**WV Joint Judiciary Subcommittee Hearing, November 15, 2006**

Meeting called to order
Approval for October meeting minutes
Change in agenda, moved item #4—the underground storage tanks up to the first slot.
Council to present the draft bill

**Speaker: Council**

I have bolded the language that has changed since our last meeting; this is not how it will appear in the final draft. One of the items I would like to address is the issue of the language of "moral obligation"—that is that it is a moral obligation of the state to make payments. I did a little research and there are a couple of cases in WV and I also talked to Cheryl Hull (sp?) who is our court claims administrator. They deal with moral obligations claims all the time. The purpose of having that language in there is very specific to responsibility of the court. There is no liability unless a sovereign assumes liability. The phraseology of "Moral obligation" establishes the legislation is setting a determination that although there is no legal duty for the state to make these payments, but that the conditions that we have set out to find is that a moral obligation does exist and allows you or the legislation to set up compensation for these folks. It is a mechanism for that to occur. So, the terminology of moral obligation is in here to talk about the findings.

On page 3, this is the history of the fund.

Another change is clarification of the dates. That is, three to five years from now and not three to five years from the original claim.

On page 5 is the section on the conditions for those who accepted the claims for the work that has already been done.

On page 8, I struck lines 4 and 5 due to our last session.

**Question and Answer:**

**Q**: I have looked over the bill and studied it thoroughly and what I keep coming back too is what I have always tried to follow: When I come across a problem, break it down into the simplest terms, and then do the right thing. I keep going back to the fact that these people bought insurance sold by the state, and the state has reneged on paying off. Is that true?
**A:** My reading of this is that this was supposed to be a self-funding program. The question that you raise,I cannot give you a black and white answer. The state assumed responsibility to compensate fully by setting up this program. The question is who the insurer is in this case. The state has historically taken the position and I cannot say for sure, it has not been litigated as to whom that is to my knowledge. Some people would say that it is the fund itself that is the insurer; others would say the EPA is. I would imagine that by looking at the policy, the policy may have assumed some liability.

**Q:** So it is safe to assume that this all goes back on the state?
**A:** Well, for this to get done, it will take state funds.

**Q**: On page 3, that seems to me to say "we should you insurance, you've come to collect that insurance, but I am sorry we are out of business"—I don't like that. On page 4, on the terms of our legal or moral obligation—you went through all of that, but can to go over it again, please?
**A:** The whole idea that it is a moral obligation to pay is that…..

**Q:** Which is tightest?
**A:** Pardon me?

**Q:** Which is tighter for the state insurer?
**A:** Well, if the state is going to going to put themselves out there and say that we are the insurers, we are required to compensate you fully for your insurance claim. That would be…would give the claimants the super full value of the policy and allow them of collect the money.

**Q:** I would say that moral obligation---would that, if we declare that it is a moral obligation, would that give them better standing to get their money?
**A:** I think that the best way, honestly, for the state to make whole is to admit they are the insurer and enter the marketplace saying that we are responsible for compensating these claims. That would give them the claim. Right here what we are saying is that we, as a state, are not responsible for these insurance policies but we are willing to sit….the reason that was done was to allow brown field mediation as opposed to the policy of green field mediation which is much more expensive but that puts you back to where the land is uncontaminated in any way.

**Q:** Another question. Down on page 4… September 2007. I think this needs to be repaired now. Why are we waiting so long?
**A:** That was written under the assumption that this bill would be passed in 2007 and in the beginning of 2008, we would better be able to set up funding.

**Q:** Just to follow up on some delicate questions, in order take the path that you are describing, you really have to create some legal fiction. My understanding, was that originally the insurance fund was set up to not be a general obligation to the state. So in order to say now that the state has a legal obligation as opposed to moral obligation, don't we have to create some legal fiction to say something different than what it said?
**A:** This bill is set up to say that because of the moral obligation we will pay for this, but there is no legal obligation. There is no legal duty here, but there is a moral obligation.

**Q:** What addition liabilities might be presented to the court of claims?
**A:** There won't be any set in the court of claims. The moral obligation concept is not purely seen in the court of claims unless they can use it for other purposes.

**Q:** Going back to page 4, is this saying the state has assumed legal obligation and remediation to brown field standards, and not go beyond that?
**A:** My response to that is: if we are obligated to take over the fund and the insurer, then folks are going to come after us with their policy, and bring the policy to us. What the policy is meant to

do is provide what the policy originally meant to provide for their coverage. As opposed to if we use the term moral obligation, we say no, we do not have any legal obligation, but we will reimburse you guys brown field standards because we feel like we need to and it is an environmental harm and give you all the benefit of your contract.

**Open discussion:**

I am not sure that we are doing the right thing by passing this amendment because when it was originally set up, it was stipulated in the original bill that this was not a legal obligation.

To the extent that we owe legal or moral obligation: that legal obligation can quantify that a certain amount of money be given to these clean ups. If the Secretary has to come back every time….on an annual basis or any other basis, then for ___dollars, then we have agreed to pay these claims. So, I am in support of it.

I understand all of these. We not only have the moral obligation, but the legal obligation. All of these claims, and this is not in the future, I suggest to remedy the situation is that we pay this thing this year. This is an obligation that I would like to get off of the books this year—go ahead and take care of it--and not have to worry about 2011, 2012, 2013, instead it should be taken care of 2007-2008. To get it taken care of. It would be like a cloud of this whole situation has been here a long time and we should take care on it now and not in future years.

Are you afraid that maybe by making this a legal obligation that we are opening this up to be a lot of legal claims from the past?

There is always that possibility. It is a risk to take to do the right thing. I would be in favor of limiting the number of claims to make sure that this is of a specific situation.

Council has done a great job. I do feel that we have a moral obligation to settle these claims. I am a little worried that if we through in moral obligation then we will jeopardize the whole bill. I would urge us to add the amendment and pass the bill.

I, too, speak in favor of the amendment; I have a problem with the bill. We did this over three years ago. It took nine sessions…nothing has been done. This has gone long enough.

Council addresses, again, the difference between legal obligation and moral obligation.

Is there anyone here from the EPA that can make a comment on this?

**Speaker: EPA Secretary Stephanie Timmermeyer**

I do have a comment actually. I would like to address this council on moral obligation. I think that this committee has made it's rule know by passing this bill. I think that the real proof is in the funding for it which does need to come from this legislation frankly. I don't know what to do about putting legal obligation on this; I don't know if that means for some reason we can't come but with the wording; or that means that DP has to assume these sites; or DP has to assume to risk and the liability to these sites; I don't know. I would be hesitant to even put the moral obligation on it—that that is something that you all have talked about. I think that the passage of this bill that you have in front of you today shows that you feel like there is an obligation and that you are willing to do something about it.

Vote on the amendment: bill passes to joint committee

Next item: Dr. William Orham (sp?), Research Biochemist for the United States Geological Survey

**Speaker: Dr. William Orem**

(Power Point Presentation)

Review of USGS and its role, funding, etc.

My project is looking at the health effects of energy recourses, that is environmental effects and health issues. Within that context we have recurrent project activities on energy supplies such as coal and more recently coal slurry, Geochemistry of coal slurry—impacts of Human Health and Environmental quality, health effects of toxic organic compounds from coal in water supplies, and coal combustion products and respiratory diseases.

This is our overall approach in addressing health related issues (slide): First, try to establish links with local health officials to see if diseases link to energy uses. Conduct environmental sampling. These two steps are where we are presently with the coal slurry issue. As the study progresses, we go on to do studies such as toxicology and organic compound studies such as what are the effects of coal slurry. Then, we conduct clinical studies to look at the effects of these substances on human health—of course in collaboration with the medical authorities.

(Next slide) Coal slurry is a fluid produced by washing cola with water and chemicals prior to shipping the coal to market. Coal washing reduced the amount of non-combustible materials (including sulfur) from the coal. Coal slurry consists of water, fine particles derived from the coal and chemicals used in coal washing. Coal slurry is stored in surface impoundments or injected underground for storage in abandoned underground mines. The precise chemical composition of coal slurry is largely unknown and may be variable. Issues related to coal slurry: Failure of coal impoundment dams (i.e. 1972 Buffalo Creek Hollow, WV) or collapse of impoundment into underground mine (i.e. 2000, Inez, KY). Contamination of water supplies with toxic inorganic and organic chemical from coal slurry in surface water contamination is know as “Blackwater Events”. This can cause both acute and chronic health effects. Chronic health effects, of course, being more dangerous.

(Next Slide) Many studies have been done on the metals found in coal slurry. The USGS has only sampled a very few. Sulfate is a compound that we found in high concentration—sulfate, once it gets into surface water supplies, it leads to the production mercury. That is something that we are concerned about. We found high concentrations of Ammonia. We are concentrating on organics in particular. We have been looking at freshwater mussels in rivers and streams. We have been looking at the proximity of these rivers and streams to mining activities: coal mining, coal slurry release and decline of freshwater mussels in Appalachian basin watersheds. The reasons for this decline are unknown and probably complex, but blackwater events from the release of coal slurry may be involved.

(Next Slide) Again, we have only looked at a few coal slurry samples so far in looking for organic substances. Graph shows peaks of high concentrations of organic compounds. We have not been able to test slurry itself—the difficultly with this type of sampling is access. We have not been able to gain access to slurry.

(Next slide) This is an illustration of two organic compounds that are a threat to human health. We have been looking for about five years now on different diseases. Ben is a kidney disease linked to toxic organic compounds from coal in drinking water supplies. Long term

exposure to low levels of coal-derived toxic organic compounds in untreated well water in rural areas of the Balkens is linked to the occurrence to BEN Nitrogen containing aromatic compounds from coal are thought to be involved. BEN results in end stage renal failure. The photo shows a normal size kidney on the left and a shrunken BEN kidney on the right. BEN patients also have a high co incidence of cancers of the renal pelvis or upper urinary tract. This disease takes about twenty years, so this is a chronic condition that takes time.

(Next slide) There is a high incidence of renal/pelvic diseases. We know that Louisiana has a high occurrence of this. We know that wells—private wells that carry drinking water supplies in coal mining regions have high concentrations of organics. The diagram shows this. (Crowd shot) There is a link between high concentrations and urinary tract infections/diseases. The number one state for renal/pelvic cancer is Wyoming.

(Next slide) We use toxicology to study specifically human cell lines to look at the effects of things such as isolated from the water. We extract human cells and then in the lab we expose those cells to coal slurry to see the effects.

(Next slide) This is a picture of a human kidney cell line. On the right you can see a close up of the individual cells. This is used as the control of normal human kidney cells in our laboratory. The bottom shows the cells that have been exposed to coal slurry. The difference is the big black spot on the bottom picture. This is a vacuole—and indication that the cell is trying to rid itself of the substance. This changes the shape of the cell.

(Next slide) There are two effects on cell lining. This graph shows you the effects of coal compounds in drinking water of Human Micorcigymal Stem cells. These cells where harvested from human bone marrow.

(Next slide) We are not only tying to figure out the many problems, but we are trying to find the solutions. One question we are looking into is if coal slurry can be converted into methane gas. This may be some positive solution instead of the coal slurry just being a problem.

(Next Slide) Conclusions and Recommendations: We don't know much of the chemical make up of coal slurry. One of the first things that we need to do is to get a good look at the composition of this material. What are the effects on human health? What will happen if this slurry is injected into abandoned mines or allowed to get into the surface water? Does it stay put? Of course, it will be different in different locations. Need to know hydrology of slurry. We need to know if there are any givens. We need to look to see what, if any, diseases are linked to coal slurry. Finally, we need to look to see there is an alternative uses for coal slurry—maybe alternative ways of washing the coal. And since we do have all of these impoundments around, we need to find if there are alterative uses for that, such as generating natural gas.

Thank you, are there any questions?

**Question and Answers:**

**Q:** From what I gather from listening to your presentation and looking at your power point presentation, there are a lot unknown variables concerning the effects of slurry…the chemicals and the effect on human health. I assume, based upon what I am hearing from you, that we need to precede with some type of study to help us find that out. I see that you work with the USGS—I am not completely sure of who they are and where they are at in the hierarchy of the federal government. What resources do you have to help, or better yet, are there any federal studies being done on the federal level on this issue? If not what other agencies can we contact to get

see if there are any monies that can be used for a study? Federal study; State study; or a collaboration study?
**A:** We have heard about this issue since we started. Our funding comes from Congress to the department, and then down to us here at USGS. Certainly it would be of best interest to get other federal agencies involved. Maybe there would be possible money from places like the Environmental Protection Agency. Places like that.

**Q:** You don't have any estimated cost of conducting such a study?
**A:** Our budget for this study has been about fifty to one hundred thousand a year—including salaries for employees, etc. If that given you any ball park figure. How extensive would the cost be? It depends on what is found. If you go out that the storage does not contain any toxic substances, then it would not cost so much. If something was found in the storage, then it would be expensive to do all the testing. Basically, we take it step by step. As information is gathered, we make decisions on the funding.

**Q:** Sir, you eluted to the issue of accessibility. We had a pervious speaker at a pervious meeting also talk about that. Does that mean that if you are doing a study, you are denied access to the site?
**A:** Yes, that incident has occurred—yes. We went to a site with the understanding that we were granted access, and when we got there we were denied. Yes, we are having some difficulty getting access. These storage sites are often on private land, and so we need their permission, or the company to give us access. I would hope that in the interest of public concern, the company would be willing to allow us access and the information that is needed. In particular, as we set an agenda, we need to know what this stuff is and we need to found out.

No more questions. Thank you for speaking to us and for presenting us with all of this information. Perhaps we will have the chance to work with you in some sort of cooperative study as what was mentioned here. Of course our focus would be on WV, but it appears that this is a national issue. Thank you again.

Next Item: Roger Calhoun

**Speaker: Roger Calhoun**

We try to share information with other states, and have a way that states can share information with each other. As you mentioned earlier, yes, there is an interest in slurry injections in more than just WV. Several of the states have expressed this interest in injections…not just slurry injections. We went to ____to talk about these injections back in July. I have brought CD's, several CD's and will leave them here for you to look at. On this CD, we got the meeting, but also the contact from the industry and the talk we had about the process of creating slurry. We had speakers from the EPA, MSHA, out-of-state participants: Pennsylvania, Ohio, Virginia, and WV. We continue to work with the DEP in working with the hydrogeology within surface mining. And, what happens when problematic water in underground mines actually surfaces. Look at the permits: they are supposed to make hydrogeology estimations on what will happen with the water. The state is supposed to review that and determine where we

are going. So, we continue to work with the states—not just WV. This is one of the most complex issues that we deal with.

We have some ongoing studies on mining. On how fast they fill up with water, how fast they drain, what is the interconnectivity between one mine and another mine. Yes, it is very complex and it does vary from one site to the next and from geology to geology. We try to keep track of this to help DEP to determine what is their best permitting process is. Also, I think that you need to think the people who have run into pollution per 1977. 1977 is when our surface mining act was passed. The state does receive funds from the collection of coal tax, abandoned mining fees, etc. This state spends about fifty million dollars a year on those wells that were affected before 1977. This state also spends quite a bit on drinking water supplies. We have a close working relationship with the DEP and are read to provide them with any assistance that they need. What we try to do is figure out what is going on with surface mines. That's it. I said that I would be short and sweet. The C.D. that I have given you should do the rest and help. The speakers had very specific information and I encourage you to open the C.D. and take a look.

Are there any questions?

No questions.

Next item: Chad C. Board, Program Manager: Underground injection control (UIC), Coal mining facilities; Division of water and waste management, WV Department of Environmental Protection.

**Speaker: Chad C. Board**

(Power Point Presentation)

UIC main goal is to ensure that all potential and existing underground water sources are protected. In WV, all water is considered existing underground water.

(Next Slide) (Quality of recording poor)

(Next Slide) Sometimes a vein into an underground water tank can accumulate millions of gallons of water. Sometimes this is rarely clean.

**Q:** Would you mind to go back one more slide?

**A:** Sure.

(Previous slide) this pictures by Ellen Herndon showing Coal preparation plant, underground injection well, interior well, private water well, and abandoned mine void. This illustration shows the different aquifers and the pumping in of the slurry and recycling the water at the same time.

(Next slide) If an abandoned underground mine is being used as potable water supply the WV DEP will Not permit any injection into that mine. This is even if one person is using the water supply.

(Next Slide) In other cases were mine voids are being used, it is still considered potential drinking water source. Any permittee would have to meet the federal safe water standards if they are going to inject into those mine voids to prevent contamination.

(Next Slide) UIC program established a separate section for coal operations with mining-specific requirements for UIC permit: Application, Issuance, and Maintenance.

(Next Slide) Here is a picture of a typical injection into an underground well. Class 5 Type X13 (5X13) wells deposit fluids into abandoned underground mine voids. There are two

types of liquids injected: Sludge, Acid Mine Drainage (AMD) or AMD treatment sludge and slurry: Coal preparation plant slurry (prep plan slurry).

(Next Slide) Our chemical evaluation is two fold. One, is the chemical analysis of the injecting and two, the assessment of the chemicals being used. The heart of the chemical evaluation of any UIC permit application (sludge or slurry): chemical analysis of the proposed injection. Assessment of each chemical used in the process that produces the injection—the Material Safety Data Sheet (MSDS). Any chemical used in this process that is considered to be toxic can not be used and a permit will not be granted.

(Next slide) All applications for UIC permits requires a battery of animalizes be performed, MSDS sheets to be submitted on each chemical that will be used to perform the process to be reviewed by the agency.

(Next Slide) In addition, on the application, it states that diesel fuel, Kerosene, or any listed hazardous waste cannot be used or they will not get a permit.

(Next Slide) Furthermore, if a facility does get a mining permit, this is actually from page 11, it states: that all chemicals that they going to use have to be stated in the application. If they are going to use any additional chemicals, they have to get written approval from the agency. If they don't, there will be some fines or possible removal of their permit.

(Next Slide) Every Mining UIC permit requires an injection.

(Next Slide) here is a graph that describes an injection well.

(Next Slide) the agency is responsible for monitoring and the companies are responsible for submitted every quarter. This is possible for about eighteen different primaries. Some of them have approximately drinking water standards while others adhere to secondary drinking water standards.

(Next Slide) this is a discharge monitoring report. This is the point that the permit fills out and submits to the agency the reports.

(Next Slide) this is the second page of the ERM. The committee must sign that all the results are accurate.

(Next Slide) Underground injection if legally allowed with meticulous control of the permitting and monitoring of the activity, present and future sources of underground drinking water are protected.

Are there any questions?

**Question and Answer:**

**Q: Citizen:** Yes, Sir
**A:** No, only members of the committee (citizen sits down)

**Q:** You mentioned that there are chemical analyses that are done, and that the permittee does that? Does that mean the injection site?
**A:** Yes, they have to sample the last point prior to the surface. And, they have to meet the Federal Safe Drinking Water Standards at that point or they are not allowed to inject.

**Q**: If your agency oversees the process, is this the water or just the injection site?
**A:** Just the injection site.

**Q:** And, is there any type of sampling done? Random sampling was done for the residents who live near the injection site? Is there a sample of these peoples water supply?
**A:** No, they cannot inject within a quarter mile area from a personal well.

**Q:** I guess my question would be: Some sampling was done last month (movement of camera, static noises, poor quality)…..water obviously had some contamination.
**A:** Those samples were done before this program at UIC, before we were able to do the monitoring. (Again, movement of camera, static noises, whispers, poor quality)…we certainly do not do sampling at private resident sites.

**Q:** According to your presentation, the DEP does not approve of any type of fuels to be mixed with the slurry to be injected?
**A:** That is correct.

**Q**: If a company was using that method, why would they be doing that?
**A:** For the floatation process. The agency has probably a hundred different floatation liquids that are approved for use instead of diesel or any other product.

**Q:** But, it is your policy to not to allow any type of fuel?
**A:** That is correct, Sir.

**Q:** Prior to issuing these permits, are there any pathological studies done to see which direction the water will flow to be assured that there will not be a possibility that water will not become contaminated?
**A:** Yes, that is correct. This is a part of the application and I will give each of you a copy of the application that the permittee has to fill out. And, the study is a part of that process.

**Q:** Once slurry is injected into the ground, is there a study done to see where it is moving? A study to tell if there are going to be issues at that specific site?
**A:** Umm, I am going to turn that question over to the agency's hydrologist, George _____. The permitting for underground storage injection sites is three fold. One is the actual injection site itself. We do underground water surveys and also long term motioning of underground water. Then, they have to get the underground injection permit that is particular to the chemicals. Then, they also have to get the MPDS (?) permit which is under the people at mining and reclamations department. So, there is a lot of motioning connected to both permits.

**Q:** Is there any papers on……or any method available with dye testing, that is dye that is non toxic, to track where the water is going?
**A:** Yes, Sir there could be. But you know, basically what we do when we permit the sites themselves, we have a half mile radius for the underground permit. We do a geological impact assessment that all geologists that work for mining and reclamations perform as a final document. And in that, we look at the hydrological consequences and we have to sign off on that. There are some people who want to inject slurry in places that it may come to the surface somewhere, and we do close monitoring on that. We don't see much in the way of well complaints. What we do is a lot of hydrological studies in areas that slurry could come up to the surface.

**Q:** You are saying a half mile radius, but I think you understand that water does not stay just in a half mile radius. Do you know of any situation where contamination has occurred a significant distance from that specific site because of the movement of underground water?
**A:** No, sir. Basically what the whole system is set up to do is you put it into this mine void, which is basically a standing body of water. So, you have this slurry, which is about 30% solids, and they put it in a standing body of water. Over time all the solid material falls out. Then you have just that fresh water that is flowing. It could down in depth, into other strata, but by then it has lost all of its black stuff.

**Q:** I think I am confused. Now, you cannot inject a quarter mile within a private well or water municipal, is that correct?
**A:** Yes, but it is even further away from a public water source. It is a five mile radius if there are at least 15 individual wells or public water source.

**Q:** Well, then, I am not sure if you were present at the last meeting or not
**A:** No, I was not

**Q:** We had several people who brought in samples of their water which had huge contaminates in it. I don't know it was, but there were two or three different colors of things in it. And, they contend that the underground slurry injections is the cause of their water problems. And, they all were from down south. Are you saying that if you cannot permit to doing this within a quarter mile of a well that there is no possibility that this could be the cause of their contamination?
**A:** All of the reports that I have seen from the DEP…there are two main reports. One from a geologist back in the 1990s that was the basis for people to get public water. Plus studies down across the state of Kentucky and its rivers. We are not seeing that these slurry things are their contaminates. Now I am not saying that people don't have contaminated wells. I think that studies have shown that their water is contaminated by underground mines, and some of these wells were shallow. I don't think that people understand that you have to maintain your wells like you maintain your car. A lot of people turn on their spicket and just think that it will automatically work for them. When they have things like iron, the hydrology is from years of things settling. Every time I go to a well water complaint, I have to explain that I have a friend at the local fire department that did not flush his well for a couple of years. So, we are not saying that people's wells are not getting contaminated, but as far as what we are talking about here, slurry, the scientific evidence does not show slurry.

**Q:** I am looking at the map here and I don't know where it came from but, it appears to be somewhere outside of this state. I assume this was prepared by your agency?
**A:** It was prepared by the underground injection people at Natural Resources.

**Q:** Most of the complaints come from all over the state, but most of the complaints seem to come from the southern part of the state. It would appear from just looking at this map, if I am reading it correctly, the triangles of slurry injection sites seem to have high concentrations in the Marian county. I wonder if there have been the same registering type complaints in that area of the state as we have heard from residents in the southern end of the state.

**A:** Most of the questions that we have gotten have been secondary contaminates from something like a pipe broke. We haven't had very few, if any, direct "I've seen blackwater in my well from an impoundment" type of complaint. I have been looking all across the state from a geology standpoint and I am not really seeing much of that anywhere.

**Q:** It depends on what happens and I know, personally, I know constituents in the Preston county area that have reported to the agency. So it appears to me that this type of contaminate is happening in other areas of the state too. I have a question along the same plane. Who takes the sample? Do you folks do the sampling?
**A:** It just depends on the individual or the company to do it. Or our inspector would take the sample to the lab.

**Q:** How many inspectors do we have?
**A:** Dozens.

**Q:** A dozen?
**A:** No. I mean there are inspectors within the mining and reclamation and natural recourses. But we have inspectors according to article 3 that is fifty or sixty or so.

**Q:** And, would they be working on the underground slurry injections?
**A:** Well, they would be working on any kind of well or water complaints. Typically, a call comes into a regional office and then the inspector or inspector specialist would respond to the complaint. Then they can call me or another one of our geologist to come out and investigate the complaint.

**Q:** Chad had mentioned that diesel fuel is not an approved liquid to use.
**A:** That is correct. In the 1990's I collected samples and testing all the chemicals used with the slurry process. I took that sample and I analyzed that sample for over a third of what is required for a public water supply. For anything that could possibly be in that slurry. They are using a lot of chemical for that slurry. The upside of that analysis is that every one of the public drinking water standards, except for suspended solids, and within the process of looking into these chemicals at the time, they were using some diesel based chemicals at the preparation plant--which says states on the MSDS could not be disposed of except by waste regulations. So, at that time we said that you had to change the preparation at the prep plant.

**Q:** How long ago what that?
**A:** That was over 10 years ago now.

**Q:** So, if there are reports of diesel being used in slurry injections then we would need to report that to you?
**A:** You would report it to me, or the UIC program because it would be violation. Yes.

**Q:** How long has this slurry injection process been used?
**A:** It has probably been used since my earliest recollection, at least since the early 1970s. It is used because people wanted to get around the combined compound, which is very sloppy to have

to deal with out in the field. So, they wanted to either pump it into the ground or the mountains to deal with. It is more of a handling issue.

**Q:** From what I am hearing and seeing, at least from the handouts, correct me if I am wrong but from this report in July 2000 you have been regulating the water going into the injections from that point.
**A:** There have not been environmental impacts from the slurry going into the ground since that time.

**Q:** Prior to that time, your agency really did not know what types of things were going in and what the make up of that was? It may well be that you are the state action that is required to monitor these activities, the water may not have been pristine, or the slurry may not have been as pristine as it is since you have been monitoring it.
**A:** That is possible.

**Q:** That leads me to my next question. Does that mean you are monitoring the southern part of the state with what may have happened a decade ago?
**A:** Sir, I…..I….cannot tell you for sure. Most of these sites are sites specific. We would have to investigate some more and most of them are not from these injection type things. Most of the problems that we have that are from slurry are pipe busting, or that sort of material things that turn the creek black or the river black, that sort of thing. Those companies did not have a permit from UIC.

**Q:** So, you don't know what has been injected into the southern part of the state?
**A:** That is correct.

**Q:** Did you come today with any specific recommendations?
**A:** No, sir, I don't think so. I think that we have had control of this program and I think that we are doing a pretty good job of it now. We cannot speak of the things that happened twenty, thirty, or forty years ago. Like I said, since we have been doing the mining permitting, there have not been any adverse environmental impacts to date.

Thank you; and, moving on since we are about out of time. Next we have the Environmental Engineering.

**Speaker: Walter Robbie** (sp?)

My name is Walter Robbie, I am an advisor to Public Resource and Department of Health. I was asking to do a bit of an overview of the drinking water program in WV. One of the responsibilities is public drinking water.

We seek the delivery of safe drinking water to consumers within this state. We do this by regulating the public water suppliers that deliver water to approx 1.3 million residents of this state. We also deal with individual wells and creek uses for water purposes in the home. The regulatory time of these uses are usually at the time of installation of these systems or at the request of the consumer. These activities are administrated at the local, county level with oversight at the state level. We have provided you a map of the water sources within this state. And, this map identifies approx 11 public water systems within WV. The definition of a public

water system is defined as: a water system that serves at least twenty-five persons at least sixty days a year.

The map breaks down both community and non-community water systems. A community water system is a public water system that provides water to year-round residents. A non-community system is a system that does not serve the same people year-round. There are ground water and surface water systems. There are 800 ground water systems in this state and over three hundred systems in this sate. But, much more of the population is served by surface water systems.

We have taken our regulatory status to enforce the safe drinking standards by the U.S. EPA. The federal government develops the regulations and WV is adopted as a reference. Methods that are used to help to ensure safe drinking water begins with source water protection. We encourage that bodies of water have developed source water plans; we provide assistance in developing these safe water plans, and help with updates to the source water plans. This helps the water systems to identify potential contaminants, to eliminate those contaminants before entering the water supply.

At this time, we do not issue operator permits for water systems. But, we do issue permits to construct water systems or to develop new water systems. These permit applications are reviewed, along with current design standards which are intended to provide protection to the consumer. The level of treatment necessary varies from ground water to surface water because there is more of a potential for contaminates at the surface water level. Thus, ground water requires less treatment than surface water. The frequency of inspection depends of the water source.

We also train certified water operators within this sate. We utilize the American Water Works Assoc, and the Environmental Protection services. The water operator is one of the key components of the proper treatment of drinking water in the state; therefore, a key component of public health.

We monitor the water systems by requiring the water systems to collect and test a variety of contaminants in the water. The number of contaminates and the frequency of testing depends on the source and the variables. If the source is a surface water system, the number of frequencies would be higher than ground water sources. The information is collected by our operators and then stored into a database that allows us to determine the assistances to apply with the necessary rules. Most of this information is then uploaded into the federal database. Water systems are also required to share the water quality report with its customers.

We also have another program that helps the water systems with infrastructure to ensure public water is within the water programs regulatory efficiency standards. We are active participants with the water infrastructurecouncil. The agency reviews all applications and then reporting to the council with recommendations. These are some of the activities that the public water suppliers and agencies participate in to ensure that the residents and visitors are guaranteed safe drinking water.

That is it. Are there any questions?

**Question and Answer:**

**Q:** Could you explain on the map that you provided for us on the public water systems what the difference is between the ground water community, non-ground water community, surface water community, and surface water non-community?

**A:** Well, it is just the difference between the ground water and surface water communities and the difference between a community and non-community water system. The community water system is a system that serves the same customers year-round. So, say where you live, if you get public water from a public water system, then you are a community system. A non-community system is a system that doesn't serve the same people year-round; or not fully year-round. Such as a school, which is generally a non-community system—their customer are not there full time, they are just there a part of the year. Restaurants are considered to also be non-community systems because they have different people who come there throughout the year.

**Q:** And the difference between ground water and surface water?
**A:** Surface water is where the source of the water is: water that can be taken out of a reservoir, or out of a river, it is water that comes from the surface. It may be a ground water source when it is a spring that creates surface water like a creek. Ground water is a well, or water that comes up from the ground.

**Q:** I am looking at this map, the one with the slurry injection sites in WV, and the two counties that have the most injections sites; you have Mingo County and Willow County listed as having the most injection sites in this state. If you look at the WV public water system map that you provided, it looks like in Rawin (sp?) county there is a lot of blank space. So, where you don't have these ground water communities or surface water communities, would you say that is more likely a private well water system?
**A:** Yes. If people live there, they are generally not on public water systems but will have an individual water system. Again, we have to go back to the definition of a public water system. We don't have a map of the public water distribution system.

There are no other questions. Thank you for coming and for your presentation. Okay on to the next item. Next we have Commissioner Yachoizichi (Sp?) from the Public Well Authority. And, I would like to mention, in all fairness to the Coal Association, we have discussed with them, we don't have enough time to give them a time to do a presentation at today's meeting. So, we will schedule them in December so that they adequate time to make their presentation. We still have a good ten minutes or so before this meeting is over.

**Speaker: Commissioner Yachoizichi** (sp?)

**Q:** Sir, are you here by yourself today?
**A:** Yes, yes I am.

The History of the Infrastructure Council Authority, created in 1994. Council is made up of eleven voting members who are all appointed. The governor chairs the council. We have six regulatory and funding agencies that sit on the council. We have three mandated invitee agencies on the council. Also, there are advisory committees such as the Rural Community Service. We have two state senators, and two state delegates that serve on the council. And, this council meets monthly to render recommendations and funding to decisions on projects. This is reviewed by four working funding committees, a consolidation committee, and two technical review committees: one committee for waste water and the other committee for water. And, then finally, a funding committee that evaluates the projects on a funding basis.

As you all know, the Legislator back in 1994, created the council and also put on the ballot a constitution amendment that authorized the issue of over 3 million dollars to provide seed money for the council. We have had a lot of success with that. That was initially challenged in the Supreme Court, it was passed, went to the sate, and then to the marketplace where we issued 300 million dollars in obligation bonds. All of that money has been either lent out or committed to projects. And, on thing that the money, you might recall, is the money….there is a formula that the council must use in order to disburse the money out to projects. All the money that comes into the council, 20% of that money must be used for economic projects. So, you start with 300 million, a part of that went to the economic development program, and then the infrastructure council provides the match for two of the federally funded revolving loan programs within WV. Our program now gives between 15 and 16 million dollars a year, the bureau of drinking water now operates at about 4 or 5 million dollars a year, and the council provides the match for those programs. So, that comes off the availability of the funds. And the reason that they provide the match is, again, because these are federally funded programs, this money is granted to the state, and the state can take this money and use it as loans to DEP and water municipalities.

Of the money, to date has been expended. The 300 million has been leveraged with about 1.1 billion dollars in other federal and state funds, so we have had a lot of successes. We have been able to provide water service and waste water treatment to rural communities. But the need for infrastructure in WV, especially for water is still needed. One of the things the council has to do is every three years is, they have to do what is called a Needs Assessment Stay to the committee. If you read though this report, you'll have an understanding that we have about 1.4 billion dollars going to projects over the past 10-12 years. The current need for adequate water sources is about 2.5 billion dollars. In that 2.5 billion dollars, that leave bout 8.4 billion for water projects and about 1.7 for sewer projects. The council currently on the applications that have been filed with the council, that have gone through the committees, that have gone through the technical process, and have deemed to be finically feasible but, yet, are not truly ready to go because they have not secured all the other funding sources they need to make the project go. That list is in excess of 800 million dollars. That is just the pending list. As the council gets its money annually through the legislator and through the excess lottery proceeds, that money is used for these projects.

But remember with 40 million coming in, that money starts to get split up: 8 million goes to the development office; the remaining 32 million gets split among the three congressional district. That is about ten and a half to eleven million going to each district. So, you can see the amount on the pending list far exceeds the amount of availability. Now the question becomes, okay, if you got 800 million dollars worth of projects pending and you've only got 40 million dollars a year, what is the criteria for funding these projects? What are the priorities?

Under the statute there is listed a criteria the council has to consider: health benefits, economic development benefits, the projects compliance with federal and state regulations, the degree of effective consolidation of systems, the coast effectiveness, the availability of terms and conditions, resources of funding, operation and maintenance needs, state or regional planning goals, and readiness to pursue. All of these factors are considered when it comes time to make a decision as to which projects get consideration for the funding. Now, readiness to proceed is becoming a real issue for the council in that the council wants to make sure that if they put the money in and are willing to invest the money, then they would like to see those partners go in fairly quick order. This results in revenue bond issues. In 2003, they did a 40 million bond

issue. In January of this year (2006) the council did a 36 million dollar bond revenue issue. Those revenue bond issues are done on a tax-exempt basis, lower interest rates, and they come under the rules of the IRS in terms of you have to demonstrate that if you are going to issue bonds, you are funding projects, and you have to have projects ready to go.

So, the council has to make certain that the funding of projects is truly ready to go. Mr. Chairman, I know that we are short on time and in a nutshell that is a short and basic overview of the council.

**Question and Answer:**

**Q:** I believe that we are indeed running out of time, but very quickly, in your program can you tell us how much goes into your water program?
**A:** The amount of money that I can issue is controlled by the legislator, you all have a ceiling cap; and, currently that ceiling is set at 440 million. On the water authority and the bonds that we have outstanding are issues though the council, this includes a January sum of 36 million. We will be up to approx 396 million dollars, so…

**Q:** Let me ask you this: the infrastructure receives money: does that go into infrastructure? Or does it go into private industries? Or in to development?
**A:** No. None the water or waste work money goes into any kind of private development. Now, if it goes to a public utility, then it goes to the general public because they serve the general public, but the also serve private, small, individual companies.

**Q:** I mean, do they get involved into any private development?
**A:** Not the infrastructure council, but the water development as involved with programs can get involved somewhat with public/private funding activities.

**Q:** The point that I was trying to stress here is that it is obvious that the state of WV is so in need of infrastructure and the money that is give to the council should be applied back to infrastructure instead of private development.

**Q:** I wanted to say the council has done a wonderful job and it is probably one of the best things this legislation has ever done. Now, you made a couple of comments and I have a couple of questions. The need is about 2.5 billion?
**A:** Infrastructure works out over time, and infrastructure has to be replaced. That dollar amount, from how I understand it, is the amount of applications currently on file with the council. All utilities in WV provide water to customers.