-mails, the object of this hearing is a handful of e-mails that indicate a possible intentional circumvention or misrepresentation of compliance with Yucca Mountain Project quality assurance requirements by these same USGS employees.

The Department of Energy has used USGS since 1983 and has invested approximately \$380 million in USGS research to support of the repository program, pursuant to an interagency agreement. Under this agreement, the USGS was required to comply with applicable quality assurance requirements, and was responsible for assuring technical performance, the technical quality of its products, and defending the technical quality of their work on the Yucca Mountain Project and with apparently one or two exceptions, they did.

The safety analyses established by the work products are prepared and peer reviewed by qualified scientists and engineers from our country's national laboratories and top technical institutions to ensure a sound technical safety basis. Through the licensing process, NRC will ultimately decide whether the repository receives a license.

Status

Our quality assurance expectations are spelled out in the work agreement between the Department of Energy and the US Geological Survey, clearly and unambiguously. Problems with Mr. Hevasi's adherence to QA requirements, though not the existence of previously discovered emails, were first identified in a DOE QA audit in January 2000. The majority of the QA program issues from the emails were documented in deficiency reports. The deficiencies were related to software controls, the lack of a scientific notebook, and traceability and transparency issues. Corrective actions were implemented and verified in mid-2000. DOE conducted a follow-up QA audit in February 2001 and concluded that the USGS had made improvements and was effectively implementing the QA program.

The e-mails themselves did not suggest that any scientific measurement was falsified. However, because our quality assurance requirements were not met, no matter how good Mr. Hevasi's work products and modeling may be, these products cannot be trusted today without reverification or replication of the specific work.

Fortunately, our regulator, the Nuclear Regulatory Commission has a procedure on how to deal with information that has not been qualified through other procedures: NRC NUREG-1298, *Qualification of Existing Data for High-Level Nuclear Waste Repositories*. NUREG-1298 was developed to evaluate and "qualify" data that was obtained without an appropriate QA program in place. Although the USGS infiltration estimates were gathered with a QA program in place, the concerns raised by the emails make it prudent to assume that the infiltration estimates effectively were

produced absent a QA program, thus warranting the application of NUREG-1298. NUREG-1298 discusses several attributes as part of the qualification process, including (1) the extent and quality of corroborating data or confirmatory testing results and (2) prior peer review of other professional reviews of the data and their results. We are currently evaluating the data in question using this protocol. *Preliminarily*, we believe there is ample corroborating data from non-USGS sources, including the State of Nevada itself and extensive peer review of the infiltration model that validates the technical basis for the project.

In addition to the process that I described above, the Department of Energy is taking the following other actions:

- First, an investigation is being conducted by the DOE Office of Inspector General.
- Second, the Secretary ordered a technical review of water infiltration modeling and analyses.
- Third, the Department is conducting a number of reviews into in the record systems to determine whether similar behavior has been exhibited by others.

Over the next several months, summary reports of these evaluations will be issued.

Summary

In summary, the Yucca Mountain project is very important to the energy security of the United States. This project has been and will always be based on sound science and engineering. We are currently in a process to re-evaluate data that has come under question on the infiltration model because our quality assurance requirements may not have been met. We will take whatever action is necessary to ensure that we have a sound technical basis going forward.

Mr. PORTER. Mr. Arthur, thank you again. Thank you for being here.

I would like to open by just asking you some basic questions as to why the Department of Energy has refused to provide for Congress documents other than those that we had asked for initially and why did you refuse to meet with us privately and why have other DOE officials chosen not to meet with our committee?

Mr. ARTHUR. First of all, Mr. Chairman, we did provide information from the committee's request. I believe it was in late March. We did not want to interfere at the time or now with any ongoing IG investigations.

We do have, as I believe was mentioned previously, our DOE reading room which was made available to your committee staff to review documents and additional information will be provided as we complete our reviews that are underway.

Mr. PORTER. The IG investigation, maybe you are not aware of this, but the IG has been very clear that your involvement and testifying and/or meeting with this committee would not interfere with their investigation whatsoever.

But you chose not to meet with the committee and obviously advising other employees not to meet with the subcommittee.

Mr. ARTHUR. I don't believe I personally advised any.

Mr. PORTER. Do you think anyone has?

Mr. ARTHUR. I am not aware of that, sir.

Mr. PORTER. You are not aware that your employees—

Mr. ARTHUR. I have talked once to, I believe, one of your staff and I believe we did offer a tour, a meeting and a visit. I am here today to answer questions you have.

Mr. PORTER. Why did you initially refuse to meet with us regarding the Yucca Mountain Project?

Mr. ARTHUR. I believe I was on travel back there, but I mean I am here today to answer any questions you have.

Mr. PORTER. Regarding the documents that we have requested, this past Friday a memo appeared from DOE stating that if we want to see the documents we can come to DOE.

It has been days, weeks and months since we requested this information. It is obvious to me that you have been very uncooperative. Why are you being uncooperative?

Mr. ARTHUR. I believe the letter you are responding to, Mr. Chairman, is from our chief counsel at DOE and I would have to have him answer the question on that.

Mr. PORTER. Is he here today?

Mr. ARTHUR. No, sir, he is not.

Mr. PORTER. OK. The IG investigation, why are you advising employees not to be interviewed if in fact the IG has agreed that it is not interfering with their investigation.

Mr. ARTHUR. If my employees in similar and other investigations wish to be interviewed, I don't believe I have set any requirements that they cannot meet with you or members of your staff.

Mr. PORTER. To your knowledge, has anyone told the employees of DOE not to talk?

Mr. ARTHUR. I am not aware of that, sir.

Mr. PORTER. You are not aware of that. OK. Let us go back to December 2004. Pursuant to documentation provided by DOE, the

first knowledge of serious issues contained in e-mails occurred during the first week of December 2004. The investigation staff has learned that it was not until March 11th that any specific action plan was taken by the Department to address these issues.

How do you account for this gap in this timeline?

Mr. ARTHUR. First of all, my records show it was early November. I had an independent review for a member of my office at DOE to take a look at the contractor information.

It was in early November, I understand, that the information was first found. That information was first relayed to my office on March 11 and I took immediate action, as I said in my testimony.

In the review that I had our office do, I could not find any purposeful holding of the information by the contractors. It was clearly wrong and it should have come to me soon.

We are taking all the necessary action, since it was brought to me on March 11th.

Mr. PORTER. So, you discovered it in early November?

Mr. ARTHUR. I did not. Members of the contractor's staff, Bechtel SAIC, did.

Mr. PORTER. And then they notified DOE in early November?

Mr. ARTHUR. No. I had no notification until March 11th.

Mr. PORTER. So you did not receive notification. Did anyone at DOE receive notification prior to March 11th?

Mr. ARTHUR. As I understand there was a telephone call. I do not—I apologize—have the exact date. I believe it was in December where an issue was discussed with representatives of our DOE staff. However, there was nothing talked about falsification or actually records, similar records of the e-mails provided.

Mr. PORTER. What steps were taken then upon that initial phone call?

Mr. ARTHUR. Nothing, nothing. Nothing was brought up about, you know, falsification or these kind of issues that would trigger the review that I did when it was brought to my attention on March 11th.

Mr. PORTER. The review and the information that you provided this committee, as you stated, was voluntarily provided although it was initiated by the State of Nevada by a lawsuit, correct, for this information to become public?

Mr. ARTHUR. Well, first of all, our certification for the license support network, Mr. Chairman, it was denied last summer. It did require that inactive e-mails additionally be reviewed. It was during a review of those e-mails that our people had found it and it was on March 11th when I brought this information to the Inspector General and kicked off a number of our internal technical reviews.

Mr. PORTER. You say that a staff member was contacted. Who was that individual?

Mr. ARTHUR. A staff member from DOE. I believe one of our attorneys, I don't remember which one; I will get that and provide that for the record, and possibly one contractor attorney were involved in that. I will have to provide the names, if I can, to supplement the record.

Mr. PORTER. That would be fine, thank you.

Mr. ARTHUR. We will get that.

Mr. PORTER. This will be one of the largest public works projects in the history of the country. With that huge responsibility for the health and safety of millions of Americans, why did it take 7 years for DOE to figure out that there were some problems internally with these memos and some question regarding the possible falsification or even the science? Why did it take 7 years?

Mr. ARTHUR. Well, first of all, we did not do random searches of e-mails back in that timeframe. However, as I did mention, our quality assurance program did do an audit in January 2000. It picked up many of the issues that were brought up in the e-mails, including non-availability of a field notebook, some issues associated with transparency and traceability and some issues with software.

As I mentioned in my testimony, corrective actions were taken and our team, the Department of Energy came back and verified that those actions were closed out.

Mr. PORTER. It seems to me that throughout this process of trying to gather information there is always that statement, and you mentioned it this morning, that the NRC will decide whether the science is accurate.

Isn't it DOE's responsibility to determine that?

Mr. ARTHUR. Well, it is clearly ours. My point in making that, Mr. Chairman, is the fact that there are many levels of independent review outside the Department of Energy. I meant that the Department of Energy will ultimately have the hearings and rule on the license application.

But yes, the Department of Energy will not submit a license application until this issue is resolved and we are sure that it meets the necessary requirements.

Mr. PORTER. You also mentioned that by putting it in perspective you are assuming that the e-mails amount to only a handful more than 10 million e-mails and they were exchanged over the course of this project.

I must say that I disagree that your assertion that these e-mails deal with water infiltration in which it is again part of the very core argument that the DOE has approached the President and Congress about the suitability.

As we talk about feasibility, you stated that you were aware of them in early 2000 and obviously didn't take any steps to correct them. Is that accurate?

Mr. ARTHUR. What I meant, Mr. Chairman, you say early 2000, that is the quality assurance reviews.

Mr. PORTER. Well, I am just repeating what you just said.

Mr. ARTHUR. In 2000 we were doing quality assurance reviews on a limited amount of U.S. Geological Survey products. Based on that we took the necessary corrective actions based on that audit.

However, as I mentioned in my remarks, based on the preliminary review, and that will not be finalized until ongoing reviews are completed, we believe there is a sound technical basis for the site recommendation and draft license application.

Mr. PORTER. I have one more question, then I will turn it over to my colleague. I am a little confused. You said that Mr. Hevesi's work is technically feasible in one sentence and then claim that his

products cannot be trusted today without re-verification or replication.

Even though Mr. Hevesi's work based on collaboration with other scientists, everyone knows that a chain is only as strong as its weakest link. How can you on one hand say it is OK and on the other hand say it is not?

Mr. ARTHUR. I mentioned, Mr. Chairman, that we are using a Nuclear Regulatory guide to look at the technical validity of the information that Mr. Hevesi created, and that was the moisture infiltration.

Based on a combination of corroborative studies, as well as other external peer reviews, we conclude the technical basis is there. However, in an NRC license process or for any license application that the Department of Energy of submits, we have to rely on the individuals and the following of quality assurance procedures.

It is not just the technical products; it is following the proper procedures and quality to get there.

Mr. PORTER. Let me interrupt for a moment. Mr. Treadwell, are you still with us? Please know that it is OK. I know you have a plane to catch. I am not sure if he is listening in the other room. Please know it is OK.

Mr. Arthur, let us go back to the timeline. From the time that you found out on March 11th?

Mr. ARTHUR. That is correct, yes.

Mr. PORTER. And I expect you are answering only for your knowledge; not for anyone else in the organization. What is the timeline? What happened from that point forward? What did you do?

Mr. ARTHUR. On the 11th, and I want to verify that was a Friday, I know it well, March 11th. I immediately got the information. I was briefed. I was actually first called the night before by my employees concerned, the manager. We met in my office the first thing the next morning.

It took me about a very small amount of time to look at that, the significance of these e-mails. I immediately notified the Inspector General's regional office in Albuquerque, NM. At the same time I notified our Washington Department of Energy offices and the other contacts that I mentioned in my testimony.

Mr. PORTER. At what point then were employees interviewed regarding the situation?

Mr. ARTHUR. As far as my own personnel, first of all, I have not conducted the interviews. Investigations are being done by the Inspector General's office. I am not involved in that.

Mr. PORTER. So that DOE is not doing it. It is the Inspector General?

Mr. ARTHUR. It is the Department of Energy's Inspector General's office, an independent arm that actually does these reviews.

Mr. PORTER. DOE is not doing its own review? It is using the IG?

Mr. ARTHUR. Let me just clarify. When you said investigations, I have not done any investigations. That is done by our Inspector General's office.

What I did then, I think it was that Saturday or Sunday, met with our staff to say what does this mean and how do we start

moving forward. So, we were working between our office and Las Vegas and Washington to determine a path forward.

We started to scope out a series of technical reviews, first of all to look at the extent of information that was touched by these e-mails. So, we tried to determine how much data, how much models and other information.

Second then, we wanted to start an approach to evaluate it and see does it have any impact on the technical basis of the site recommendation and license application.

The third part of that review was to say, now with that, what corrective actions do we have to take. We are still in the process of outlining that path forward.

Mr. PORTER. Mr. Davis, do you have a question?

Mr. DAVIS. Thank you very much, Mr. Chairman. I think that was actually where I was going to start was whether or not there has been any changes in the review of the quality assurance guidelines since these allegations have surfaced.

Mr. ARTHUR. If I can just clarify, Mr. Davis, you are referring to the March date when e-mails came forward or do you want me to go back into the 1990's?

Mr. DAVIS. After the e-mails came forward.

Mr. ARTHUR. I will have to check and answer that, supplement the record. I am not aware. I mean we have had a revision to our quality assurance program, to our quality assurance requirements document, but I believe that was underway about or around the time this came up, but it was not caused by this issue.

I will have to check and see if there was any other provisions we have made.

Mr. DAVIS. Under the investigation that is underway has there been any report of findings that would give you cause to believe or to think that there might have been some falsification of some official documents and records by employees?

Mr. ARTHUR. Again, I am not able to speak about what our Inspector General has found. On our side some of these issues such as earlier quality assurance reviews that I brought up, we found some of those kind of areas. But as far as any falsification, I have not found anything on our reviews to support that. Our IG will have to answer that question specifically.

Mr. DAVIS. Would it be fair and accurate to suggest that you have an ongoing review and that perhaps there hasn't been enough time to determine what kind of changes might be necessary?

Mr. ARTHUR. That is correct. The reviews are still underway. That is why I said the conclusions are very preliminary that I presented here today. Those reviews, we believe, will all be completed over the next several months.

Mr. DAVIS. Mr. Chairman, I have no further question of the witness.

Mr. PORTER. Would you explain your involvement in the work plan that was posted on the office of Civilian Radioactive Waste Management Web site following this committee's hearing on April 5 and that was later removed by DOE that same week?

Mr. ARTHUR. I and my staff created that plan. When I say staff, it was some members from my Department of Energy Office of Re-

pository Development. Some of our contractors were going to help and review it.

At the time, Mr. Chairman, we were trying to scope out an approach that would be reasonable and various lines of inquiry we followed to evaluate what impacts, if any, this causes to the project.

Mr. PORTER. In Pahrump, NV, in reference to a Las Vegas Sun article, June 7, NRC staff told data site in Yucca Mountain e-mails is sound.

So you testified, or someone testified, I guess it was you, that the net infiltration estimates are technically defensible in early June. Today you are telling that you still have ongoing studies.

Which is it?

Mr. ARTHUR. What I mentioned to the Nuclear Regulatory Commission in that meeting, Mr. Chairman, is the same thing I am bringing up today. These are preliminary conclusions. Preliminary conclusions indicate there is ample corroborating data and extensive peer review of infiltration models that provides the technical basis for the project.

I will provide for the record a summary of those studies and documents that support that. This is not our final report, but I will provide to you the references by which we draw the conclusion, which include the State of Nevada, it includes the University of Connecticut, the Lawrence Berkeley Lab and a number of top institutions around the United States as well as the world.

Mr. PORTER. So, you are telling me that in this document is the answer to the questions that the subcommittee has asked since April?

Mr. ARTHUR. What this will provide, Mr. Chairman, is that again preliminary information supports our preliminary conclusions that the technical basis is sound. Again, it comes down to the actual moisture infiltration rates that were generated by the U.S. Geological Survey and independent corroborating studies, not just in the State, but in the region and around the United States in dry climates that draw similar conclusions that those numbers are in the range.

Again, it is about a 2 to 3 percent moisture infiltration rate that occurs based upon the total amount of precipitation that comes to the top of the mountain.

Mr. PORTER. Again, this is a study, but does it include the answers to our questions as a subcommittee that were presented on April 5th, I believe?

Mr. ARTHUR. I don't believe this includes all answers. It is one piece of critical information and references supporting some of the answers.

Mr. PORTER. When will you be providing the answers to the questions the subcommittee requested as of April 5th?

Mr. ARTHUR. I will have to get back to you, check with our people. As I mentioned, our reports will be done. I am doing our best to manage completion of all this. Those reports, as I said earlier, should be done within 2 months.

We want to make sure of the technical accuracy and validity of everything. I stand by this that we are providing today and more information will be provided as it is available.

Mr. PORTER. Let me ask you this more specifically. Will we be seeing those documents within the next week, 6 months, 10 years, 100,000 years? When will we be seeing an answer to our questions as a subcommittee?

Mr. ARTHUR. I will have to go back and check the specific questions and get back to you specifically when the information is there.

Mr. PORTER. Who will you need to ask that question of?

Mr. ARTHUR. I will check with the other members of my management in the Department of Energy.

Mr. PORTER. Who will make that decision?

Mr. ARTHUR. I believe a lot of the answers, sir, were provided in our letter.

Mr. PORTER. Please answer my question. Who will make the decision regarding the release of information that the subcommittee requested. What individual will make that decision?

Mr. ARTHUR. I will have to get back to you on that.

Mr. PORTER. Is it the Secretary?

Mr. ARTHUR. It will probably be the Secretary or a senior manager from his staff.

Mr. PORTER. And who would those be, the senior managers of his staff?

Mr. ARTHUR. I would say the Secretary of Energy will have to make a determination on when it will be provided.

Mr. PORTER. Thank you. I guess so the record reflects some of the things that we have asked is an organizational chart of employees and management structure, some very, very simple questions with names.

We have asked some very technical questions. We have also asked some very basic ones. Is it a problem that you can't provide information because you don't have it available?

Mr. ARTHUR. I will have to check and see what is available or not. I did not review the specific letter in the request. I apologize. I will get back to you on what we have, organization charts that we have.

Mr. PORTER. When will you get back to us?

Mr. ARTHUR. I assume we will supplement the record to any questions in the immediate future.

Mr. PORTER. Regarding the specific questions that this subcommittee asked, when will you get back to us with an answer whether or not you will be providing these documents?

Mr. ARTHUR. That will be answered by the Washington office. I will get back to you at that date, sir. I can't say any more right now.

Mr. PORTER. So, what you are telling me is that you have to talk to the Secretary's office to get this question resolved. Is that correct?

Mr. ARTHUR. What I am doing and what I came prepared for today is to talk to you about the technical aspects of what we are doing. We are managing reviews out of our office in Las Vegas.

The request for information, we will send that to Washington and Washington will make a decision when it is provided.

As we mentioned earlier, we do have our reading room open. Documents are available there. I will check to get back to you on the other specific requests.

Mr. PORTER. Mr. Davis, do you have any additional questions?

Mr. DAVIS. No, Mr. Chairman. Unfortunately, I am going to have to leave.

Mr. PORTER. Thank you.

Mr. DAVIS. Thank you very much.

Mr. PORTER. Since the 1990's, the DOE implemented additional engineering safeguards at Yucca Mountain, not previously planned or budgeted. I think this is probably in your area of professionalism.

Yucca Mountain not previously planned or budgeted for due to scientific findings by USGS and other contractors working on the project.

If so, did this determination relate to the high flux or low flux debate?

Mr. ARTHUR. I have to ask you to repeat that.

Mr. PORTER. OK. Since the 1990's, has DOE implemented additional engineering safeguards at Yucca Mountain not previously planned or budgeted for due to scientific findings by the USGS and other contractors working on the project?

Mr. ARTHUR. Our approach, Mr. Chairman, on this project is a combination of both natural barriers and engineering barriers including the actual waste package and others to demonstrate the necessary compliance with the EPA standards.

The design has evolved over time through the years on this project.

Mr. PORTER. If so, then, did this determination relate to the high flux or low flux debate?

Mr. ARTHUR. I will have to get back specifically on Mr. Hevesi's comments earlier about what happened on high flux and low flux.

Mr. PORTER. You mentioned that you have a specific purview. This is in your purview. So, let me ask it again, did this determination relate to the high flux or low flux debate?

Mr. ARTHUR. The current engineering and design and safety analysis we are providing and preparing in the license application meets the best scientific technical data and it is a combination of science and engineering design, again, as required under the Nuclear Waste Policy Act in 10 C.F.R. 63 for implementing this project.

Mr. PORTER. Our staff has learned that parallel studies were performed on various tests, some yielding conflicting results. How does DOE resolve scientific disputes within the project? What do you do when there is a dispute within the project?

Specifically, please address the debate regarding the discovery of isotopes in Chlorine 36 molecules.

Mr. ARTHUR. First of all, the Chlorine 36, in that particular area we had differing results between two credible institutions, the U.S. Geological Survey and Los Alamos National Laboratory.

Currently at the site we are doing a third study. I believe that is being done by one of our institutions in the State of Nevada to determine what the numbers actually are.

So in this you are always going to have, in a project of this kind of scientific challenge, you are going to have scientific debate. We do have a number of avenues for scientists to raise concerns, issues and we will resolve those issues when they are raised.

Mr. PORTER. As you know, this flux, low flux is a key part of the debate, the infiltration, the seepage. Since you have differences of opinion on this particular subject, explain to me again how you then come up with a third answer when you have two competing experts telling you two different findings.

Mr. ARTHUR. Based on a number of reviews, and again in particular the Chlorine 36 is not my specific area of expertise, but we wanted to have a third party, our individuals from the Department of Energy and Bechtel SAIC and the labs looking at this decided to have an independent third party look at it and do a separate set of studies. So, those are underway and I believe we will have the results sometime later this year.

Again, it shows our commitment to try to get to what the answer is.

Mr. PORTER. Unfortunately, your lack of cooperation does not state the same, providing information to the subcommittee. So, I would not agree that you are showing a commitment to the public.

Regarding the quality assurance, is DOE primarily responsible for quality assurance guidelines?

Mr. ARTHUR. Correct. We set the policy and requirements.

Mr. PORTER. What was USGS's role in that program?

Mr. ARTHUR. Implementing those requirements per the inter-agency agreement of 1997 that I referenced earlier.

Mr. PORTER. How many delays in licensing have been attributed to quality assurance?

Mr. ARTHUR. Delays in licensing? I need to better understand the question.

Mr. PORTER. Have there been any delays because of quality assurance?

Mr. ARTHUR. We originally had a plan to submit a license application last year. That was delayed for a number of reasons, one the remand of the ETA standard to not getting the LSN license support network certified. At the time we did not have the license application ready to go and I believe we did delay it for the right reason.

As I said earlier, we will make sure every quality assurance requirement and regulatory requirement including the necessary actions for this moisture infiltration are resolved before we submit that application.

Mr. PORTER. So, when we say quality assurance, we are talking about safety, correct, health and safety.

Mr. ARTHUR. Quality assurance and safety are the same, yes.

Mr. PORTER. Thank you. A GAO study was published in April 2004 regarding the Yucca Mountain quality assurance program and recommended several changes. Has DOE implemented any of these changes? If so, could you be specific?

Mr. ARTHUR. First of all, in some of the findings that were made we disagreed. But we have been making significant improvements. I would like to address that. Some of the areas were that our corrective action program was not effective.

A number of key issues were not in performance measures. I can tell you, Mr. Chairman, I personally meet on a regular basis with executives from the nuclear industry to benchmark this program against theirs.

I believe right now we are having better effectiveness in the program of self-identification of issues, of implementing that through a corrective action and managing the similar processes you would see throughout the nuclear industry throughout the United States.

Mr. PORTER. I appreciate you expressing your confidence in the program and what you have improved upon, especially in the last 5 years. How does something like this happen that we are talking about today if you have this improved quality assurance program?

Mr. ARTHUR. You are referring when something like this, the issue of moisture infiltration that we were talking about?

Mr. PORTER. Specifically, yes, infiltration, but also regarding the documents and the questions as to the science of Yucca Mountain and to the paramount issue regarding the safety of the site, and that is infiltration.

Mr. ARTHUR. First of all, as I mentioned earlier, moisture infiltration is on the beginning of the old total system performance assessment and we believe, as I mentioned earlier, based on preliminary information, that the technical basis is sound, subject to concluding our studies.

But as far as the quality assurance program, from when this project first started in the 1980's to today, we kept elevating the bar as the program matured. That is no different than what would occur in the nuclear industry for commercial operating reactors back in the 1970's and 1980's.

With that, I can tell you, is some of the frustrations that scientists had in the late 1990's. We were consolidating our basic programs, standardized requirements and procedures.

While most scientists, while there were some issues raised, did follow it, you know, this is the first case we have found of potential willful violation of the quality assurance principles.

Mr. PORTER. What appears on the face of the testimony today and the documents, it appears to be outright defiance for not only the quality assurance protocol, but the project management process as well. Is this a culture that was displayed in the past that is no longer there? Can you fill me in on that a little bit?

Mr. ARTHUR. I sure can't speak to the culture of the past. But I did ask our people to search and say what kind of concerns were raised by Mr. Hevesi and others through our employee concerns, corrective actions, to others. I could not find in that any direct concerns that were raised.

Mr. PORTER. Has management historically condoned this type of activity?

Mr. ARTHUR. I would never support this kind of activity. Do you mean violating quality assurance standards?

Mr. PORTER. Yes.

Mr. ARTHUR. I would never support that.

Mr. PORTER. What steps do you take then once there has been the violation of quality assurance?

Mr. ARTHUR. First of all, violation means non-compliance. If that issue comes up you do a review to see if that happened or not.

In this particular case, as I mentioned, while the technical basis appears sound, it is the credibility of following—good science means not just following the scientific methodology, having the right technical credentials, but following established quality assurance procedures.

Without all three we have to go back and independently, in our office, have our scientists review this information and remediate or in some cases replace it before it can be used in the license application.

Mr. PORTER. With the new and improved quality assurance program that you are referring to, what steps have you taken to make sure in the future that this doesn't happen again, that this doesn't occur, as far as the appearance that you have had employees who have snubbed their nose at quality assurance?

So, what programs do you have in place now to prevent it from happening again?

Mr. ARTHUR. Well, I can tell you, we advocate, we are trying to move in and be at the same culture that you would have in a nuclear operating reactor today, a safety-conscious work environment.

We openly advocate, not just myself, but all managers in the program, an environment as an employee if you have any concerns raise it to your supervisor without any fear of retaliation. We like to get that issue raised.

We also have an active employee concerns program for concerns raised. Also, we have hundreds of corrective actions that are raised in the system.

We want those individuals, if there is an issue, to raise it so we can deal with it. So, we advocate that and we manage based on that principle.

Mr. PORTER. The subcommittee investigation staff has been advised that during this time period in question DOE placed intense pressure on contractors. They have heard that throughout their interviews working on the project to produce results and that DOE had a system in place whereby bonuses were awarded to contractors based on timelines of their submissions.

Obviously, this is a make-it-work or make-it-fit schedule mentality that could potentially compromise the quality and integrity of the work.

Please comment on this bonus system.

Mr. ARTHUR. First of all, I will have to get specifics of what timeframe you are talking about. I can talk to the bonus system. I assume you are meaning the contract.

Mr. PORTER. Well, do you have a bonus system in place?

Mr. ARTHUR. What we have right now with the Bechtel SAIC, which is our management operating contractor, is a performance-based incentive contract. With that it sets various quality requirements that have to be achieved before payments occur.

Mr. PORTER. Were any bonus incentives, to your knowledge, offered to USGS to do scientific studies in the QA procedures?

Mr. ARTHUR. I will have to check. I am not aware of that. Bonus incentives? I mentioned that we paid over \$300 million to date. You were saying some kind of incentive financially to do something?

Mr. PORTER. Specifically, were there any bonus incentives offered to USGS to do scientific studies?

Mr. ARTHUR. Other than the budgets that I said we paid yearly, I am not aware of anything and I will have to check.

Mr. PORTER. Then I guess this is within your purview, were any bonuses actually awarded to contractors? Was that the \$3 million you were talking about for timely completion?

Mr. ARTHUR. Let me go back if I can. I said we paid over \$300 million to the U.S. Geological Survey.

Mr. PORTER. I am sorry. I misspoke. And independent contractors?

Mr. ARTHUR. The contractor, Bechtel SAIC, and prior to them it was——

Mr. PORTER. TRW?

Mr. ARTHUR. TRW, yes, sir. I am not aware. I mean there were payments, but I would have to supplement the record with the exact amount. But I can tell you in today's environment the payments won't be incurred unless the quality requirements and schedule are achieved.

Mr. PORTER. In this article I referred you to earlier where you testified in Pahrump in June 7 you were quoted as saying the data in question will not be used in DOE's upcoming request for a NRC license to open and operate a nuclear waste repository at Yucca Mountain. When was that determination made?

Mr. ARTHUR. That is based on a newspaper quote?

Mr. PORTER. Las Vegas Sun. Actually, it was the Associated Press that quoted you.

Mr. ARTHUR. I just have to look at statements versus what I said. The intent is that we are going, as I mentioned earlier, even though preliminary results show the technical basis was sound, we are going to have to have a group separate from Mr. Hevesi look at all that information and review it, re-validate it to make sure the necessary level of quality is there. And that corrective action is underway now.

Some of it will be remediated. Some of it will be replaced or removed.

Mr. PORTER. June 7 you were quoted as saying the data in question will not be used in DOE's upcoming request for an NRC license to open and operate a nuclear waste repository at Yucca Mountain.

In going with the substance of the hearing, you say the data in question will not be used in your application. Then why is it so critical to have Mr. Hevesi come back and do additional work to find the missing computer file?

Mr. ARTHUR. First of all, the missing computer file was first brought up in a condition report. As I mentioned, when people see issues we want them to raise them.

The system worked perfectly back in February of this year. A contractor under Sandia National Laboratories was trying to replicate the work. As I understand, they could not find the list of input files. Based on that, Bechtel SAIC was working with the USGS to try to get that information.

We allowed, and I concurred in only 40 hours of work to recover those files and those files only. That is the only work that was authorized.

Mr. PORTER. Mr. Arthur, we have numerous questions yet to be answered, of course, those we requested in early April. We have additional questions that I would like to ask that you respond to.

I also would like to ask that you meet with my staff in the next week to 2 weeks, barring any unusual circumstances. We would appreciate if you would agree to do that.

Mr. ARTHUR. I will do that.

Mr. PORTER. Again, we want to say thank you for your being here today. We appreciate your testimony, but I will tell you that it is unfortunate for the public that the Department of Energy, whether it be based on not having the information or unwillingness to provide the information or a simple arrogance to the process, has chosen not to meet with our staff.

Had those meetings taken place we may not have to be here today. I am extremely disappointed. In fairness to all those strong, hardworking, quality folks at DOE, I think you have done a disservice to all those employees that represent you across the country because there is the appearance that you are hiding information from this committee; there is an appearance that you are hiding information from the American people.

I am extremely disappointed that someone in your organization has advised your employees not to meet with the U.S. Congress to answer questions.

As I stated earlier, we communicate frequently with the Inspector General's office. It is a part of our process.

Again, I cannot state it strongly enough. I am extremely disappointed. You have a responsibility to the American people and I believe that, again, either you are hiding something or because of a culture in the organization you don't have the information that we need or you have just chosen not to cooperate under simple arrogance.

I appreciate your being here today. I am sorry that you didn't meet with us privately as I had requested.

We will continue our investigation. We still have numerous individuals that we will be interviewing. Our investigation, as has both the Department of Interior and Department of Energy's Inspector General has just begun.

In many respects we are going to continue this. I will be honest with you, enough is enough. It is time for the American people, as even Mr. Hevesi says, we need more public involvement in this process and that is what we are going to have happen.

I thank you for being here. We will adjourn the meeting.

[Whereupon, at 12:40 p.m., the subcommittee was adjourned.]

[The prepared statements of Hon. Harry Reid and Hon. John Ensign, and Hon. Jim Gibbons, and additional information submitted for the hearing record follow:]

**House Committee on Government Reform
Subcommittee on Federal Workforce and Agency Organization**

“Yucca Mountain Project: Digging for the Truth”

**Senator Harry Reid
and
Senator John Ensign**

June 29, 2005

Mr. Chairman, we appreciate your holding this hearing today regarding the falsification of data about the proposed Yucca Mountain repository. Thank you for the opportunity to submit comments for the record.

These hearings were prompted by the revelation on March 16, 2005, of emails showing that employees at the U.S. Geological Survey falsified documents, models and scientific information critical to assessing water infiltration and, hence, the viability of long-term storage at the proposed Yucca Mountain repository. In addition, DOE knew of these problems for some time before revealing the emails to the public, regulators or lawmakers responsible for oversight.

These discoveries call into question the quality, validity and integrity of the scientific review and quality assurance processes for the proposed Yucca Mountain project, causing grave concern amongst scientists, members of the Nevada delegation, and lawmakers and regulators throughout the country. Unfortunately, these concerns are not new; for years the Department of Energy has had significant problems with its quality assurance program, problems that independent reviewers have found unresolved.

Despite more than three months since the falsifications were made public and despite numerous requests, many parties still have not been fully forthcoming with information, most notably the Department of Energy. While we are glad to see U.S. Geological Survey employees coming forward and providing data, we urge the Department of Energy to fulfill its responsibilities to provide Congress with information and to ensure the safety and viability of spent nuclear fuel storage. Until it so does, its actions and decisions regarding Yucca are highly questionable.

The importance of this issue cannot be understated. The entire premise of the proposed Yucca Mountain repository is that it will safely contain spent nuclear fuel for hundreds of thousands of years. It is becoming increasingly clear that the agencies in charge of the proposed Yucca Mountain repository cannot establish Yucca Mountain safety by using sound science, thus must manipulate the data to suit their predetermined decision.

Recent statements by Department of Energy Secretary Bodman reflect this myopic viewpoint. In the *Las Vegas Sun* on June 10th, Secretary Bodman acknowledged the many issues

“swirling around” the Yucca Mountain project, but stated that he is “single-minded” about licensing and constructing Yucca. Such a single-minded and unconsidered position seriously undermines the credibility of both the Department of Energy and the entire review process for Yucca Mountain. While we had great hopes that Secretary Bodman would buck the status quo, he is caving into the administration and embracing its flagrant disregard of science.

There are significant scientific controversies and unresolved issues regarding Yucca Mountain, including the recent revelations that critical scientific data have been falsified. All of these issues can, and must, be addressed before we go forward. In fact, the Inspector General for DOE, the Inspector General for the Department of the Interior, the Federal Bureau of Investigation and the U.S. Attorney General are currently conducting investigations regarding the falsification of scientific documents regarding Yucca Mountain. The Supreme Court recently rejected the U.S. Environmental Protection Agency’s (EPA’s) radiation standard for Yucca as inadequate. There are also concerns about the Department’s testing and approval of storage and transportation casks, not to mention a transportation plan that includes loading spent nuclear fuel onto slow-moving barges.

In order to ensure that government officials are able to come forward and speak without fear of reprisal, Senator Ensign and I added an amendment to the Energy Policy Act of 2005, H.R. 6, authorizing whistleblowers at the Department of Energy to bring a civil action in federal court if the Secretary of Energy has not made a final decision on a complaint within six months. We are working to extend the same protections to Nuclear Regulatory Commission employees. We are confident that ensuring whistleblower protections will create an atmosphere allowing more employees to come forward and share the truth behind Yucca Mountain.

As Senators from Nevada, we are interested in ensuring the Department of Energy maintains the highest level of integrity during this process. In any analysis of options, it is crucial that the Department maintain its independence and scientific credibility. By predetermining the outcome of the process before all of the information has been received and analyzed, the Department has significantly diminished its impartiality and credibility. It is clear that there is no such thing as sound science at Yucca Mountain. Until these issues are resolved and sound science becomes the driving force behind administration policies and decisions regarding the proposed Yucca Mountain repository, we call on the Department of Energy to put its license application on hold.

**STATEMENT BY REPRESENTATIVE JIM GIBBONS
REPRESENTING NEVADA'S 2ND DISTRICT**

Thank you Chairman Porter for allowing me to submit this testimony today for the record. This hearing is an example of the fine work you do for the American people on this committee and I thank you for your diligent exploration of this important issue.

The proposal to build a nuclear repository at Yucca Mountain first surfaced in the 1980's. For over two decades, both my constituents and I have expressed grave concerns about the project.

I have heard from people all across Nevada, and all across this nation, about this issue. They want to be sure that any nuclear waste that will be transferred to and stored at this facility will not contaminate their soil or drinking water. As a geologist, I have always maintained that the claims made by the Department of Energy regarding the structural integrity of Yucca were unsound and these recent allegations only reinforce these concerns.

The Department of Energy (DOE) admitted in March that scientists working for the U.S. Geological Survey may have falsified data used for these scientific studies on water infiltration and climate effects. In early April, a series of e-mails that circulated among scientists working on the project were released to the public at a hearing of this subcommittee.

During the April subcommittee hearing, the DOE balked at our questions regarding these emails and failed to provide Congress with adequate information. Following this hearing, even more allegations surfaced of additional emails that were not provided to Congress and it became quite clear that this was only the tip of iceberg.

As a result, the Nevada delegation met with Secretary Bodman to discuss these claims and the need to halt this project until the investigation is complete. Unfortunately, it became very clear in the meeting that the DOE has no intention to halt the project and was not overwhelmingly concerned with the allegations. The most shocking revelation was that the DOE sees no reason to share internal documents regarding the investigation with Congress. It is this failure of the DOE to share these important documents with Congress, who has a constitutional obligation of oversight, which brings us here today.

The e-mails in question make repeated references to mismanagement by the USGS and DOE. One USGS scientist wrote on December 17, 1998, to another scientist, "In all honesty I've never felt well managed or helped by the USGS YMP folks, in fact, as you know, I've often felt abandoned."

The e-mails paint a disturbing picture of a culture within the DOE and the USGS that seems to value the completion of the site over any scientific data that could call the safety of the repository into question. In another e-mail on April 2nd, 1999, a USGS employee seems to capture the consequences quite well, "Science by peer pressure is dangerous," the employee writes, "but sometimes necessary."

What is necessary is accurate data, without which no scientist could make an informed decision on the safety of the Yucca Mountain site. What is necessary is an environment that encourages truth and discourages peer pressure. The American people deserve accountability and oversight, ensuring both scientists and bureaucrats are working for the safety of the American people.

I commend my colleague from Nevada, Chairman Porter once again for working for the safety of the American people and pressing forward on this issue. But I wonder why we've had to press so hard. Why has DOE not cooperated with this committee's investigation, as the Department of the Interior has? As a geologist myself, I wonder why any scientist would knowingly report inaccurate findings on such an important project. Why, exactly, is it so important to rush this project to completion?

It is my sincere hope that the witnesses today will be able to shed light on these issues and provide answers to these questions. I look forward to their testimony.

ATTORNEY WORK PRODUCT-PROTECTED COMPILATION

ALD.20050208.5101, ENCL1000

From: Alan Flint
PostedDate: 02/23/1998 12:03:56 PM
SendTo: Lorrie Flint@CRWMS
CopyTo:
ReplyTo:
BlindCopyTo:
Subject: Re: stuff
Body:

My response.
----- Forwarded by Alan Flint on 02/23/98 09:10 AM

Alan Flint
02/22/98 10:28 PM
To: Joseph Hevesi@CRWMS
cc:
Subject: Re: stuff

Joe, you are just starting to wake up to what the hell is going on in the Yucca Mountain project. I can't teach it to you. I've learned, and that's why I'm in California. I would have liked to bring more people with me but nobody ever figured it out as much as I tried to tell you. I couldn't do it directly because you have to learn by experience. Once you learn, you learn. There is more to it than you think, that's why I'm still on the project. They won't get rid of me. You are on the verge of figuring this shit out. Good luck.

Alan



emails on Question List

ATTORNEY WORK PRODUCT-PROTECTED COMPILATION

ALD.20050209.1820, EML1000

From: Joseph Hevesi
PostedDate: 05/11/1998 03:44:35 PM
SendTo: Alan Flint@CRMS
CopyTo:
ReplyTo:
BlindCopyTo:
Subject: UZ Flow (+climate+infiltration) section for TSPA-VA document

4

Body:
FYI. Still don't know quite how to handle the air temp glitch. I'm continuing to keep mum about this, but from a scientific integrity standpoint, it is tempting to let the end users know exactly what was provided to them in terms of ~~more~~ cooler future climate simulations. Problem is, I don't know how to go this without looking bad. If we can let it all pass without trying to attach DTN numbers to these results (the preferred choice), then I can forget about it and just concentrate on getting results out for the new model. If they (DOE) force us to put DTNs on these things, I would rather the truth come out sooner than later.
Don't need to respond to this, we can talk about it later.

----- Forwarded by Joseph Hevesi on 05/11/98 12:24 PM -----

mlwilso@nwr.sandia.gov on 05/04/98 03:00:49 PM
To: GSBodvarsson@lbl.gov, YITSang@lbl.gov, CFRsang@lbl.gov, Joseph Hevesi, forester@usgs.gov
cc: Robert Andrews, haddock@nwr.sandia.gov, David Sevougian, Jerry McNeish, jhgauth@nwr.sandia.gov, ckhof@nwr.sandia.gov, sjaltma@nwr.sandia.gov, ndfranc@nwr.sandia.gov
Subject: UZ Flow (+climate+infiltration) section for TSPA-VA document

X-Sun-Data-Type: text
X-Sun-Data-Description: text
X-Sun-Data-Name: text
X-Sun-Charset: us-ascii
X-Sun-Content-Lines: 15
To all --

5

Attached is the first draft of the UZ Flow section (which includes climate and infiltration as well as flow) for the TSPA-VA document. It is in two Word 97 files, one for the text and one for the figures. We are already behind schedule in submitting this section to the VA Electronic Storyboard, so I would appreciate any comments or suggestions you may have by the end of this week (May 8). It is about 15 pages of text, and several figures. You are welcome to comment only on the sections that you are interested in, of course.
If you can't read the Word 97 files, let me know and we can get it to you in some other format.
-- Mike Wilson

X-Sun-Data-Type: default-app
X-Sun-Data-Description: default
X-Sun-Data-Name: vauz.doc
X-Sun-Encoding-Info: usencode
X-Sun-Content-Lines: 2222
- vauz.doc

X-Sun-Data-Type: default-app
X-Sun-Data-Description: default
X-Sun-Data-Name: vauzfigs.doc
X-Sun-Encoding-Info: usencode
X-Sun-Content-Lines: 25626

- vauzfigs.doc

Attachment: vauz.doc
Attachment: vauzfigs.doc

ATTORNEY WORK PRODUCT-PROTECTED COMPILATION

ALB.20050216.7533, EML1017

From: Joseph Hevesi
 PostedDate: 06/18/1998 04:47:34 PM
 SendTo: Alan Flint@CRWMS
 CopyTo:
 ReplyTo:
 BlindCopyTo:
 Subject: Re:

Body:

I'm finishing up the infil report (concentrating only on those items Lorrie originally requested me to look at ... I talked this over with Lorrie yesterday). I've been meaning to send you a program that will convert the 6 regional strips you have back to the original *.inp file format, but I got sidetracked a little with the planning stuff. Let me finish infil and I will get you the code (I'm close to finishing it). I wanted to have these simulations running this week. But I also wanted you and Lorrie to look at what I'm using for effective permeabilities. I'm trying to clean up a worksheet I have so that you and Lorrie can understand it.

As far as FY99 modeling goes, there are several areas that we can always use help in; programming, GIS, and anyone capable of getting a simulation going, compiling the results, creating maps and graphs of the output, and helping me compile and update the climate database, streamflow records (along with any other calibration data), and the future climate stuff. You and I may be the only ones developing the model code, but even some part-time help from someone with programming skills would be a tremendous boost to keep things going (the small re-formatting program above is a great example), and to have software QA keep in step with model improvements. I don't know who this person would be, and there we have a dilemma. At least we are making an effort to improve our GIS expertise.

As far as the Fortymile Wash stuff and the regional stuff goes: 1. We never seem to be certain about the funding level from Frank until the planning is over and done with I wanted to have a backup to keep the regional effort going. 2. We are doing the same amount of work on the regional scale whether we get the money for Fortymile Wash or not, so why not try to get the money? All we have to do is a few extra simulations in Fortymile Wash. Its like we'll get paid twice for the same work (and I don't feel bad about this considering how little we're getting paid for the work this year in my mind it will all even out in the end). 3. I'm still not convinced that there will not be another round of planning where we have to try to cut 50% of the funding we are asking for now. Then we can just get rid of the Fortymile Wash WF.

Geese... I spent too much time on this email... gotta go!

ATTORNEY WORK PRODUCT-PROTECTED COMPILATION

AIC.20050216.D124, EML1017

7

From: CN=Alan Flint/OU=YM/O=RWDOE
PostedDate: 10/20/1998 09:57:57 AM
SendTo: CN=Joseph Reeves1/OU=YM/O=RWDOE@CRWMS

CopyTo:

ReplyTo:

BlindCopyTo:

Subject: Re: Additions to DRAFT--DOE Requests for Possible FY99 Additions

Body:

This is a gamble but I'll take the OK and make them eat shit in the long run.
They WILL NOT go into a license scenario with the model we have now, and
particularly with FA demanding changes. Don't sell out.
Alan

ATTORNEY WORK PRODUCT-PROTECTED COMPILATION

ALD.20050208.1690, EML1000

From: CN=Joseph Hevesi/00-YM/O=RWDOE
PostedDate: 10/29/1998 07:41:37 PM
SentTo: CN=William Guertal/00-YM/O=RWDOE@CRWMS

8

CopyTo:
ReplyTo:
BlindCopyTo:
Subject: Re: Design Features 23/24 - Period of Effectiveness

Body:
enjoyed the ranting and raving. We're trying to work with the engineers because that's where the funding's going. Leveling the top of the mountain seemed humorous but it gave me the chance to make some more cool figures. This little task is history now. Wait till they figure out that nothing I've provided them is QA. If they really want the stuff they'll have to pay to do it right.

*

William Guertal
10/29/98 03:31:59 PM
To: Joseph Hevesi@CRWMS

CC:
Subject: Re: Design Features 23/24 - Period of Effectiveness
This sure is an interesting viewpoint. The desert pavement forms on areas where the slope is generally less than 1 to 2 percent. You don't generally see pavement on slopes of 10% or more. The other idea that I love is engineered modifications. As he notes, the natural system is very stable, so why do we have to fool with it. The other idea they are not looking at is caliche. In areas where there is well developed caliche, one could expect erosion to that surface but then extremely limited erosion of the well cemented carbonates. These are usually old truncated surfaces that have had new material deposited on them. These show part of the erosion/deposition processes that occur in arid environments. The natural system exists for a reason and it got there without engineers screwing with it. I am starting to rant and rave so I should get back to my other work.
Thanks for sending the information to me. I find these things interesting.
Bill

9

Joseph Hevesi
10/29/98 03:21 PM
Sent by: Joseph Hevesi
To: William Guertal/YM/RWDOE@CRWMS, Emily Taylor/YM/RWDOE@CRWMS
CC:
Subject: Re: Design Features 23/24 - Period of Effectiveness
FYI: the engineering perspective on this. I meant to send this earlier (if I already did, ignore this... I may have gone senile)
Forwarded by Joseph Hevesi/YM/RWDOE on 10/29/98 02:24 PM

10

Robert_Elyas@notes.ymp.gov on 10/28/98 04:26:21 PM
To: "Robert G. Baca" <rbaca@sandia.gov>
cc: Jeff Steinhoff/YM/RWDOE, Alan_Flint@ymp.gov, Joseph_Hevesi@ymp.gov (bcc: Joseph_Hevesi/YM/RWDOE)
Subject: Re: Design Features 23/24 - Period of Effectiveness
Thought I would put in my 'two bits worth' on this subject. Afterall, the DP's life expectancy has a lot to do with the engineering design. I would welcome comments.
The design for #23 calls for armorng the soil blanket with rip-rap. In nature, desert nature that is, the rip-rap is called desert pavement. We can see that the desert pavement effectively protects the soil from wind, rain, snow, sleet, etc, so that the mass transport erosion is confined mainly to the washes. If the rip-rap is applied properly to imitate nature, then why can't we assume a similar protection for our man-made desert pavement? Also, the average erosion rates there are extremely small - 0.19 cm/ka average for Yucca Mountain hillslopes. Could expect similar erosion rates with the rip-rap protection? If we look at the ages of the hillslopes at YM, we see it ranges from 170 to 760 ka. I would not suggest that our engineering effort could last this long, but it is certain to last at least 1 ka., and possibly 10 ka's or more (100's of ka's?). I proposed at one time a very conservative approach with 1000 years. Let's face it, the desert topography is very stable and long living so why can't we expect

11

ATTORNEY WORK PRODUCT-PROTECTED COMPILATION

12/17/98 06:57 PM
 Sent by: JOSEPH BEVESI
 To: Alan Flint/YM/RWDOE@CRWMS
 cc:
 Subject: Re: AP 3.10Q

12

FYI: The work plan PA has put together as a result of the meeting this week includes model hand-offs (TBVs documented using MFP 3-15a) which will all eventually be QA'd using AP 3.10Q (see attachment below). Jack Gauthier is going to be the PA lead on the AP 3.10Q for the FY98 model. We're not sure how smoothly this is going to go but this is the approach. Like you've said all along, YMP has now reached a point where they need to have certain items work no matter what, and the infiltration maps are on that list. If USGS can't find a way to make it work, Sandia will (but for now they are definitely counting on us to do the job). PA totally supports paying for a USGS report on the FY98 model, but they fully realize the problems we're having with the Director's approval thing.

I've had no response from Bob concerning my response to his request for an FY99 work plan using the close-out funds. PA has indicated that I can charge all my time this year to the 10506 account. There was also good indication this week that PA is willing to support us in FY00 to continue on with model validation and uncertainty work, and to deal with FEPs addressing the infiltration maps. The 110k provided to USGS was in direct response to the telecon and was specifically intended for infiltration modeling work. I can no longer wait for USGS to figure this out. I'm moving ahead according to the PA/Sandia work plan we put together this week.

What I really need now are some warm bodies to review the work I've been doing.

Like Jack Gauthier said, "Live by the sword, die by the sword!"

----- Forwarded by Joseph Bevesi/YM/RWDOE on 12/17/98 06:15 PM -----

Joseph Bevesi
 12/17/98 05:01 PM
 Sent by: Joseph Bevesi
 To: Cynthia Miller-Corbett/YM/RWDOE@CRWMS
 cc: Robert Craig/YM/RWDOE@CRWMS
 Subject: Re: AP 3.10Q

13

Cynthia,
 Thanks much! Yes, I very much need to take a close look at this. I was just about to request this when I saw your note. AP3.10Q has been mentioned quite a number of times this week.

Joe
 Cynthia Miller-Corbett
 12/17/98 12:01 PM
 To: Robert Craig/YM/RWDOE@CRWMS, Joseph Bevesi/YM/RWDOE@CRWMS
 cc:
 Subject: AP 3.10Q

14

Hello, I thought you might like an electronic copy of the new AP. Like? Well, anyway, will need to be familiar with....
 Merry Christmas

----- Forwarded by Cynthia Miller-Corbett/YM/RWDOE on 12/17/98 02:04 PM -----

Charles Bartley
 12/17/98 11:05 AM
 To: Cynthia Miller-Corbett/YM/RWDOE@CRWMS
 cc:
 Subject: AP 3.10Q

15

Per your request below is the electronic version of AP-3.10Q as it was approved.
 Charlie

----- Forwarded by Charles Bartley/YM/RWDOE on 12/17/98 10:04 AM -----
 Joan Dyson

ATTORNEY WORK PRODUCT-PROTECTED COMPILATION

ALD.20050208.7110, EML1002

From: CN=Alan Flint/OU=YM/CRWDOE
 PostedDate: 12/17/98 11:47:08 PM
 SendTo: CN=Joseph Hevesi/OU=YM/CRWDOE/CRWMS
 CopyTo:
 ReplyTo:
 BlindCopyTo:
 Subject: Re: AP 3.10Q
 Body:

I agree with your analysis. We only win if we get the final product out. I have to think through this carefully but where I'm headed is this: Lorraine and I will make sure we get the 96 report done (you need to call Lorraine ASAP, just in case she needs input from you on Friday). You, on the other hand, need to start the FY99 report, assuming the FY96 gets approved. You need to lay out the changes you've made to the model, how you've tested or calibrated those changes (stream gage, neutron (I've already started working on a new neutron hole analysis which I had hoped to finish this vacation but won't be done until later I'm sure)), what the results are, and what difference it makes. Do this for the site scale as your basis for the change to the model and as the basis of the report. Then start another report, which uses the first report, to lay out the regional model. Both report will address past and future climates. That's where I'm heading but I'm not there yet. We can discuss this tomorrow.

Alan

The bottom line is forget about the money, we need a product or we're screwed and will take the blame. EVERYBODY will say they told us to go ahead without a plan or budget in place (even though Zell said no hires). This is now CYA and we had better be good at it. I seem to have let this one slip a little to much in an attempt to cover all our work (and get us the hell out of the long term problem of Tucca Mountain) but now it's clear that we have little to no choice. In all honesty I've never felt well managed or helped by the USGS YMP folks. In fact, as you know, I've often felt abandoned. This time it's no different, or worse, and we have to work together to get out of this one. I'm still overwhelmed trying to protect the rest of the program from the ravages of what's happening in Denver (funding, which we seem to be blamed for because we got funding) and the current HDP fiascoes in the ESP. That is to say we're not working on our own as we have for the past 12 years, now we're being threatened (and carefully watched by the people who use to simply ignore us. These are very dangerous time, both funding wise and professionally. Mark my words on this one, it will not be long before our technical credibility will be challenged in an attempt to discredit us and redirect funding!

Oh, by the way, you did a great job in response to Zell's request. Bravo!!

(keep my last paragraph private or among friends, if you know who they are)

Joseph Hevesi
 12/17/98 06:57 PM
 Sent by: Joseph Hevesi
 To: Alan Flint/YM/CRWDOE/CRWMS
 cc:
 Subject: Re: AP 3.10Q

FYI: The work plan PA has put together as a result of the meeting this week includes model hand-offs (TBVs documented using NLP 3-15s) which will all eventually be QA'd using AP 3.10Q (see attachment below). Jack Gauthier is going to be the PA lead on the AP 3.10Q for the FY98 model. We're not sure how smoothly this is going to go but this is the approach. Like you've said all along, YMP has now reached a point where they need to have certain items work no matter what, and the infiltration maps are on that list. If USGS can't find a way to make it work, Sandia will (but for now they are definitely counting on us to do the job). PA totally supports paying for a USGS report on the FY98 model, but they fully realize the problems we're having with the Director's

approval thing.

ATTORNEY WORK PRODUCT-PROTECTED COMPILATION

ALD.20050208.1512, EML1000

From: CN-Joseph Hevesi/OU-YM/O-RWDOE
 PostedDate: 12/18/1998 05:25:24 PM
 SendTo: CN-Alan Flint/OU-YM/O-RWDOESCRWMS
 CopyTo:
 ReplyTo:
 BlindCopyTo:
 Subject: Re: AP 3.10Q

Body:
 Alan: Thanks for this very thoughtful and philosophically charged wealth of advice. I here exactly what you say. YMP is looking for the fall guys, and we are high on the list. I got a strong feeling at the PA meeting that high level folks are starting to pay very close attention to who they will come after when things hit the fan. Who got how much funding at what time will all be long forgotten when the lawyers start challenging credibility of results. It was made clear that this will be like the OJ trial, where results are completely thrown out because of minor procedural flaws or personal attacks on credibility. As Rick Forester told the lawyer who was there, YMP doesn't stand a snowball's chance in hell of making this work if that is the approach. As far as the 98 and 99 modeling, I'm starting the write-ups now. Much of this is already being covered in the NLPs and APs so I can kill 2 birds with the same stone. I much as I think Sandia may help us out with some things, I am going to be very careful that Sandia doesn't end up taking credit for our work.
 Alan Flint

12/17/98 08:47 PM
 To: Joseph Hevesi/YM/RWDOESCRWMS
 cc:
 Subject: Re: AP 3.10Q

I agree with your analysis. We only win if we get the final product out. I have to think through this carefully but where I'm headed is this. Lorrin and I will make sure we get the 96 report done (you need to call Lorrin ASAP, just in case she needs input from you on Friday). You, on the other hand, need to start the FY99 report, assuming the FY96 gets approved. You need to lay out the changes you've made to the model, how you've tested or calibrated those changes (stream gage, neutron (I've already started working on a new neutron hole analysis which I had hoped to finish this vacation but won't be done until later I'm sure)), what the results are, and what difference it makes. Do this for the site scale as your basis for the change to the model and as the basis of the report. Then start another report, which uses the first report, to lay out the regional model. Both report will address past and future climates. That's where I'm heading but I'm not there yet. We can discuss this tomorrow.

Alan
 The bottom line is forget about the money, we need a product or we're screwed and will take the blame. EVERYBODY will say they told us to go ahead without a plan or budget in place (even though Zell said NO BUDGET). This is now CVA and we had better be good at it. I seem to have let this one slip a little too much in an attempt to cover all our work (and get us the hell out of the long term problem of Yucca Mountain) but now it's clear that we have little to no choice. In all honesty I've never felt well managed or helped by the USGS YMP folks. In fact, as you know, I've often felt abandoned. This time it's no different, or worse, and we have to work together to get out of this one. I'm still overwhelmed trying to protect the rest of the program from the ravages of what's happening in Denver (funding, which we seem to be blessed for because we got funding) and the current RDP fiascoes in the ESF. That is to say we're not working on our own as we have for the past 12 years, now we're being threatened (and carefully watched) by the people who use to simply ignore us. These are very dangerous times, both funding wise and professionally. Mark my words on this one, it will not be long before our technical credibility will be challenged in an attempt to discredit us and redirect funding!
 Oh, by the way, you did a great job in response to Zell's request. Bravo!!

(Keep my last paragraph private or among friends, if you know who they are)

Joseph Hevesi

ATTORNEY WORK PRODUCT-PROTECTED COMPILATION

AID.20050208.6289, EML1002

From: CN=Alan Flint/OU=YM/O=RWDOE
 PostedDate: 03/15/1999 10:14:50 PM
 SendTo: CN=Joseph Bevesi/OU=YM/O=RWDOE@CRWMS
 CopyTo: "Frank A D'Agnese, Hydrologist, Tucson, AZ " <fadagnes@usgs.gov>
 ReplyTo:
 BlindCopyTo:
 Subject: Re: Tiger Team Hell
 Body:

This memo actually hits the nail on the head. You are exactly right: One, yes, we will do the work. Two, yes, screw the tiger team (I don't know how yet but I'll figure it out). Three, yes, destroy this memo!

Alan
 Joseph Bevesi
 03/15/99 12:18 PM
 To: "Frank A D'Agnese, Hydrologist, Tucson, AZ " <fadagnes@usgs.gov>
 cc: Alan Flint/YM/RWDOE@CRWMS
 Subject: Re: Tiger Team Hell

Frank,

Alan and I have been trying to figure out what's really coming at us with the tiger team effort. So far we've learned that they don't have a solid plan of action yet. I've formulated a "potential impact list" that is prioritized according to what work gets impacted list: 1. FY99 support to FA (includes all the workshop stuff), 2. regional recharge report, 3. site-scale infiltration modeling report. Some of the work the effort calls for was scheduled under 2201 QA anyway, but we started hearing rumors of things like re-doing all the QA work for the neutron logging data, which will stop us dead in the water.

Now I'm going to give you the inside scoop: I'm going to continue the regional modeling, even if it means ignoring direct orders from YMP management. I'm also going to be working on reports, even if it means ignoring direct orders from YMP management. Alan and I have a pretty clear vision of the type of work that needs to be done to stay alive for the long-haul, and it very definitely involves getting product out there for the users and the public to see. The Death Valley regional modeling work fits that bill. Screwing around with tiger teams does not. In the end, it's going to be the reports that move everything else forward. Tiger team efforts will just be vaporized.

So, the work may be slowed, but I will not let it stop. At this point, I am still working to the plan that we've all spent a significant amount of time on to make things happen for FY99. That's the insider scoop. The position we will take for the M&O planners may be much different. So delete this memo after you've read it.

Joe
 Frank D'Agnese <fadagnes@usgs.gov> on 03/15/99 10:29:26 AM
 Please respond to "Frank A D'Agnese, Hydrologist, Tucson, AZ "
 <fadagnes@usgs.gov>
 To: Joseph Bevesi/YM/RWDOE
 cc: Alan Flint/YM/RWDOE
 Subject: Tiger Team Hell

I understand you're going to be sucked into the Tiger Team for UE site infiltration. Any idea how that will impact timing for your regional recharge model product for the year's end. Or are you just working every weekend and waking moment like all the rest of us?

Frank

ATTORNEY WORK PRODUCT-PROTECTED COMPILATION

ALD.20050208.2417, EML1000

From: CN=Joseph Hevesi/OU=YM/O=RWD0E
 PostedDate: 03/26/1999 01:59:05 PM
 SendTo: CN=Alan Flint/OU=YM/O=RWD0E@CRWMS
 CopyTo:
 ReplyTo:
 BlindCopyTo:
 Subject: Status of LADS phase 1 calc. report - USGS

Body:
 Between you and me, I put my SK effort in months ago. My work gets charged to 11016 and 22001. This is where we invested our time and energy in promoting, planning, and actually doing the work. I'll admit that I have not devoted a full-time effort towards LADS. I've been working on the GALLY THINGS data-base, the new Future Climate simulations, the regional modeling, and the backlog of reports. Yes the LADS work is now behind schedule but so is everything else because I'm the ONLY one doing this work, and I'll be damned if I drop everything else and work on nothing but LADS. I'd be very happy to just hand the work over to someone else at this point. It seems I do not have this option, thus all I can say is that the work will get done, but not by sacrificing everything else that's going on. I do not need to be developing N&O hoop jumping skills. The skills I am interested in developing are ones that will benefit the CA district and our careers. I'm not directing this at you. This is just to let you know where I stand at this point in time. I guess this is another one of those memos that need to be destroyed.
 Joe

----- Forwarded by Joseph Hevesi/YM/RWD0E on 03/26/99 10:39 AM

Ernest Hardin
 03/26/99 09:56 AM
 To: Robert Craig/YM/RWD0E@CRWMS
 cc: Sounia Darnell/YM/RWD0E@CRWMS, Joseph Hevesi/YM/RWD0E@CRWMS, Larry Hayes/YM/RWD0E@CRWMS
 Subject: Status of LADS phase 1 calc. report - USGS

Bob,
 On Feb. 19 I requested the following steps from USGS staff, to complete the calculation report for LADS DF23A and B (formerly designated DF 23 and 24):

1. Train J. Hevesi and a checker to QAP 3-15. Train S. Darnell to YAP SIII.3Q. Also, train J. Hevesi to APSI.1Q, for classification of software as "software routines."
2. Assign a DTN, and prepare a TDIF with input/output files (i.e. implement YAP SIII.3Q). Typically this means that all input/output files, and code listings, are put on a CD-ROM. The originating organization should be NEPO, to avoid complications from USGS policies.
3. Designate all software used in this calculation as "software routines." This means the software does not have to be qualified. The calc. report should include source code listings, description of routines and how they fit together, exact specification of compiler and CPU (with S/W's), and a test case that exercises all the routines.
4. Revise 3-15 calc. report with DTN, and software routine documentation. Note that the report should state whether all input data are "Q." If not, then the calculation results should be clearly indicated as "TBV." 5. Printout first draft (Rev. 00A). Originator signs calc. cover sheet. All pages will have the DI number, including the correct Rev. number. Page numbering will comply with QAP 3-15.
6. Perform internal review of report. This can be informal, or as a NEPO review implementing QAP SIII-2. Make revisions as required (a revised copy will have the next draft number, i.e. Rev. 00B, etc.)
7. Printout checking draft (increment draft number using Rev. 00B, Rev. 00C, etc.). All pages will be marked "Checking Draft" in addition to the DI number, etc.
8. Perform checking function, coordinating with the checking group (Bob Zimmerman). A technically qualified checker (as determined by the Responsible Manager), who has received the checking indoctrination training and knows how to use the checklists, needs to be identified from within NEPO.
9. Revise document, backcheck per QAP 3-15, and get Originator and Checker signoffs on calc. cover page. Get Lead Engineer's signoff (R. Elayer or J.

ATTORNEY WORK PRODUCT-PROTECTED COMPILATION

ALD.20050208.2422, EML1000

99
 From: CN=Joseph Hevesi/OU=YM/O=RWD0E
 PostedDate: 04/04/1999 12:03:31 AM
 SendTo: CN=Alan Flint/OU=YM/O=RWD0E@CRWMS;CN=Lorrie Flint/OU=YM/O=RWD0E@CRWMS
 CopyTo:
 ReplyTo:
 BlindCopyTo:
 Subject: Re: Precipitation estimates in VA
 Body:

Here's my perspective:

Have you looked at the latest EOS? The article on nuke waste and Yucca Mt. states that the amount of water that will be contacting waste canisters is still the key issue for repository performance. The primary factor controlling flux thru the UZ is the infiltration rate. Some nights I have a hard time going to sleep because I realize the importance of trying to get the RIGHT answer, and I know how many serious unknowns are still out there, and how many quick fixes are still HOIDING things together. I'm just trying the best I can with 3 equations and 15 unknowns. It seems so odd that we've had to push so hard just to get even a little support for THIS work, and at the same time we end up being the ones most responsible for whether the PA predictions are right or wrong. I'm looking forward to putting the YMP nonsense far BEHIND me.

I ran your're sublimation model and the entire snowpack sublimated. I have a 3rd model now which just uses a lower percentage of PET. Sublimation using this model comes to about 20% of the total annual snow fall, but the term includes sublimation above freezing, which thus includes evaporation from the snow pack, in addition to melting. I found out our PET calculation goes negative when air temp drops below about -20 deg C, which happens once in while using the Spokane climate, so this just gets set to zero for now. It causes PET to go from about 805 mm/year to 805.5 mm/year, so this was not a significant problem.

I'm driving out to Sacramento on Monday with the family (next time we'll fly, but we couldn't get our act together with air travel for the coming week). We'll be staying on the east side of Sacramento. Sharie will start checking out the area while I go to work at the SAC office. I'm bringing the lap-top, and lots of JAZ disks. I need to start a number of models running on the SAC DEC Alpha. I plan to work Tues - Thurs at the SAC office, then take Friday off and spend time with Sharie looking around, and drive back Saturday. Ariel is on Spring break now so we wanted to take advantage of this. The LADS start will fall a little further behind but that's too bad because the move has now become my highest priority.

We've contacted a Realtor and everything is already in full swing at this end. We have 2 For-sale signs out in the yard, and our house is officially "listed".

Happy Easter! I'll see everyone 1st thing Tuesday morning.

Joe
 Alan Flint
 04/02/99 10:19 PM
 To: Joseph Hevesi/YM/RWD0E@CRWMS
 cc:

Subject: Re: Precipitation estimates in VA

Here is a clue. Ike has clued in Rick as to why he thinks Rick is wrong. Rick knows Ike is smart. Rick doesn't want to be wrong (who does?). Rick is covering his ass. You might be the cover. You and I both know the estimates were too high. We talk about it at length. Rick is coming around. Science by peer pressure is dangerous but sometime it is necessary.

Alan

God, I love working on San Gorgonio and the Mojave.
 Joseph Hevesi
 04/02/99 03:19 PM
 To: Alan Flint/YM/RWD0E@CRWMS

ATTORNEY WORK PRODUCT-PROTECTED COMPILATION

ALD.20050208.2426, RML1000

From: CN-Joseph Hevesi/OU-YM/O-RWDOE
PostDate: 04/22/1999 07:05:17 PM
SendTo: CN-Alan Flint/OU-YM/O-RWDOE@CRWMS
CopyTo: CN-Lorrie Flint/OU-YM/O-RWDOE@CRWMS
ReplyTo:
BlindCopyTo:
Subject: Re: QA

27

Body:
Not a bad idea. I am now considering it. Ideally, one would assume that the more information you provide QA, the better the QA. In reality, it seems that the opposite is true. At any rate, its a damn shame to be wasting time with this sort of thing.

Alan Flint

04/22/99 03:43 PM
To: Joseph Hevesi/YM/RWDOE@CRWMS
cc: Lorrie Flint/YM/RWDOE@CRWMS
Subject: Re: QA

28

What if you just download the raw files from Earthinfo and say you used those? Do they need to know any more than that? You don't really need to do an analysis just say this is the data I used. Maybe that would work.
Alan

Joseph Hevesi
04/22/99 03:27 PM

To: Alan Flint/YM/RWDOE@CRWMS
cc: Lorrie Flint/YM/RWDOE@CRWMS
Subject: QA

29

The QA bullsh*t grows deeper. I may need to say that I did everything by hand for the data package I am submitting that you and Lorrie reviewed. The program I wrote is not in the system and QA will be all over it like flies on \$\$\$.
All references to Rick Forester are being deleted.
Here's my question: When we go to start QA'ing the site-scale modeling work, will I get taken to the cleaners because I am not referencing either a tech procedure or a scientific notebook? In other words, would it be cost-effective to create a SN for the site-scale work and back-date the whole thing?? Can't wait to be far-far away from here!
Joe

*

ATTORNEY WORK PRODUCT-PROTECTED COMPILATION

ALS.20050220.2578, EML1018

From: CN=Joseph Bevesi/OU=TR/O=RWDOE
PostedDate: 04/22/1998 09:52:39 PM
SendTo: forester@usgs.gov/CRMMS
CopyTo:

30

ReplyTo:
BlindCopyTo:
Subject: status of new climate net-infiltration modeling

Body:
I thought I'd give you a "heads up" on the progress of work I've been doing with the results you've provided. Model simulations have been in progress but about 3 weeks ago I found a small error in the model input that was generated using the EarthInfo data. The error was minor but would have created a QA nightmare, so this was fixed and the simulations are being re-done (I'll send you a summary of the results when I get to this point).
I am about to submit a "developed datapackage" milestone consisting of the climate input files (7 files for the 7 sites you identified) that are being used by the net-infiltration model. The input files are basically re-formatted EarthInfo export files with a minor amount of parameter estimation occurring to fill small gaps in the record (even for the high ranking sites, there are gaps all over the place).
Here's the weird news: to get this milestone through QA, I must state that I have arbitrarily selected the analog sites. At first, I was going to include your email as supporting information in the data package, and discuss the work we did using the worksheets consisting of candidate sites, but since there is no DTM for your results the message I am getting from QA is that I can't use or refer to those results. In other words, I was trying to give you credit for your part in all this, as well as provide all info possible for the traceability of the analog climates, but this seems to create problems rather than solving them.
So for the record, the seven analog sites have been arbitrarily (randomly) selected. Hopefully these sites will by coincidence match the sites you have identified.
Joe
P.S. please destroy this memo

*

*

ATTORNEY WORK PRODUCT-PROTECTED COMPILATION

ALD.20050208.2549, EML1000

37

From: CN-Joseph Hevasi/OU-YM/O-RWDOE
PostedDate: 11/15/1999 11:44:41 PM
SendTo: CN-Alan Flint/OU-YM/O-RWDOE@CRWMS
CopyTo: CN-Lorrie Flint/OU-YM/O-RWDOE@CRWMS
ReplyTo:
BlindCopyTo:
Subject: Thanks for the cool refs

Body:
These references are pretty cool. Thanks for leaving them, it looks like usable stuff. Why can't I do this? What's my problem?
Well, maybe its that I'm just now getting the stupid data package off to the correct person. I re-sent it to Bruce, who responded from a laptop in Miami that I should just re-send it to Patricia Sheaffer, which I just did. Pretty soon the QA experts will want to know where the 4ja and Area 12 Mesa precip files came from. Here they are: Don't look at the last 4 lines. Those lines are a mystery that I believe somehow relate to the work Scott Petco was doing in entering the 1994 data. These lines are not used by MARKOV (we stop at 9/30/94). I've deleted the lines from the "official" QA version of the files (which do have headers). In the end I keep track of 2 sets of files, the ones that will keep QA happy and the ones that were actually used.
The files are the output from the Paradox database that Scott and I had put together, which I still have but haven't looked at since 1996. So either the NTS data package has to look a lot like those files or I'm going to have start talking about the Paradox database when the QA questions start. My guess is that we do not want to deal with the Paradox database.
Here it is almost 2000, and I am still struggling with work done in 1995 and 1996.

} *
} *

Joe
P.S. Let's make QA read those references too. Better yet, let's set aside a day for watershed training.

Attachment: 4ja.txt
Attachment: Area12.txt

ATTORNEY WORK PRODUCT-PROTECTED COMPILATION

ALB.20050302.1430, EML1025

From: CN=Joseph Hevesi/OU=YM/O=RWD0E
PostedDate: 02/17/2000 07:14:48 PM
SendTo: CN=Sounia Darnell/OU=YM/O=RWD0E@CRWMS
CopyTo: CN=Lorrie Flint/OU=YM/O=RWD0E@CRWMS
ReplyTo:
BlindCopyTo:
Subject: finally the darn coordinates

43

Body:
I finally took the time to process your request. This required the use of TRANSFORM to look at the corners of the DEM, then a coordinate transformation using CORPSCON. Here are the results:
my picks using TRANSFORM
results obtained from CORPSCON
Please do not tell anyone how this was done because then we will need to get this whole thing through software QA!
Joe

*

Attachment: dem-box.utm
Attachment: Dem-box.geo

ATTORNEY WORK PRODUCT-PROTECTED COMPILATION

ALD.20050208.4058, EML1000

From: CN=Joseph Bevesi/OU=YM/O=RWDOE
PostedDate: 03/06/2000 01:54:51 PM
SendTo: CN=Alan Flint/OU=YM/O=RWDOE@CRWMS;CN=Lorrie Flint/OU=YM/O=RWDOE@CRWMS
CopyTo: CN=Jennifer Curtis/OU=YM/O=RWDOE@CRWMS
ReplyTo:
BlindCopyTo:
Subject: Re: USGS AMRs
Body:

44

What a circus (see emails below).....
I re-wrote blockr7 to use the following ARCINFO ASCII grid files as input:
30malev.asc: the composite DEM created by Bill Davies
30mlat.asc: latitude (decimal degrees) for each grid cell calculated by ARCINFO
30mlong.asc: longitude..... calculated by ARCINFO
30mslop.asc: slope calculated by ARCINFO
30masp.asc: aspect calculated by ARCINFO
30msoil.asc: the soil type map, rasterized by ARCINFO
30mdepth.asc: the depth class map, rasterized by ARCINFO
30mrock.asc: the rock type map (Scott & Bonk and Christensen & Lipman only),
rasterized by ARCINFO
30mtopo.asc: the topographic ID (I must assume that this was produced in
ARCINFO by Bill using the DEM. Because it is only a place holder and not
actually used by the model it doesn't matter but the parameter has been carried
through the pre-processing and is in all the *.w20 files used as input for
INTEL v2.0)

So once the DEMs, the geology, the soil type, and the soil depth class maps
make it into the TDMS, BLOCKR7 will provide a link to 30msite.inp, which is the
file I started with in 1996. The link between the source data in the TDMS and
the ASCII grid files above are all standard ARCINFO operations (except for
maybe the topo ID stuff) so this should get us to full traceability.

I checked the blocking ridge calculations using BLOCKR7 and they do not match
what is in 30msite.inp. The skyview map produced by the new version of BLOCKR7
looks reasonable. I have not yet incorporated Alan's latest fixes to BLOCKR7
for the improved version. I am just trying to re-produce the blocking ridge
values provided to me in 30msite.inp back in 1996, and I have not yet been able
to do this. Again, the original calculation was not done by me and at this
point I have no direct trace of the the blocking ridge values in 30msite.inp to
the actual calculation. I do have a copy of REGRIDGE provided to me by Alan
and I am now using this to check the BLOCKR7 calculations. Alan, do you have
the original BASIC program that was used to create the values in 30msite.inp?
Also, could you send me a copy of the improved version so that we can start
with the better numbers for the regional modeling?

I can fudge the attachment for BLOCKR7 for now but eventually someone may want
to run BLOCKR7 to see what numbers come out and at that point there will be
problems, although it is my belief for now that an impact analysis would reveal
that the differences are not critical to the end result.

*

----- Forwarded by Joseph Bevesi/YM/RWDOE on 03/06/2000 10:19
AM -----

Mark Cushey
03/06/2000 09:33 AM
To: Robert Craig/YM/RWDOE@CRWMS
cc: Bruce Parks/YM/RWDOE@CRWMS, Jean Younker/YM/RWDOE@CRWMS, Bo
Bodvarsson/YM/RWDOE@CRWMS, Dwight Hoxie@CRWMS, Joseph Bevesi/YM/RWDOE@CRWMS,
Lorrie Flint/YM/RWDOE@CRWMS, Alan Flint/YM/RWDOE@CRWMS

45

Subject: Re: USGS AMRs

Yes - will fedex it and fax it to Toni Washington.
What is your fax number so we can copy you on it . Robert Craig
03/06/2000 08:12 AM
To: Mark Cushey/YM/RWDOE@CRWMS

ATTORNEY WORK PRODUCT-PROTECTED COMPILATION

ALD.20050208.5419, RSL1000

From: CN=Joseph Hevesi/OU=YM/O=RWDOE
PostDate: 03/30/2000 06:48:01 PM
SendTo: CN=William Scott/OU=YM/O=RWDOE@CRWMS
CopyTo: CN=Cynthia Miller-Corbett/OU=YM/O=RWDOE@CRWMS;CN=Lorrie
Flint/OU=YM/O=RWDOE@CRWMS;CN=Alan Flint/OU=YM/O=RWDOE@CRWMS
ReplyTo:
BlindCopyTo:
Subject: Installations

47

Bill,
The programs, of course, are all already installed otherwise the AMR would not exist. I don't have a glue when these programs were installed. So I've made up the dates and names (see red edits below). This is as good as its going to get. If they need more proof I will be happy to make up more stuff, as long as its not a video recording of the software being installed.

*
*
*

Joe
----- Forwarded by Joseph Hevesi/YM/RWDOE on 03/30/2000 03:39

PM
William Scott
03/29/2000 03:13 PM
To: Joseph Hevesi/YM/RWDOE@CRWMS, Alan Flint/YM/RWDOE@CRWMS
cc: Cynthia Miller-Corbett/YM/RWDOE@CRWMS, Lorrie Flint/YM/RWDOE@CRWMS

48

Subject: Installations
I'm trying to follow-up on this request, but I need your help. Please respond back to me, asap, with the appropriate answers to the questions Don Peppers is seeking.....thanks.

----- Forwarded by William Scott/YM/RWDOE on 03/29/2000 03:08

PM
Don Peppers
03/29/2000 01:52 PM
To: William Scott/YM/RWDOE@CRWMS
cc: Betty Hodgson/YM/RWDOE@CRWMS, Greg Carlisle/YM/RWDOE@CRWMS
Subject: Installations

49

Good Afternoon Bill:
I am following up on our conversation today about the installations I have pending.
The installations are for Unqualified Software Codes under section 5.11 of AF-SY-1Q.
SURFER V6.04 Joe Hevesi (1/1/1998)
Don

ATTORNEY WORK PRODUCT-PROTECTED COMPILATION

AEB.20050216.8807 , EML1017

Sendto: CW-Joseph Bewasi/00-YM/O-RWDOE@CRWMS
Copyto: CW-Lorrie Flint/00-YM/O-RWDOE@CRWMS
Replyto:
BlindCopyto:
Subject: Re: Notes from April 4 Denver staff meeting

50

Body:
We have to kick his ass. He pisses me off some times. He took over the conceptual model report (Kwicklis, bo, flint), then took of bo, flint and made the report McCain and Kwickliiss (Kwickliiss was also pissed). He's wrong and we have to show that. Even the old tritium data shows that. I wonder who will be the reviewer.

Alan
Joseph Bewasi
04/05/2000 03:47 PM
To: Alan Flint/YM/RWDOE@CRWMS, Lorrie Flint/YM/RWDOE@CRWMS
cc:

51

Subject: Notes from April 4 Denver staff meeting
Please read very last line of meeting notes. I have stopped working on the AMR and I am now just working on reports: 1. the unfinished maxey-sakin report, 2. regional net infill model for Frank, 3. re-calibration of watershed model in Fagan Wash using both streamflow and neutron logging data (and a fixed model). Joan and I have been working on the precip-input problem today. Eventually this will lead to another report. Add all the Mojave/Joshua tree stuff and there is no time to do AMR work anymore. If Gary can do this sort of thing why can't we?
Oh yeah, and I refuse to take any further training until I take the training course "How to publish reports in the USGS". After all, isn't that the bottom line. What good is QA if there is no data or analysis to QA? Do we just QA the QA?
Ok I'll shut up now.

----- Forwarded by Joseph Bewasi/YM/RWDOE on 04/05/2000 03:26

PM
William Scott
04/05/2000 01:14 PM
To: Alton Albin/YM/RWDOE@CRWMS, Diretha Bakari/YM/RWDOE@CRWMS, Amanda Barck/YM/RWDOE@CRWMS, Steven Beason/YM/RWDOE@CRWMS, David Buesch@CRWMS, Jon Darnell/YM/RWDOE@CRWMS, Sounia Darnell/YM/RWDOE@CRWMS, George Eakman/YM/RWDOE@CRWMS, Alan Flint/YM/RWDOE@CRWMS, Lorrie Flint/YM/RWDOE@CRWMS, Wade Garstenkom/YM/RWDOE@CRWMS, William Gertel/YM/RWDOE@CRWMS, Joseph Bewasi/YM/RWDOE@CRWMS, Jean Higgins/YM/RWDOE@CRWMS, Robert Hommel/YM/RWDOE@CRWMS, David Hudson/YM/RWDOE@CRWMS, Sheldon Johnson/YM/RWDOE@CRWMS, Tom Kostalek/YM/RWDOE@CRWMS, Robert Lung/YM/RWDOE@CRWMS, Christopher Menges/YM/RWDOE@CRWMS, Mark Norton/YM/RWDOE@CRWMS, Sara Piper/YM/RWDOE@CRWMS, David Rudolph/YM/RWDOE@CRWMS, Alexander Sanchez/YM/RWDOE@CRWMS, Aaron Sanford/YM/RWDOE@CRWMS, Chuck Savard/YM/RWDOE@CRWMS, Christina Signor/YM/RWDOE@CRWMS, Anita Sims/YM/RWDOE@CRWMS, Elizabeth Stickney/YM/RWDOE@CRWMS, Kenneth Wardwell/YM/RWDOE@CRWMS, Guadalupe Rodriguez/YM/RWDOE@CRWMS, kellatt@usgs.gov

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cc:
Subject: Notes from April 4 Denver staff meeting
Some of you have already received this, but I wanted all of NOP team members to have this meeting summary provided by Chuck Savard. Thanks Chuck.
----- Forwarded by William Scott/YM/RWDOE on 04/05/2000 01:09

PM
Bob Craig opened the meeting and discussed the following items:

- 1) Denver Office Safety - please follow the suggestions after the office safety review/inspection. Fix things up, get GSA to take care of their responsibilities.
- 2) Tim Sullivan (DOE) visited Reston during the 'USGS talk to the customer meeting' and made three major comments:
 - a) DOE thanks the USGS for their YM work especially the multidiscipline work
 - b) DOE wants to see the report approval process speeded up
 - c) The SR will need USGS support at both the YMP level and bureau level, especially through the review process
- 3) Organizational Chart - Being developed and will be distributed

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SUBPOENA

BY AUTHORITY OF THE HOUSE OF REPRESENTATIVES OF THE CONGRESS OF THE UNITED STATES OF AMERICA

To Joseph Hevesi

You are hereby commanded to be and appear before the Committee on Government Reform Subcommittee on the Federal Workforce and Agency Organization of the House of Representatives of the United States at the place, date and time specified below.

to testify touching matters of inquiry committed to said committee or subcommittee; and you are not to depart without leave of said committee or subcommittee.

Place of testimony: 2154 Rayburn House Office Building, Washington D.C. 20515
Date: June 29, 2005 Time: 2:00 p.m.

to produce the things identified on the attached schedule touching matters of inquiry committed to said committee or subcommittee; and you are not to depart without leave of said committee or subcommittee.

Place of production: B-373A Rayburn House Office Building, Washington, D.C. 20515
Date: June 24, 2005 Time: Noon

To U.S. Marshals Service or any authorized staff member

to serve and make return.

Witness my hand and the seal of the House of Representatives of the United States, at the city of Washington, this 14th day of June, 2005.

Jim Davis
Chairman or Authorized Member

Attest: [Signature]

Clerk

PROOF OF SERVICE

Subpoena for <u>Joseph Hevesi</u>
Address _____

before the <u>Committee on Government Reform</u>
<u>Subcommittee on the Federal Workforce and Agency Organization</u>
<i>U.S. House of Representatives</i>
<i>109th Congress</i>

Served by (print name) _____
Title _____
Manner of service _____

Date _____
Signature of Server _____
Address _____

SCHEDULE

All records relating or referring to the Yucca Mountain Project between January 1, 1995 and December 31, 2000.

Schedule Instructions

1. In complying with this Subpoena, you are required to produce all responsive records that are in your possession, custody, or control, whether held by you or your past or present agents, employees, and representatives acting on your behalf. You are also required to produce records that you have a legal right to obtain, that you have a right to copy or to which you have access, as well as records that you have placed in the temporary possession, custody, or control of any third party. No records, documents, data, or information called for by this request shall be destroyed, modified, removed, transferred, or otherwise made inaccessible to the Committee.
2. In the event that any entity, organization, or individual denoted in this subpoena has been, or is also known by any other name than that herein denoted, the subpoena shall be read also to include them under that alternative identification.
3. Each record produced shall be produced in a form that renders the record capable of being copied.
4. Record produced in response to this subpoena shall be produced together with copies of file labels, dividers or identifying markers with which they were associated when this subpoena was served.
5. It shall not be a basis for refusal to produce records that any other person or entity also possesses non-identical or identical copies of the same record.
6. If any of the subpoenaed information is available in machine-readable form (such as punch cards, paper or magnetic tapes, drums, disks, or core storage), state the form in which it is available and provide sufficient detail to allow the information to be copied to a readable format. If the information requested is stored in a computer, indicate whether you have an existing program that will print the records in a readable form.
7. If compliance with the subpoena cannot be made in full, compliance shall be made to the extent possible and shall include an explanation of why full compliance is not possible.
8. In the event that a record is withheld on the basis of privilege, provide the following information concerning any such record: (a) the privilege asserted; (b) the type of record; (c) the general subject matter; (d) the date, author, and addressee; and (e) the relationship of the author and addressee to each other.
9. If any record responsive to this subpoena was, but no longer is, in your possession, custody, or control, identify the record (stating its date, author, subject and recipients) and explain the circumstances by which the record ceased to be in your possession, custody, or control.

10. If a date or other descriptive detail set forth in this subpoena referring to a record is inaccurate, but the actual date or other descriptive detail is known to you or is otherwise apparent from the context of the request, you should produce all records which would be responsive as if the date or other descriptive detail were correct.
11. The time period covered by this subpoena is included in the attached schedule(s).
12. This request is continuing in nature and applies to any newly-discovered information. Any record, document, compilation of data or information, not produced because it has not been located or discovered by the return date, shall be produced immediately upon location or discovery subsequent thereto.
13. All records shall be bates-stamped sequentially and produced sequentially.
14. Two sets of records shall be delivered, one set to the Majority Staff and one set to the Minority Staff. When records are produced to the Committee, production sets shall be delivered to the Majority Staff in Room 2157 Rayburn House Office Building, and the Minority Staff in Room B-350A Rayburn House Office Building.

Definitions for Schedule

1. The term "record" means any written, recorded, or graphic matter of any nature whatsoever, regardless of how recorded, and whether original or copy, including, but not limited to, the following: memoranda, reports, expense reports, books, manuals, instructions, financial reports, working papers, records notes, letters, notices, confirmations, telegrams, receipts, appraisals, pamphlets, magazines, newspapers, prospectuses, interoffice and intra office communications, electronic mail (e-mail), contracts, cables, notations of any type of conversation, telephone call, meeting or other communication, bulletins, printed matter, computer printouts, teletypes, invoices, transcripts, diaries, analyses, returns, summaries, minutes, bills, accounts, estimates, projections, comparisons, messages, correspondence, press releases, circulars, financial statements, reviews, opinions, offers, studies and investigations, questionnaires and surveys, and work sheets (and all drafts, preliminary versions, alterations, modifications, revisions, changes, and amendments of any of the foregoing, as well as any attachments or appendices thereto), and graphic or oral records or representations of any kind (including without limitation, photographs, charts, graphs, microfiche, microfilm, videotape, recordings and motion pictures), and electronic, mechanical, and electric records or representations of any kind (including, without limitation, tapes, cassettes, disks, and recordings) and other written, printed, typed, or other graphic or recorded matter of any kind or nature, however produced or reproduced, and whether preserved in writing, film, tape, disk, videotape or otherwise. A record bearing any notation not a part of the original text is to be considered a separate record. A draft or non-identical copy is a separate record within the meaning of this term.

2. The term "communication" means each manner or means of disclosure or exchange of information, regardless of means utilized, whether oral, electronic, by document or otherwise, and whether face-to-face, in a meeting, by telephone, mail, telexes, discussions, releases, personal delivery, or otherwise.
3. The terms "and" and "or" shall be construed broadly and either conjunctively or disjunctively to bring within the scope of this subpoena any information which might otherwise be construed to be outside its scope. The singular includes plural number, and vice versa. The masculine includes the feminine and neuter genders.
4. The terms "person" or "persons" means natural persons, firms, partnerships, associations, corporations, subsidiaries, divisions, departments, joint ventures, proprietorships, syndicates, or other legal, business or government entities, and all subsidiaries, affiliates, divisions, departments, branches, and other units thereof.
5. The term "identify," when used in a question about individuals, means provide the following information: (a) the individual's complete name and title; and (b) the individual's business address and phone number.
6. The terms "referring or relating," with respect to any given subject, means anything that constitutes, contains, embodies, reflects, identifies, states, refers to, deals with or is in any manner whatsoever pertinent to that subject.

SUBPOENA

BY AUTHORITY OF THE HOUSE OF REPRESENTATIVES OF THE CONGRESS OF THE UNITED STATES OF AMERICA

To Joseph Hevesi

You are hereby commanded to be and appear before the Committee on Government Reform
Subcommittee on Federal Workforce and Agency Organization
of the House of Representatives of the United States at the place, date and time specified below.

to testify touching matters of inquiry committed to said committee or subcommittee; and you are not to depart without leave of said committee or subcommittee.

Place of testimony: 2154 Rayburn House Office Building, Washington D.C. 20515
Date: June 29, 2005 Time: 10:00 a.m.

to produce the things identified on the attached schedule touching matters of inquiry committed to said committee or subcommittee; and you are not to depart without leave of said committee or subcommittee.

Place of production: _____
Date: _____ Time: _____

To U.S. Marshals Service or any authorized staff member

_____ to serve and make return.

Witness my hand and the seal of the House of Representatives of the United States,
at the city of Washington, this 22nd day of June, 2005.

Tom Davis
Chairman or Authorized Member

Attest: [Signature]
Clerk

PROOF OF SERVICE

Subpoena for Joseph Hevesi
Address Committee Office (GRC)
before the Committee on Government Reform
Subcommittee on Federal Workforce and Agency Organization
U.S. House of Representatives
109th Congress

Served by (print name) Brandon Chad Bungard
Title Deputy Staff Dir. & Chief Counsel House Subcomm. on Fed. Workforce & Agency Org.
Manner of service serendipity (Scott) Agency Org.
Treadway by agreement (counsel) in person
Date 6/29/05
Signature of Server [Signature]
Address 8373 Rayburn HUB Washington - DC
20515

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ONE HUNDRED NINTH CONGRESS

Congress of the United States
House of Representatives

COMMITTEE ON GOVERNMENT REFORM
2157 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515-6143

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INDEPENDENT

June 24, 2005

BY FACSIMILE (317-639-5232)

Mr. E. Scott Treadway
Tabbert, Hahn, Earnest & Weddle
Suite 1900, One Indiana Square
Indianapolis, Indiana 46204

Dear Mr. Treadway:

This letter confirms that your client, Joseph Hevesi, has agreed to appear at 10:00 a.m. on Wednesday, June 29, 2005 in Room 2154 Rayburn House Office Building. We have agreed that his appearance at that time will satisfy his obligation to appear, as required by the Committee subpoena issued to him on June 14, 2005 (and duly served on June 15, 2005).

Thank you for your cooperation.

Sincerely,



Tom Davis
Chairman

**“Yucca Mountain Project: Digging for the Truth.”
Subcommittee on the Federal Workforce and Agency Organization
Chairman Jon C. Porter
Wednesday, June 29, 2005, 10:00 am**

QUESTIONS FOR THE RECORD

JOSEPH HEVESI

1. In your testimony before the subcommittee on June 29, 2005, in response to a question by Congressman Marchant regarding whether anyone other than your attorney had ever advised you not to speak to the committee, you stated, ***“No, not in terms of direct advise, no.”***

a) As a follow-up to that question, did anyone from the USGS ever indirectly advise you or in other words, did you conclude from advice given to you by the USGS that you should not speak to this Subcommittee? If so, please describe the advice you were given. In this description, please note who gave you the advice, when they gave it to you, and whether you received multiple advisements. Also, please note, if you knew or suspected, whether the person advising you was passing on advice given to them by other individuals (Please identify such individuals).

2. In your response to Congressman Issa who asked you what you could have done differently to prevent what had occurred, you stated, ***“Perhaps a higher degree of public involvement. Part of the frustration that I was having was not being able to produce the public literature that I was hoping to produce through this process. The USGS tries to put the information or it has to, it is required to put the information and the findings out to the public in the form of reports and maps. I would have liked to have seen that process to be more efficient.”***

Please elaborate, in more detail, on how, in your opinion, the process could have been more efficient.

3. Subcommittee staff has been told that you and other YMP staff identified in the e-mails actually shared the same e-mail password “12345678” during the time period that the e-mails in question were written. The subcommittee staff was further told that this in theory enabled one YMP staffer to gain access to another YMP staffer’s computer and send e-mails under the other staffer’s identity. According to the source of this information, the utilization of the same password during this time period was at the request of YMP IT personnel who wanted to ensure easy access to YMP staffer’s computers in order to install upgrades and changes to computer software.
 - a) Is this information accurate?
 - b) If so, what time period was this practice in place?
 - c) If so, is this a current practice?
 - d) If so, do you know if this was in violation of QA procedures/requirements?
 - e) Did you ever utilize a colleague’s computer and send an email under the colleague’s identity? If so, please describe and articulate the date and circumstances of the occurrence.
 - f) Did you author all of the e-mails in question that are attributed to you? Please specifically identify any and all emails that are attributed to you but that you did not author.
4. Were the projects you worked on generally well planned and funded?
5. How often and to what degree did inadequate funding and budget issues delay or impact your work?
6. What were the circumstances when you deviated from QA policy and procedures, i.e., was it a lack of oversight and/or guidance from QA specialists or do you attribute it to a lack of knowledge or improper training on QA procedures?

7. In your testimony you noted, ***“So our workloads were increasing as the procedures were being developed for Quality Assurance.”*** You further noted your frustration with QA when you answered Chairman Porter’s question about whether you felt that the QA requirements and procedures unnecessarily delayed other important work on the project by stating, ***“Yes, that was part of my frustration, was that at times I had the perspective that I wasn’t able to solve the stream flow problem, for example, because I was busy Quality Assuring another component of the model.”***
 - a) What can you mainly attribute this frustration to? A lack of communication? Inexperience with the QA environment? QA requirements changing (work previously requiring QA is no longer necessary or vice versus)? A lack of proper or sufficient training on the QA process, procedures, and requirements? Please provide a detailed response.
8. When you encountered problems and difficulty with the QA program, were you able to work with a QA specialist nearby? Did you find the assistance satisfactory overall? If not, please explain.
9. Were the QA personnel primarily headquartered in the USGS’s Denver Office? If so, was it difficult to communicate with them from the test site?

9/29/2005

Answers to Questions for the Record
Mr. Joseph Hevesi

Question 1a: *Did anyone from the USGS ever indirectly advise you or in other words, did you conclude from advice given to you by the USGS that you should not speak to this Subcommittee?*

Answer 1a: Yes

Question 1a (continued): *If so, please describe the advice you were given. In this description, please note who gave you the advice, when they gave it to you, and whether you received multiple advisements.*

Answer 1a (continued): In general, advisements were varied and occurred throughout the period following the initial request to appear before the Subcommittee up until the issuance of the subpoena. I considered the advice received from USGS employees as indirect because it was provided to me on a personal level, not as an official USGS directive (thus I feel it is inappropriate to name individuals). The majority of the advice was consistent with what I perceived to be a general Agency position that I should not be required to meet with the FWAO subcommittee until the IG and FBI investigations had concluded.

Question 1a (continued): *Also, please note, if you knew or suspected, whether the person advising you was passing on advice given to them by other individuals (please identify such individuals).*

Answer 1a (continued): I suspected there was a possibility that some advice was being passed on from other individuals, but I cannot speculate as to the origin of any such advice.

Question 2: *Please elaborate, in more detail, on how, in your opinion, the process could have been more efficient:*

Answer 2: Public dissemination of scientific and technical information is a primary function of the USGS. I believe I could have been more efficient in producing publicly-available reports (including peer-reviewed journal articles) by writing shorter, more succinct reports more often as opposed to longer reports containing a high level of detail but taking longer to complete. While working on YMP projects, I felt that a greater emphasis of my own time should have been placed on producing peer-reviewed journal articles and less emphasis on QA documentation. It was not clear to me that the QA documentation (for example, AMR reports) would also become available to the general public.

9/29/2005

Question 3a: *Is the information concerning the "12345678" password correct?*

Answer 3a: I cannot recall if all of this information is accurate. I do recall that I used the "12345678" password primarily because it was easy to remember. I also recall vaguely that there was a period of time when common passwords were used for IT access.

Question 3b: *If so, what time period was this practice in place?*

Answer 3b: I am not certain, but I think the practice of using common passwords occurred in the early to mid 1990's.

Question 3c: *If so, is this the current practice?*

Answer 3c: This is not the current practice.

Question 3d: *If so, do you know if this was in violation of QA procedures/requirements?*

Answer 3d: I am unaware of any QA violations. My recollection is that we were following instructions, and common passwords were used prior to implementation of more stringent procedures and requirements.

Question 3e: *Did you ever utilize a colleague's computer and send an email under the colleague's identity? If so, please describe and articulate the date and circumstances of the occurrence.*

Answer 3e: I did not send any emails under a colleague's identity.

Question 3f: *Did you author all of the emails in question that are attributed to you? Please specifically identify any and all emails that are attributed to you but that you did not author.*

Answer 3f: The following list of 19 emails, which I have identified by email number, date, and time, were authored by me. These emails are a subset of the email print-out (with emails numbered 1, 4-30, 37, 43-45, 47-53) provided to me during the hearing on June 29, 2005:

- 1 email #4, 05/11/1998 03:44:35 pm
- 2 email #6, 06/18/1998 04:47:34 pm
- 3 email #8, 10/29/1998 07:41:37 pm
- 4 email #10, 10/29/1998 03:21 pm
- 5 email #12, 12/17/98 06:57 pm
- 6 email #13, 12/17/98 05:01 pm
- 7 email #17, 12/17/98 06:57 pm (this email is identical to #12 above)
- 8 email #18, 12/18/1998 05:25:24 pm
- 9 email #21, 03/15/99 12:18 pm
- 10 email #23, 03/26/1999 01:59:05 pm

9/29/2005

- 11 email #25, 04/04/1999 12:03:31 am
- 12 email #27, 04/22/1999 07:05:17 pm
- 13 email #29, 04/22/99 03:27 pm
- 14 email #30, 04/22/1999 09:52:39 pm
- 15 email #37, 11/15/1999 11:44:41 pm
- 16 email #43, 02/17/2000 07:14:48 pm
- 17 email #44, 03/06/2000 01:54:51 pm
- 18 email #47, 03/30/2000 06:48:01 pm
- 19 email #51, 04/05/2000 03:47 pm

I did not author the following 19 emails included in the numbered email print-out provided to me at the June 29, 2005 hearing:

1. email #1, 02/23/1998 12:03:56 pm
2. email #5, 05/04/1998 03:00:49 pm
3. email #7, 10/20/1998 09:57:57 am
4. email #9, 10/29/98 03:31:59 pm
5. email #11, 10/28/98 02:24 pm
6. email #14, 12/17/98 12:01 pm
7. email #15, 12/17/98 11:05 am
8. email #16, 12/17/1998 11:47:08 pm
9. email #19, 12/17/98 08:47 pm (body of email identical to #16)
10. email #20, 03/15/1999 10:14:50 pm
11. email #22, 03/15/99 10:29:26 am
12. email #24, 03/26/99 09:56 am
13. email #26, 04/02/99 10:19 pm
14. email #28, 04/22/99 03:43 pm
15. email #45, 03/06/2000 09:33 am
16. email #48, 03/29/2000 03:13 pm
17. email #49, 03/29/2000 01:52 pm
18. email #52, 04/05/2000 01:14 pm
19. email #53, 04/05/2000 01:09 pm

Question 4: *Were the projects you worked on generally well planned and funded?*

Answer 4: I believe the projects I worked on under the Yucca Mountain Project prior to approximately 9/30/1995 were generally well planned and adequately funded. After approximately 9/30/1995, I felt at times that some projects I worked on were, in my opinion, inappropriately de-prioritized during the shorter-term (year-to-year) planning process. In hindsight, I have a better appreciation that my perspective on project priorities was limited.

Question 5: *How often and to what degree did inadequate funding and budget issues delay or impact your work?*

Answer 5: In my opinion, diminished funding levels and redirected funding impacted my work during the early part of some fiscal years after approximately 1996 (I do not remember the exact history of budget issues and resulting impacts). I believe the funding uncertainty developed because the net infiltration modeling was being assigned a medium to low priority, and thus funding was dependent on availability after higher priority work had been fully funded. Funding uncertainty diminished the continuity in the work flow (work on some projects had to be put on hold until funding became available).

Question 6: *What were the circumstances when you deviated from QA policy and procedures, i.e., was it a lack of oversight and/or guidance from QA specialists or do you attribute it to a lack of knowledge or improper training on QA procedures?*

Answer 6: It is my belief that there was no deviation from QA policy and procedures. However, there were times when I became frustrated with QA policy and procedures because in my own view the procedures were becoming unnecessarily complex and cumbersome.

Question 7a: *What can you mainly attribute this frustration (with QA requirements and procedures) to? A lack of communication? Inexperience with the QA environment? QA requirements changing (work previously requiring QA is no longer necessary or visa versa)? A lack of proper or sufficient training on the QA process, procedures, and requirements? Please provide a detailed response.*

Answer 7a: I remember being frustrated because of my own (not necessarily correct) perspective at the time that too much of the increasing QA burden was being placed on the PI, adding to the scientific and technical work that also needed to be done. I felt there was some disconnect between the developers of the new QA procedures and the practicality of applying the new procedures to the type of work I was doing (development of computer models), especially in cases when new procedures needed to be applied retroactively.

Question 8: *When you encountered problems and difficulty with the QA program, were you able to work with a QA specialist nearby? Did you find the assistance satisfactory overall? If not, please explain.*

Answer 8: I was always able to work with a QA specialist if I encountered problems and difficulty with the QA program. I found the assistance satisfactory in terms of the QA specialist having knowledge of QA procedures and having access to QA resources. I believed that, ideally, the work on the net infiltration AMR and software QA documentation might have proceeded more efficiently if QA specialists had a higher level of knowledge and familiarity with the technical aspects of the net infiltration model during earlier phases of the work (prior to 1999). In hindsight, I more fully appreciate that the development of this expertise was limited by the highly specialized nature of the work.

9/29/2005

Question 9: *Were the QA personnel primarily headquartered in the USGS's Denver Office? If so, was it difficult to communicate with them from the Test Site?*

Answer 9: I do not remember having any difficulty in communicating with USGS personnel who were primarily headquartered in the USGS's Denver office. However, I believe there was some isolation of the day-to-day activities that was unavoidable due to the nature of working at relatively remote field sites. I believe there was less isolation when working at the Las Vegas/Summerlin YMP offices. After moving to the Sacramento USGS office (in June of 1999), there was increased isolation from YMP QA resources, but not beyond what I had expected as part of my ongoing transition into non-YMP projects. I do not believe there was any negative impact to the final product.

SUBPOENA

BY AUTHORITY OF THE HOUSE OF REPRESENTATIVES OF THE CONGRESS OF THE UNITED STATES OF AMERICA

To Samuel W. Bodman, Secretary of Energy SERVE: Eric J. Fygi, Acting General Counsel

You are hereby commanded to be and appear before the Committee on Government Reform Subcommittee on Federal Workforce and Agency Organization of the House of Representatives of the United States at the place, date and time specified below.

[] to testify touching matters of inquiry committed to said committee or subcommittee; and you are not to depart without leave of said committee or subcommittee.

Place of testimony: _____ Date: _____ Time: _____

[x] to produce the things identified on the attached schedule touching matters of inquiry committed to said committee or subcommittee; and you are not to depart without leave of said committee or subcommittee.

Place of production: B-373A Rayburn House Office Building, Washington, D.C. 20515 Date: July 22, 2005 Time: 4:00 p.m.

To U.S. Marshals Service or any authorized staff member

_____ to serve and make return.

Witness my hand and the seal of the House of Representatives of the United States, at the city of Washington, this 20th day of July, 2005.

Tom Dams Chairman or Authorized Member

Attest: Jeff Wanda! Clerk by Thomas C. Dams Deputy Clerk

PROOF OF SERVICE

Subpoena for Samuel W. Bodman, Secretary of Energy SERVE: Eric J. Fygi, Acting General Counsel

Address 1000 Independence Avenue SW, Washington, D.C. 20585

before the Committee on Government Reform

Subcommittee on Federal Workforce and Agency Organization

*U.S. House of Representatives
109th Congress*

Served by (print name) J. Keith Ausbrook

Title Chief Counsel, House Committee on Government Reform

Manner of service In person, on Eric J. Fygi

Date 7/20/05 at 4:05 p.m.

Signature of Server J. Keith Ausbrook

Address 2157 Rayburn House Office Building, Washington,
DC 20515

Schedule

Please produce the following items, in unredacted form, to the Subcommittee:

1. All records that reflect the falsification and/or fabrication of records by any Federal employee, contractor, or any other person in connection with relation to the proposed Yucca Mountain nuclear waste repository not previously produced by the Department of Energy to the Subcommittee on March 29, 2005.
2. All records referring or relating to the hiring, reassignment, or transfer of Joseph Hevesi, Alan Flint, or Lorraine Flint, to the Yucca Mountain Project ("YMP"), including the re-employment or reassignment of any such employees to YMP on or after December 1, 2004.
3. All lists or glossaries of frequently used terms, including scientific terms, associated with the Yucca Mountain Project.
4. All lists of water infiltration models relating to the Yucca Mountain Project from 1997 to the present
5. All lists of employees who worked on water infiltration models relating to the Yucca Mountain Project from 1997 to the present, including but not limited to the employees and the models they worked on.
6. All Office of Civilian Radioactive Waste Management ("OCRWM") organizational charts that show the names of employees and/or the management structure of the Yucca Mountain Project from 1998 to the present.
7. Any portions of the current version of the draft license application to the Nuclear Regulatory Commission ("NRC") for construction and operation of the Yucca Mountain Repository referring or relating to the work or modeling performed by Joseph Hevesi, Alan Flint, or Lorraine Flint.
8. A copy of the current version of the draft license application to the NRC for construction and operation of the Yucca Mountain Repository.
9. All records referring or relating to any communications between Bectel SAIC and Department of Energy officials regarding the records listed in Item 1 of this Schedule, without regard to whether such records were produced by the Department of Energy to the Subcommittee on March 29, 2005.
10. All records referring or relating to the Department of Energy's review of scientific work conducted by Alan Flint, Lorraine Flint and Joseph Hevesi since December 1, 2004.

Schedule Instructions

1. In complying with this Subpoena, you are required to produce all responsive records that are in your possession, custody, or control, whether held by you or your past or present agents, employees, and representatives acting on your behalf. You are also required to produce records that you have a legal right to obtain, that you have a right to copy or to which you have access, as well as records that you have placed in the temporary possession, custody, or control of any third party. No records, documents, data, or information called for by this request shall be destroyed, modified, removed, transferred, or otherwise made inaccessible to the Committee.
2. In the event that any entity, organization, or individual denoted in this subpoena has been, or is also known by any other name than that herein denoted, the subpoena shall be read also to include them under that alternative identification.
3. Each record produced shall be produced in a form that renders the record capable of being copied.
4. Record produced in response to this subpoena shall be produced together with copies of file labels, dividers or identifying markers with which they were associated when this subpoena was served.
5. It shall not be a basis for refusal to produce records that any other person or entity also possesses non-identical or identical copies of the same record.
6. If any of the subpoenaed information is available in machine-readable form (such as punch cards, paper or magnetic tapes, drums, disks, or core storage), state the form in which it is available and provide sufficient detail to allow the information to be copied to a readable format. If the information requested is stored in a computer, indicate whether you have an existing program that will print the records in a readable form.
7. If compliance with the subpoena cannot be made in full, compliance shall be made to the extent possible and shall include an explanation of why full compliance is not possible.
8. In the event that a record is withheld on the basis of privilege, provide the following information concerning any such record: (a) the privilege asserted; (b) the type of record; (c) the general subject matter; (d) the date, author, and addressee; and (e) the relationship of the author and addressee to each other.
9. If any record responsive to this subpoena was, but no longer is, in your possession, custody, or control, identify the record (stating its date, author, subject and recipients) and explain the circumstances by which the record ceased to be in your possession, custody, or control.

10. If a date or other descriptive detail set forth in this subpoena referring to a record is inaccurate, but the actual date or other descriptive detail is known to you or is otherwise apparent from the context of the request, you should produce all records which would be responsive as if the date or other descriptive detail were correct.
11. The time period covered by this subpoena is included in the attached schedule(s).
12. This request is continuing in nature and applies to any newly-discovered information. Any record, document, compilation of data or information, not produced because it has not been located or discovered by the return date, shall be produced immediately upon location or discovery subsequent thereto.
13. All records shall be bates-stamped sequentially and produced sequentially.
14. Two sets of records shall be delivered, one set to the Majority Staff and one set to the Minority Staff. When records are produced to the Committee, production sets shall be delivered to the Majority Staff in Room 2157 Rayburn House Office Building, and the Minority Staff in Room B-350A Rayburn House Office Building.

Definitions for Schedule

1. The term "record" means any written, recorded, or graphic matter of any nature whatsoever, regardless of how recorded, and whether original or copy, including, but not limited to, the following: memoranda, reports, expense reports, books, manuals, instructions, financial reports, working papers, records notes, letters, notices, confirmations, telegrams, receipts, appraisals, pamphlets, magazines, newspapers, prospectuses, interoffice and intra office communications, electronic mail (e-mail), contracts, cables, notations of any type of conversation, telephone call, meeting or other communication, bulletins, printed matter, computer printouts, teletypes, invoices, transcripts, diaries, analyses, returns, summaries, minutes, bills, accounts, estimates, projections, comparisons, messages, correspondence, press releases, circulars, financial statements, reviews, opinions, offers, studies and investigations, questionnaires and surveys, and work sheets (and all drafts, preliminary versions, alterations, modifications, revisions, changes, and amendments of any of the foregoing, as well as any attachments or appendices thereto), and graphic or oral records or representations of any kind (including without limitation, photographs, charts, graphs, microfiche, microfilm, videotape, recordings and motion pictures), and electronic, mechanical, and electric records or representations of any kind (including, without limitation, tapes, cassettes, disks, and recordings) and other written, printed, typed, or other graphic or recorded matter of any kind or nature, however produced or reproduced, and whether preserved in writing, film, tape, disk, videotape or otherwise. A record bearing any notation not a part of the original text is to be considered a separate record. A draft or non-identical copy is a separate record within the meaning of this term.

2. The term "communication" means each manner or means of disclosure or exchange of information, regardless of means utilized, whether oral, electronic, by document or otherwise, and whether face-to-face, in a meeting, by telephone, mail, telexes, discussions, releases, personal delivery, or otherwise.
3. The terms "and" and "or" shall be construed broadly and either conjunctively or disjunctively to bring within the scope of this subpoena any information which might otherwise be construed to be outside its scope. The singular includes plural number, and vice versa. The masculine includes the feminine and neuter genders.
4. The terms "person" or "persons" means natural persons, firms, partnerships, associations, corporations, subsidiaries, divisions, departments, joint ventures, proprietorships, syndicates, or other legal, business or government entities, and all subsidiaries, affiliates, divisions, departments, branches, and other units thereof.
5. The term "identify," when used in a question about individuals, means provide the following information: (a) the individual's complete name and title; and (b) the individual's business address and phone number.
6. The terms "referring or relating," with respect to any given subject, means anything that constitutes, contains, embodies, reflects, identifies, states, refers to, deals with or is in any manner whatsoever pertinent to that subject.

“Yucca Mountain Project: Digging for the Truth.”
Subcommittee on the Federal Workforce and Agency Organization
Chairman Jon C. Porter
Wednesday, June 29, 2005, 10:00 am

QUESTIONS FOR THE RECORD

JOHN ARTHUR

1. You, W. John Arthur III, Deputy Director Office of Civilian Radioactive Waste Management Office of Repository Development for the Department of Energy, testified at the Subcommittee’s June 29, 2005 hearing that a DOE official was telephonically briefed in December 2004 by Bechtel SAIC regarding the emails in question.
 - a) Was this the first time that a DOE official was briefed on the matter?
 - b) What was the actual date of the first briefing to DOE on this matter?
 - c) Who was this DOE official that was telephonically briefed in December 2004 by Bechtel SAIC? Were any other DOE officials or any other individuals, including officers from Bechtel SAIC involved in the first briefing? Please identify all the individuals who participated in this first telephonic briefing.
2. In testimony regarding the telephonic briefing referred to in question one, you stated that, “there was nothing talked about falsification or actually records, similar records of the e-mails provided.”
 - a) Since you were not a participant in this briefing (according to your testimony before this Subcommittee), is this an accurate reflection of the briefing?
 - b) Please summarize this initial telephonic briefing in December 2004 by Bechtel SAIC officials (or the first briefing if December 2004 is not accurate) and articulate the information provided.
 - c) What action did DOE take after this initial briefing? Include in this answer a timeline identifying individuals involved in decisions and actions as well as dates of briefings and meetings.
3. Please provide an approximate timeline of DOE’s actions taken immediately after you first learned of the emails. In your response, please addresses the following questions:
 - a) Who did you or any one else at DOE contact at USGS and when?

- b) On what date were the Inspector Generals at both the Department of Interior and Department of Energy first contacted?
- 4. You testified that you were not briefed regarding the e-mails in question until Friday March 11, 2005.
 - a) Do you continue to stand by this date as your first knowledge of the emails?
 - b) Please identify all the individuals and their respective employers who were present (either physically or telephonically) for this March 11, 2005 briefing.
 - c) Please summarize the content of this briefing.
- 5. In your testimony, you said the following: “ It took me a very small amount of time to look at that, the significance of these emails. I immediately notified the Inspector General’s regional office in Albuquerque, New Mexico. At the same time I notified our Washington Department of Energy offices and the other contacts that I mentioned in my testimony.”
 - a) Who in the “Washington Department of Energy offices” did you contact when you were first briefed regarding the emails in question?
 - b) Was the decision to immediately contact the Inspector General’s office solely your decision?
 - c) If not, who else within the DOE made the decision to immediately contact the IG’s office?
 - d) Specifically, which emails and statements within those emails caused DOE to suspect that documents had been falsified?
- 6. Did DOE not conduct an initial inquiry into the emails prior to issuing a public statement stating that DOE “has learned that certain employees of the US Geological Survey (USGS) at the Department of the Interior working on the Yucca Mountain project may have falsified documentation of their work?” If so, please explain in detail the results of any such inquiry?
- 7. Why did DOE not conduct an initial inquiry into the emails prior to contacting the IG’s office in order to determine if an IG investigation was warranted?
- 8. What was the basis in assuming that there might be criminal misconduct involved in this incident?
- 9. Was there a DOE protocol in place at the time the emails in question were discovered that guided the decision to contact the IG’s office? If so, please provide the details of the protocol and any supporting documents.

10. a) Did DOE provide direction to or collaborate with USGS on what steps to take in dealing with the matter? If so, what were those steps?
 - b) Were any specific steps taken to meet with Mr. Hevesi, the Flints or other individuals identified in the e-mails in question by either USGS or DOE? If so, please explain in detail what steps were taken and if any such interviews took place. If interviews took place, please describe the interviews and provide any supporting documents.
 - c) If USGS interviewed Mr. Hevesi and/or the Flints about the e-mails, did USGS brief DOE officials about these interviews?
If so, when did this occur and please summarize the briefings.
11. In your written statement you stated that; "The e-mails themselves did not suggest that any scientific measurement was falsified. However, because our Quality Assurance requirements were not met, no matter how good Mr. Hevesi's work products and modeling may be, these products cannot be trusted today without reverification or replication of the scientific work."

You also testified that previous audits had uncovered and addressed problems with Mr. Hevesi's adherence to Quality Assurance (QA) requirements.

- a) Specifically, which e-mails identified QA problems that DOE had already addressed in previous audits (Please specify the QA problems as well and note the resolution)?
- b) Specifically, which QA requirements were not met in Mr. Arthur's reference (Please note the resolution)?
- c) Specifically, which of Mr. Hevesi's and/or Alan and Lorraine Flint's work products were reverified or replicated as a result of the discovery of the emails in question?
- d) If replication occurred with any of their work, does this equate to any of their work having been replaced in the application to the NRC?
- e) If so, which of their products were replaced?

12. In Mr. Hevesi's testimony he stated that, "This was the case for the project where it wasn't always apparent exactly what software would need to be qualified (QA) if it was just being used for visualization..."
- a) Is this statement reflective of an overall level of confusion with USGS scientists on what the QA requirements were for software installation that existed at the time? If not, what were the QA requirements for software installation at the Yucca Mountain project from 1996 to 2000? Please provide any supporting documents.
 - b) Subcommittee staff have learned that certain QA requirements that were referred to in the emails were later rescinded and not required, such as certain software installation requirements. Is this accurate?
 - c) If so, which QA requirements referred to in the emails in question were later modified or rescinded?
13. During the time period the e-mails in question were written, it appears that the QA system was fragmented and a work in progress with little uniformity and consistency between USGS and DOE.
- Is this an accurate assessment? Please provide a detailed answer articulating your position on this statement.
14. In your testimony regarding the QA system you stated that, "we have been making significant improvements."
- a) Please articulate what these "significant improvements" are and when they were implemented.
 - b) You further testified that, "We were consolidating our basic programs, standardized requirements and procedures."
 - i. Was this consolidation and standardization done in consultation with the USGS?
 - ii. Which agency has final say and management oversight for the QA procedures in the YMP as it relates to USGS employees?
15. What type of training and frequency does DOE provide to Project personnel regarding QA procedures and the importance of strict adherence to them?
- a) Can any of the issues identified in the emails in question, regarding lack of adherence to QA requirements, be attributed at least in part to a lack of sufficient training on QA requirements?

16. Did any of the work conducted by Dr. Alan Flint, Lorraine Flint, and Joseph Hevesi lead directly or indirectly to engineering modifications within Yucca Mountain? If so, please describe such work in detail and any subsequent modifications.

17. Are any of the Flint's or Hevesi's projects and or work being utilized in the License application to the NRC for the Nuclear Waste Repository at Yucca Mountain? If so, please describe such projects or work relied upon in explicit detail.

18. In your testimony you stated that you would provide a summary of studies and documents that support DOE's preliminary conclusions that; "there is ample corroborating data and extensive peer review of infiltration models that provides the technical basis for the project."
 - a) Have those summaries been completed?

 - b) Have those documents been gathered?

 - c) When does DOE anticipate providing those studies and documents to the committee for the record?

19. You failed to completely answer Chairman Porter's question regarding whether the "high/low flux" debate resulted in engineering modifications to Yucca Mountain not previously planned. You said that you would get back to the Subcommittee on this. Did DOE institute further engineering modifications to Yucca Mountain in the 1990's, not previously planned for as a direct result of potentially higher water infiltration through Yucca Mountain commonly referred to as the "high flux" theory?
 - a) If so, what specifically were these engineering modifications?

 - b) If so, did any of the work conducted by Dr. Alan Flint, Lorraine Flint, and/or Joseph Hevesi contribute to these engineering modifications?

21. Did DOE engineer the Yucca Mountain project site to handle the worst case scenario? If so, please articulate the specific engineering modifications that were implemented and the hypothetical worst case scenario that was used.

22. You told Chairman Porter in your testimony that you would have to check on whether USGS or its employees were paid bonus incentives by DOE for time completion incentives.
 - a. Now that you have had time to check, were bonuses paid to USGS or its employees based on time incentives, such as goals for project completions?
 - b. Were there any bonus incentives offered to USGS or its employees to do scientific studies? If so, to whom?
 - c. Does Bechtel SAIC or did its predecessor TRW have time completion incentives in their contracts? If so, please articulate.

23. Some of the emails reflect possible problems with long term budgeting and planning. Has there been a lack of long term budgeting and planning with the YMP? If so, please explain.

24. You mentioned in your testimony an employee concerns program for concerns raised within the YMP.
 - a. When was this program instituted?
 - b. How are concerns handled?
 - c. Is there a tracking mechanism within the program for identifying types of concerns and resolutions?
 - d. If so, how many employee concerns relate to QA issues?

25. Subcommittee staff has been told that during the time period that the emails in question were written, YMP staff, including the USGS scientists identified in the emails, all utilized the same e-mail password, which was 12345678. The Subcommittee staff was further told that this in theory enabled one YMP staffer to gain access to another YMP staffer's computer and send emails under the other staffer's identity. According to the source of this information, the utilization of the same password during this time period was at the request of IT personnel working for DOE so that they could readily gain access to YMP staffers computers in order to install upgrades and changes to software.
- a. Is this information accurate?
 - b. If so, was this practice in violation of QA procedures?
 - c. If so, what time period was this practice in place?
 - d. If so, is this a current practice?
 - e. If not, when did this practice cease?

**QUESTIONS FROM THE SUBCOMMITTEE ON THE
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Yucca Mountain

- Q1: You, W. John Arthur III, Deputy Director Office of Civilian Radioactive Waste Management Office of Repository Development for the Department of Energy, testified at the Subcommittee's June 29, 2005 hearing that a DOE official was telephonically briefed in December 2004 by Bechtel SAIC regarding the emails in question.
- a) Was this the first time that a DOE official was briefed on the matter?
 - b) What was the actual date of the first briefing to DOE on this matter?
 - c) Who was this DOE official that was telephonically briefed in December 2004 by Bechtel SAIC? Were any other DOE officials or any other individuals, including officers from Bechtel SAIC involved in the first briefing? Please identify all the individuals who participated in this first telephonic briefing.
- A1: I testified that I was first notified of the U.S. Geological Survey (USGS) e-mails on March 11, 2005. I am unaware of any previous "briefing" on the matter of a "DOE official." It is my understanding, however, that Bechtel SAIC attorneys, Jeffrey Halliday (managing counsel) and Sheldon Trubatch, initiated a telephone conversation with DOE attorney, Martha Crosland, and Hunton and Williams attorney, Michael Shebelskie, in mid-December 2004. The firm of Hunton and Williams is under contract to the DOE Office of General Counsel. While I understand that an issue related to the Licensing Support Network (LSN) was discussed, I understand that the full contents of the e-mails were neither shared nor described during that conversation. I was not a participant in this telephone conversation. The first time a DOE official became aware of the e-mails was

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when the Office of Civilian Radioactive Waste Management's (OCRWM) Concerns Program Manager, Julie Goeckner, reviewed a summary of the e-mails in a meeting with the Bechtel SAIC Employee Concerns Program Office Manager on or about March 9, 2005. At that meeting, Ms. Goeckner requested that a copy of the e-mails promptly be sent to her office. Even though Ms. Goeckner had not received a copy of the e-mails, she telephoned me on March 10. She received a copy of the e-mails on the morning of March 11, 2005, and immediately brought them to my office.

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- Q2: In testimony regarding the telephonic briefing referred to in question one, you stated that, "there was nothing talked about falsification or actual records, similar records of the emails provided."
- a) Since you were not a participant in this briefing (according to your testimony before the Subcommittee), is this an accurate reflection of the briefing?
 - b) Please summarize this initial telephonic briefing in December 2004 by Bechtel SAIC officials (or the first briefing if December 2004 is not accurate) and articulate the information provided.
 - c) What action did DOE take after this initial briefing? Include in this answer a timeline identifying individuals involved in decisions and actions as well as dates of briefings and meetings.

A2(a&b): It is my understanding that the December 2004 telephone call was to discuss certain USGS e-mails that were categorized as LSN relevant and non-privileged discovered by Bechtel SAIC reviewers during a review of backup tapes containing archived e-mails. Archived e-mails were those on OCRWM's Lotus Notes system (the standard e-mail software used by OCRWM) that were authored by inactive users (i.e., employees no longer having Lotus Notes accounts) or from external sources. I understand that descriptions of this telephone conversation are contained in a memorandum to Ben McRae, DOE's Assistant General Counsel for Civilian Nuclear Programs, Office of General Counsel, from Michael Shebelskie, dated March 21, 2005 and a memorandum to Ben McRae from Martha Crosland, dated March 22, 2005. I understand that these memoranda were transmitted to Tom Davis, Chairman of the Committee on Government Reform on July 22,

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2005, and were stamped respectively 000744-000748 and 000749-000751. I also understand that members of the Subcommittee's staff have interviewed some of the participants in the telephone conversation.

According to my understanding, based on this brief conversation, a determination was made that the USGS e-mails had been appropriately categorized by the reviewers as LSN relevant and not privileged and would be in the LSN collection when DOE certified the LSN. I am told that the actual text of the e-mails was not shared with Ms. Crosland or Mr. Shebelskie orally or in writing by Mr. Halliday or Mr. Trubatch and that there was no discussion of falsification or the potential falsification of records.

I have no firsthand knowledge of any action taken by DOE between the December phone call and when I first became aware of the USGS e-mails in March 2005.

A2(c): No further action was taken by DOE as a result of this telephone conversation.

**QUESTIONS FROM THE SUBCOMMITTEE ON THE
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Q3: Please provide an approximate timeline of DOE's actions taken immediately after you first learned of the emails. In your response, please address the following questions:

- a) Who did you or any one else at DOE contact at USGS and when?
- b) On what date were the Inspector Generals at both the Department of Interior and Department of Energy first contacted?

A3(a): The following actions were taken by DOE after learning about the e-mails:

- *Friday, March 11:* W. John Arthur III, DOE Deputy Director, Office of Repository Development (ORD), OCRWM, notified the following individuals:
 - Theodore Garrish, Deputy Director, Office of Strategy and Program Development, OCRWM
 - Robert Craig, USGS, Las Vegas, Nevada
 - Adrian Gallegos, DOE's Office of Inspector General (OIG) in Albuquerque, New Mexico (Mr. Gallegos was on travel and a message was left with his Administrative Assistant for Mr. Gallegos to call the ORD as soon as possible).
 - William Reamer, U.S. Nuclear Regulatory Commission
- *Sunday, March 13:* W. John Arthur, III, Deputy Director, ORD, obtained an update briefing from Peggy McCullough, Deputy General Manager, Bechtel

**QUESTIONS FROM THE SUBCOMMITTEE ON THE
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SAIC. Mr. Arthur then prepared a brief summary for Theodore Garrish to use in his meeting with Secretary Bodman the next day, March 14.

- *Week of March 14:*
 - Kenneth W. Powers, Deputy Director, ORD, conferred with the Adrian Gallegos, OIG, to ensure that ORD could review technical work to determine the potential impacts, if any, resulting from the discussions contained in the e-mails.
 - W. John Arthur, III, Deputy Director, ORD, spoke to William Alley, Chief, Office of Groundwater Water Resource Division, USGS.
 - An ORD task group was organized by the Deputy Director, ORD, and assigned to review technical work, and met to discuss strategy and actions.
 - Secretary Bodman issued a press release regarding the e-mails and the initiation of appropriate reviews. The Department notified the State of Nevada and the Congress.

**QUESTIONS FROM THE SUBCOMMITTEE ON THE
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A3(b): Adrian Gallegos, DOE OIG in Albuquerque, New Mexico, was contacted on March 11, 2005. It is my understanding that a member of DOE's OIG contacted Eric May, in the OIG for the Department of the Interior.

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- Q4: You testified that you were not briefed regarding the e-mails in question until Friday March 11, 2005.
- a) Do you continue to stand by this date as your first knowledge of the emails?
 - b) Please identify all the individuals and their respective employers who were present (either physically or telephonically) for this March 11, 2005 briefing.
 - c) Please summarize the content of this briefing.
- A4(a): At approximately 7 p.m. on March 10, 2005, the OCRWM Concerns Program manager, Julie Goeckner, informed me that there were some e-mails that I needed to be aware of and that she would obtain a copy and bring them to my office the next morning. She delivered a copy to my office the morning of March 11, 2005. That is when I first became aware of the content of the e-mails.
- A4(b): Joseph Ziegler, Director, Office of License Application and Strategy, ORD; Julie Goeckner, OCRWM Concerns Program Manager; J. Russell Dyer, Associate Deputy Director, ORD; and Susan Rives, Chief Counsel, ORD, all DOE employees, were present in my office on March 11, 2005 when these e-mails were first reviewed and discussed.
- A4(c): Ms. Julie Goeckner, OCRWM's Concerns Program Manager, informed those present that she had received a copy of the e-mails from Mr. Richard Phares, Bechtel SAIC's Employee Concerns Program Manager, that morning at approximately 10:00. Ms. Goeckner stated that she had reviewed the e-mails and immediately recognized they contained information that prompted a 'duty to act'

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since they contained potential falsification of records or fraud, waste and abuse (involving both quality assurance and timekeeping records), and a general attitude that is not consistent with ORD's safety conscious work environment policy. Ms. Goeckner advised the participants that she had scheduled the meeting immediately (by 10:30 a.m.), based upon her quick review of the e-mails, and that consistent with DOE internal requirements, OCRWM would need to notify the DOE OIG. Ms. Goeckner also related that if OCRWM were a Nuclear Regulatory Commission (NRC) licensee or applicant, OCRWM would also be required to report this to the NRC. Ms. Goeckner stated she was required to document the e-mails in the OCRWM Concerns Program (OCP) files (captured in Concern #O-05-015). The meeting participants recognized the seriousness of the e-mails, and a discussion ensued which resulted in the following: 1) OCRWM senior management would immediately notify the DOE OIG, DOE HQ, USGS and NRC; 2) Ms. Goeckner would transfer the concerns to management for appropriate disposition and close the concern file; and 3) OCRWM senior management would evaluate the issuance of a Condition Report.

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- Q5: In your testimony, you said the following: "It took me a very small amount of time to look at that, the significance of these emails. I immediately notified the Inspector General's regional office in Albuquerque, New Mexico. At the same time I notified our Washington Department of Energy offices and other contacts that I mentioned in my testimony."
- a) Who in the "Washington Department of Energy offices" did you contact when you were first briefed regarding the emails in question?
 - b) Was the decision to immediately contact the Inspector General's Office solely your decision?
 - c) If not, who else within the DOE made the decision to immediately contact the IG's office?
 - d) Specifically, which emails and statements within those emails caused DOE to suspect that documents had been falsified?

A5(a): See answer to question 3.

A5(b): Yes.

A5(c): N/A

A5(d): The e-mails discussing time charging and possible fabrication of quality assurance documentation were of concern.

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- Q6: Did DOE not conduct an initial inquiry into the emails prior to issuing a public statement stating that DOE “has learned that certain employees of the US Geological Survey (USGS) at the Department of the Interior working on the Yucca Mountain project may have falsified documentation of their work?” If so, please explain in detail the results of any such inquiry?
- A6: Prior to the issuance of the Department of Energy press release on March 16, 2005, no inquiry was conducted beyond the actions outlined in answer 3.

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- Q7: Why did DOE not conduct an initial inquiry into the emails prior to contacting the IG's office in order to determine if an IG investigation was warranted?
- A7: DOE employees are required by regulation and policy to report actual or suspected violations of law, regulations, or policy including fraud, waste, abuse, misuse, corruption, criminal acts, or mismanagement relating to DOE programs to appropriate authorities. The IG is the authority within DOE charged with investigating potential fraud, waste, and abuse of the nature that was suspected based on the words used by the authors of the e-mails.

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Q8: What was the basis in assuming that there might be criminal misconduct involved in this incident?

A8: The e-mails discussing time charging and possible fabrication of quality assurance documentation indicated a potential for fraud which, if subsequently verified, could have criminal implications.

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- Q9: Was there a DOE protocol in place at the time the emails in question were discovered that guided the decision to contact the IG's office? If so, please provide the details of the protocol and any supporting documents.
- A9: A copy of DOE regulation "Conduct of Employees" found at 10 C.F.R. Part 1010, and DOE Order DOE O 221.1 and DOE Notice DOE N 221.10 regarding the reporting of fraud, waste, and abuse to the OIG, are at Enclosure 1.

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- Q10: a) Did DOE provide direction to or collaborate with USGS on what steps to take in dealing with the matter? If so, what were those steps?
- b) Were any specific steps taken to meet with Mr. Hevesi, the Flints or other individuals identified in the e-mails in question by either USGS or DOE? If so, please explain in detail what steps were taken and if any such interviews took place. If interviews took place, please describe the interviews and provide any supporting documents.
- c) If USGS interviewed Mr. Hevesi and/or the Flints about the e-mails, did USGS brief DOE officials about these interviews? If so, when did this occur and please summarize the briefings.

A10(a): OCRWM's Office of Repository Development faxed a copy of the e-mails to USGS on March 11, 2005, so that it could take appropriate action. DOE did not provide direction or discuss what action might be appropriate for USGS to take. Please note, this answer does not address any actions that may have been taken by the DOE OIG.

A10(b): The DOE cannot address what actions the USGS may have taken. To my knowledge, the DOE, with the possible exception of the OIG, did not take steps to meet with or interview these individuals. To the best of my knowledge, with the possible exception of OIG personnel, no DOE employee was directed to contact these individuals. Only the DOE OIG may speak to any interviews that may have been conducted.

A10(c): I am not aware of any DOE program officials being briefed by USGS about any interviews it may have conducted with Mr. Hevesi and/or the Flints regarding the

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e-mails. I cannot speak for any communications that may have occurred between representatives of the two Departments' Offices of Inspector General.

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Q11: In your written statement you stated that; "The e-mails themselves did not suggest that any scientific measurement was falsified. However, because our Quality Assurance requirements were not met, no matter how good Mr. Hevesi's work products and modeling may be, these products cannot be trusted today without reverification or replication of the scientific work."

You also testified that previous audits had uncovered and addressed problems with Mr. Hevesi's adherence to Quality Assurance (QA) requirements.

- a) Specifically, which e-mails identified QA problems that DOE had already addressed in previous audits (Please specify the QA problems as well and note the resolution)?
- b) Specifically, which QA requirements were not met in Mr. Arthur's reference (Please note the resolution)?
- c) Specifically, which of Mr. Hevesi's and/or Alan and Lorraine Flint's work products were reverified or replicated as a result of the discovery of the emails in question?
- d) If replication occurred with any of their work, does this equate to any of their work having been replaced in the application to the NRC?
- e) If so, which of their products were replaced?

A11(a): Enclosure 2 is a table that summarizes 17 issues raised by the e-mails and notes any past QA oversight activities that independently identified those issues. The QA oversight activity, related deficiency documentation, a description and disposition of the problem, additional clarifying notes, and resolution of the issues are also provided in the table. Of those 17 issues, all but 3 were generically or specifically addressed in QA oversight activities. Many of these issues were identified during an audit of the USGS and Lawrence Berkley National Laboratory activities on January 24-28, 2000. This audit was conducted by

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OCRWM's Office of Quality Assurance at the Lawrence Berkeley National Laboratory facilities in Berkeley California, and was observed by NRC staff. In NRC Observation Audit Report number OAR-00-04, the NRC observers stated:

“The NRC staff has determined that OQA Audit M&O-ARP-00-04 was useful and effective. The audit was organized and conducted in a professional manner. The NRC agrees with the audit team's conclusions and recommendations.”

Eight e-mail issues identified in lines 1, 2, 3, 9, 11, 12, 14, and 16 of the table were addressed generically as part of a broader investigation, and 6 of the issues identified in e-mails (line items 4, 5, 7, 8, 15, and 17) were specifically identified during subsequent QA oversight activities. Line items 2, 5, and 8 reference condition reports for which corrective actions have not been concluded.

The three issues in lines 6, 10, and 13 of the table that were not identified through independent oversight are not the type of issues that are readily susceptible to identification during oversight reviews.

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A11(b): DOE/RW-0333P, *Quality Assurance Requirements and Description (QARD)* is the QA program document for OCRWM and its contractors, and its participants such as DOE's Office of Environmental Management, and USGS. The specific QARD requirements that existed at the time and that were not met, along with the related resolutions, are identified in Enclosure 2.

A11(c): While DOE has identified each of Mr. Hevesi's and/or Alan and Lorraine Flint's work products, no final evaluation and determination has yet been made as to which work products will be reverified and/or replicated. This work is currently underway.

A11(d): See answer 11(c).

A11(e): See answer 11(c).

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Q12: In Mr. Hevesi's testimony, he stated that, "This was the case for the project where it wasn't always apparent exactly what software would need to be qualified (QA) if it was just being used for visualization..."

- a) Is this statement reflective of an overall level of confusion with USGS scientists on what the QA requirements were for software installation that existed at the time? If not, what were the QA requirements for software installation at the Yucca Mountain project from 1996 to 2000? Please provide any supporting documents.
- b) Subcommittee staff have learned that certain QA requirements that were referred to in the emails were later rescinded and not required, such as certain software installation requirements. Is this accurate?
- c) If so, which QA requirements referred to in the emails in question were later modified or rescinded?

A12: **NOTE:** To properly respond to this question a clarification is necessary. We assume that the term "installation" in Q12(a) was used in error and that the term "qualification" was likely intended.

A12(a): To the extent that the quoted statement suggests "confusion" by Mr. Hevesi, there is no indication of "an overall level of confusion" among USGS scientists regarding software QA requirements. USGS procedure YMP-USGS-QMP-3.03, *Software* (Enclosure 3), was the prime USGS software procedure to be used by those developing and using USGS software. This procedure was initially issued in October 1986. During 1996-1999, YMP-USGS-QMP-3.03, was revised twice. In February 1999, AP-SI.1Q, *Software Configuration Management* (Enclosure 4) became effective and in September of that year replaced YMP-USGS QMP 3.03.

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During the period 1996 to 2000, AP-SI.1Q was twice revised. Procedures are typically revised as technology and processes change. The revisions were made to reflect standard nuclear industry practices. QARD, Supplement I, *Software*, is also enclosed for your information (Enclosure 5).

A12(b): No. A review of the procedures, including revisions, in effect during 1996 -2000 and revisions subsequent to this timeframe, did not identify any specific software qualification requirements that were rescinded. In fact, revisions indicate that requirements were added and made more stringent.

A12(c): See answers 12(a) and 12(b).

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Q13: During the time period the e-mails in question were written, it appears that the QA system was fragmented and a work in progress with little uniformity and consistency between USGS and DOE.

Is this an accurate assessment? Please provide a detailed answer articulating your position on this statement.

A13: No. The QA program was not “fragmented,” but had been fully integrated among the Yucca Mountain Project participants before the 1998-2000 timeframe when the e-mails were generated. Prior to the end of 1996, the QA programs of the Yucca Mountain Project participants were consolidated and into a single, uniform QA program. Common procedures controlled activities subject to quality assurance procedures, including the qualification of data, software, and models. Consistent with nuclear industry practice, quality assurance processes and procedures are routinely evaluated and continuously improved as appropriate.

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Q14: In your testimony regarding the QA system you stated that, “we have been making significant improvements.”

- a) Please articulate what these “significant improvements” are and when they were implemented.
- b) You further testified that, “We were consolidating our basic programs, standardized requirements and procedures.”
 - i. Was this consolidation and standardization done in consultation with the USGS?
 - ii. Which agency has final say and management oversight for the QA procedures in the YMP as it relates to USGS employees?

A14(a): Improvements are continuously being made in the QA program. Some of the more recent improvements made during and since the 1998 to 2001 period include:

1. Defining a set of quality assurance performance indicators. The status of these indicators is reported to the Deputy Director, ORD, and discussed during monthly meetings. The quality performance indicators include the status and health of the quality assurance program.
2. The QARD has changed significantly to improve its clarity and content. Changes to the QARD have improved software and modeling quality assurance process requirements; provided a more specific description of the activities to which quality assurance procedures apply; and assigned the corrective action responsibility to the line organizations.

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3. We are continuing to enhance our corrective action and trending programs.
All Yucca Mountain Project personnel are encouraged to self-identify conditions adverse to quality and to offer suggestions for improvement through the Corrective Action Program (CAP). A single entry process by which issues, condition reports, are entered into the CAP system for resolution has been implemented. The ownership, responsibility, and accountability for the proper and effective implementation of the QA program rests with the respective line organizations. The trending program is being improved to allow a better review of similar conditions adverse to quality and recurring conditions adverse to quality.
4. Based upon corrective actions related to data, software, and models, the associated procedures were reviewed and enhanced to ensure that applicable qualification, validation, and transparency activities were performed. Technical and quality assurance procedures and processes are continuously evaluated and updated, as appropriate, to ensure that they comply with the QARD requirements and that these processes and procedures are effective.
5. Overall QA activities and controls, both those governed by the NRC (10 CFR 63.142, *Quality Assurance Criteria*) and those governed by the DOE Orders, are described in the Quality Assurance Management Policy (QAMP) document that was effective on March 23, 2005. This document integrates all

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QA requirements and procedures applicable to a given item or activity.

Application of the appropriate QA requirements is based upon applicable NRC regulations or DOE Orders and is described in the appropriate QA program documents (e.g., the QARD and the Augmented Quality Assurance Program (AQAP)). The QARD addresses the quality assurance controls for those activities required by NRC regulation. The AQAP addresses the quality assurance controls for those activities not specifically required by NRC regulations.

14(b)i: The consolidation of quality assurance requirements and the review and enhancement of the procedures were done with the full cognizance and participation of the major entities working on the Yucca Mountain Project, including USGS. Numerous briefings were provided to USGS and other entities, to OCRWM's management and operating contractor, and to DOE personnel prior to implementation. The approach by which DOE would establish quality assurance procedures to be implemented by other entities and individuals working on the Yucca Mountain Project was also identified in an Interagency Agreement with the USGS.

14 (b)ii: DOE has the overall responsibility for management oversight of the QA procedures utilized by USGS employees. DOE and Bechtel SAIC, DOE's management and operating contractor for Yucca Mountain activities, currently

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share the responsibility for identifying the applicable quality assurance requirements, establishing and implementing QA procedures, and for performing oversight audits, surveillances, and other quality assurance and technical reviews of work related to Yucca Mountain activities. USGS is accountable for ensuring that its activities are performed in accordance with DOE requirements.

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Q15: What type of training and frequency does DOE provide to Project personnel regarding QA procedures and the importance of strict adherence to them?

- a) Can any of the issues identified in the emails in question, regarding lack of adherence to QA requirements, be attributed at least in part to a lack of sufficient training on QA requirements?

A15: OCRWM has provided various types of training to the entities and personnel involved in Yucca Mountain-related activities, including: QARD training, Lead Auditor training, and software quality assurance procedure training. OCRWM personnel are also required to receive training on the QA program as part of general employee training when they are first hired. Annual refresher courses are required by ORD and other organizations that provide technical and scientific support to the Yucca Mountain Project. This includes USGS.

A15(a): No. Personnel are assigned work that they are qualified to perform. This includes completing required training. Individuals, supervisors, and managers are responsible to ensure that the proper training is offered and completed.

The ongoing training needs of personnel are evaluated by their supervisors to ensure that training is consistent with their work assignments and to ensure that applicable training is completed. A review of the training records of the individuals involved with the e-mails indicates that they had received the necessary training applicable to the activities they were performing.

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- Q16: Did any of the work conducted by Dr. Alan Flint, Lorraine Flint, and Joseph Hevesi lead directly or indirectly to engineering modifications within Yucca Mountain? If so, please describe such work in detail and any subsequent modifications.
- A16: The scientific and engineering work performed by the many individuals who have worked and are working on the Yucca Mountain Project has contributed directly and indirectly to the constant consideration of modifications and improvements in engineering concepts and designs. For example, engineered barrier system enhancements were considered and evaluated throughout site characterization in response to increasing understanding of the Yucca Mountain site. In the 1998 Viability Assessment [Volume 2, Section 5.3], DOE described options, including more robust waste packages and drip shields, that could prove prudent to meet the performance standard or would be desirable from a safety margin perspective. DOE's evaluations were not based solely on the work of any individual investigators, but rather relied on multiple lines of evidence for a total system view of repository performance and the development of a system of multiple barriers for the repository.

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Q17: Are any of the Flint's or Hevesi's projects and or work being utilized in the License application to the NRC for the Nuclear Waste Repository at Yucca Mountain? If so, please describe such projects or work relied upon in explicit detail.

A17: DOE has not yet identified which, if any, of the work performed by the Flints or Mr. Hevesi will be a part of the license application submitted to the NRC. See also response to question 11.

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- Q18: In your testimony you stated that you would provide a summary of studies and documents that support DOE's preliminary conclusions that: "there is ample corroborating data and extensive peer review of infiltration models that provides the technical basis for the project."
- a) Have those summaries been completed?
 - b) Have those documents been gathered?
 - c) When does DOE anticipate that providing those studies and documents to the committee for the record?

A18(a,b, and c): The summary of studies and documents that I said I would provide for the record, in my testimony on June 29, 2005, are enclosed. (Enclosure 6).

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- Q19: You failed to completely answer Chairman Porter's question regarding whether the "high/low flux" debate resulted in engineering modifications to Yucca Mountain not previously planned. You said that you would get back to the Subcommittee on this. Did DOE institute further engineering modifications to Yucca Mountain in the 1990's, not previously planned for as a direct result of potentially higher water infiltration through Yucca Mountain commonly referred to as the "high flux" theory?
- a) If so, what specifically were these engineering modifications?
 - b) If so, did any of the work conducted by Dr. Alan Flint, Lorraine Flint, and/or Joseph Hevesi contribute to these engineering modifications?

A19: No, the DOE did not institute further engineering modifications in the 1990's as a direct result of the "high-flux" theory. See also response to Question 16.

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Q20: No Question #20 listed

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- Q21: Did DOE engineer the Yucca Mountain project site to handle the worst case scenario? If so, please articulate the specific engineering modifications that were implemented and the hypothetical worst case scenario that was used.
- A21: DOE's engineering designs for long-term repository performance are guided by NRC risk informed, performance-based regulations which require a probabilistic analysis of disruptive events (i.e., volcanic or earthquake activity intersecting the repository) in order to protect the public and safety. These "disruptive events" may not be "worst case scenarios."

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Q22: You told Chairman Porter in your testimony that you would have to check on whether USGS or its employees were paid bonus incentives by DOE for time completion incentives.

- a) Now that you have had time to check, were bonuses paid to USGS or its employees based on time incentives, such as goals for project completions?
- b) Were there any bonus incentives offered to USGS or its employees to do scientific studies? If so, to whom?
- c) Does Bechtel SAIC or did its predecessor TRW have time completion incentives in their contracts? If so, please articulate.

A22(a): The DOE interagency agreements with USGS do not provide incentives of any kind. USGS is responsible for awards provided to its employees.

A22(b): The DOE interagency agreements with USGS do not provide for bonus incentives for scientific studies.

A22(c): The Bechtel SAIC contract, and the TRW contract before it, provided for performance-based incentives. Successful completions of deliverables/milestones are measured on technical adequacy, quality, and the timely submittal of products.

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- Q23: Some of the emails reflect possible problems with long term budgeting and planning. Has there been a lack of long term budgeting and planning with the YMP? If so please explain.
- A23: Over the past several years the DOE has done a significant amount of long-term budgeting and planning. Additionally, each fiscal year DOE updates its planning consistent with the expected funding levels included in annual budget requests. After the fiscal year budget is known, DOE adjusts the plan to that funding level.

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Q24: You mentioned in your testimony an employee concerns program for concerns raised within the YMP.

- a) When was this program instituted?
- b) How are concerns handled?
- c) Is there a tracking mechanism within the program for identifying types of concerns and resolutions?
- d) If so, how many employee concerns relate to QA issues?

A24(a): The OCRWM Concerns Program was instituted in 1991.

A24(b): The program is currently run in accordance with DOE O 442.1A, DOE Employee Concerns Program; DOE G 442.1-1, *DOE Employee Concerns Program Guide*, dated 2/1/99 (Enclosure 7); and NRC Inspection Manual Procedure 40001, Resolution of Employee Concerns. OCRWM's implementation of these requirements and guidance are further documented in detail in AP-32.1, *OCRWM Concerns Program*, dated 2/23/2004, and the OCRWM Concerns Program Detailed Process Instruction, dated 7/8/2005 (Enclosure 8).

A24(c): Yes. Consistent with DOE O 442.1A requirements and DOE G 442.1-1, Section 6.4, Employee Concerns Tracking System, the OCRWM Concerns Program performs/documents information as a normal part of processing, including categorizing the concerns (environment, safety, health, quality, management, fraud, waste, abuse, etc.).

A24(d): As of August 5, 2005, the OCRWM Concerns Program has categorized the

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following concerns as “Quality” related:

Calendar year 2005 – 22

Calendar year 2004 – 8

Calendar year 2003 – 5

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Q25: Subcommittee staff has been told that during the time period that the emails in question were written, YMP staff, including the USGS scientists identified in the emails, all utilized the same e-mail password, which was 12345678. The Subcommittee staff was further told that this in theory enabled one YMP staffer to gain access to another YMP staffer's computer and send emails under the other staffer's identity. According to the source of this information, the utilization of the same password during this time period was at the request of IT personnel working for DOE so that they could readily gain access to YMP staffers computers in order to install upgrades and changes to software.

- a. Is this information accurate?
- b. If so, was this practice in violation of QA procedures?
- c. If so, what time period was this practice in place?
- d. If so, is this a current practice?
- e. If not, when did this practice cease?

A25(a): The following responses apply only to OCRWM facilities under the operational control of OCRWM's Information Technology (IT) Division staff or contractors with operational responsibility for providing OCRWM information technology services.

Since 1993, the standard e-mail software used by OCRWM is Lotus Notes.

Access to Lotus Notes accounts is protected by a Notes password defined and maintained by each individual user. When a personal computer is configured by IT technical support staff for any new user, the Lotus Notes password is set by the IT technical support staff to be '12345678'. Upon completion of installation at

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the user's location, the user is directed by the IT technical support staff to immediately change both their User Account password and their Lotus Notes password. Until recently, technology was not available to monitor and review user compliance with this direction.

While Lotus Notes e-mail accounts are created centrally by the OCRWM IT contractor staff, the maintenance of YMP personal computers at remote locations such as Denver is not performed by OCRWM IT staff or contractors. Local IT security policies (i.e., USGS policies and procedures) apply to computers at these remote locations. OCRWM IT contractors are not generally made aware of password management practices by other IT contractors at these remote locations.

However, in order for an individual to assume the identity of another user and to send e-mail as that user, knowledge of both the User Account password and the Notes password would be required. Since 1987, all new user computer account request forms explicitly state the requirement that users must refrain from sharing passwords. Users are required to sign an acknowledgement that they have read this condition before an account is established. Establishment of identical passwords within a group would be a violation of the conditions for having an OCRWM account and could only have occurred without the knowledge of

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OCRWM IT.

IT personnel did not request that staff all use the same password so that they could easily assess the system. Various levels of access to Lotus Notes functionality are provided to staff members, as required. General users have access limited to their own personal account. [Certain IT staff (Lotus Notes Administrators) retain access privileges that permit them to access, modify and maintain Lotus Notes software and databases without user intervention.] However, there are no circumstances under which IT staff would require the use of a common password by the user community to install upgrades and changes to software. Such a practice would have been a violation of OCRWM IT password management requirements.

A25(b): The QA procedures are governed by the Quality Assurance Requirements Document which does not address issues related to computer password management.

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A25(c,d and e): See response to 25 (a) & (b)

Documents and reports referred to by Mr. John Arthur from the Department of Energy will be available on the Subcommittee on the Federal Workforce and Agency Organization's website.

That website is <http://reform.house.gov/FWAO/>.

Questions on that report can be directed to:

Shannon Meade, Professional Staff Member
202.225.5147