



LAND QUALITY ADVISORY BOARD MEETING
3rd Quarter Meeting Minutes



July 30-31, 2003
Oil & Gas Commission
Casper, Wyoming

BOARD MEMBERS PRESENT: Marshall Gingery - Chairman
Jim Gampetro
Rodney Proffitt
Larry Munn - only on the 30th

DEQ STAFF PRESENT: Rick Chancellor Roberta Hoy
Sandra Garcia Dan Keefe
Steve Ingle Mark Moxley
Mark Taylor Don McKenzie
Glenn Mooney

MINUTES APPROVED BY LQD BOARD:

Marshall Gingery
LQD Chairman - Marshall Gingery

DATE:

July 10, 2004

NONCOAL RULE: PACKAGE 1L - INSITU

BOARD MEMBER GINGERY: Roberta, let's begin.

ROBERTA HOY, LQD: What we're planning to do is start with Chapter 11, Section 1. It'll take a second to get the light box going.

MARION LOOMIS, WYOMING MINING ASSOCIATION (WMA): Mr. Chairman, we're prepared to talk about each section as we go but I also have some general comments about the rule package that I'd like to provide and I'd like to give you a little feel for what the industry is going to say as we get to these specific sections and prepare you a little bit.

BOARD MEMBER GINGERY: I think that would be an excellent idea. Why don't you go right ahead because I think it's good timing to do that.

MARION LOOMIS, WMA: Thank you Mr. Chairman.

Mr. Chairman and members of the Advisory Board, I'm Marion Loomis with the Wyoming Mining Association. We really appreciate the opportunity to comment to you today. I would like to briefly go through this cover letter and just kind of appraise you of some of our major concerns and what we would like to do today and if it goes into tomorrow.

The Mining Association, as I'm sure you're aware, represents bentonite, coal, trona, and uranium companies that are producing in Wyoming. We have the last known producing uranium companies in the United States. We're down to one solution mining company now left which is of course in Converse County and several operations are in restoration.

There are a number of portions of the rules which we don't have any comments with and as we get into the specific sections, I think you'll see that. There are probably a number of things that probably should go forward. We do need to comply with the UIC program but we feel that there are a number of instances where the proposed rules go far beyond what is required by the UIC program.

One of my real concerns is in Section 1 of Chapter 7 which takes away the right to initiate non-significant changes that are filed with the Administrator and the LQD Statement of Reasons says that this is not used anyway but if you look at the proposed rule it says that other non coal operations can use that non-significant change except for in situ operations. I don't think the Department of Environmental Quality has any right to take away any operators rights under the statutes. When I read that section, it looks to me like DEQ has singled out one industry to take away rights that are guaranteed or provided for in the Environmental Quality Act. The two sections of the Environmental Quality Act that allow for those insignificant or small revisions, permit boundaries are contained in my letter here but I have a real concern with a regulatory agency deciding what industry may comply with the Environmental Quality Act.

Everybody knows the tremendous pressure the uranium industry is been under in the last twenty years. We've gone from 12 million pounds of uranium production in 1980 to a little over 1 million pounds probably last year and employment has gone from 5,000 to 200 or 300 hundred. Certainly the industry is in a good deal of concern but there are a number of instances in these regulations and I think they will be brought out as we get into the specifics that go beyond the UIC program. So, as you're doing this, I hope you recognize that there are some aspects that we have to change in order to comply with the UIC program but there are a lot of things that are up to the State of Wyoming to administer on in situ mining that are not mandated by EPA or not mandated by the UIC program. One of the concerns we have on the new well construction programs is the UIC program really looks at a public drinking water supply which is a minimum of 25 drinking hook ups and their requirements apply to public water supply. The proposed regulations apply to any underground source of water including waters that should never be used as drinking water such as the waters that would be in uranium ore body. That should never be developed as a public drinking water supply and I think that needs to be kept in mind as you work through these.

There are a number of well construction standards that are proposed in the regulations that are going to make it very onerous on the industry and I'm pleased that you're going to start with Chapter 11 because we have some people here that are intimately familiar with what it takes to design the wells, what it costs to design those wells and can provide more information but we think that with some of the requirements that are in this that well installation could increase 60-70% with no increase in protection for the environment or for anybody that might be in the area and using adjacent waters and those people from industry can talk about those.

The exempted aquifer was put in back in the 1980's when we started with these regulations and we've always had concern with what was the exempted aquifer and we would strongly urge that as we go into this that we look at the well field area, the monitor wells and then some kind of a buffer zone that would be a defying buffer zone but that you would have to comply with and maintain water quality. We can get into more of that as we go on.

One of the major issues that we've had for a number of years, and you've addressed it in some of the standards and the policy that you've recently adopted, was the statutes say that you restore to quality of use and you went through this on the policy you adopted with the Water Quality Advisory Board and adopted a policy that said that that was the standard that we're going to put onto the industry and the department has continually put into the regulations to go to background and we feel that it's very important that we keep in mind what the statute says and it says that you'll restore the quality of use. There's no place in the statute that says you'll restore to background and we would hope that these regulations would reflect that as you adopt them.

Mr. Chairman, I think that's enough overview and at least you have a feel for where some of our comments are going to come from. With me today are Bill Kearney with Power Resources and Donna Wichers with COGEMA Mining and I think they'll make most of the comments on behalf of the Mining Association when we get into these specific sections. Ralph Knode is here and he can talk about some of the well installation standards and there may be some others from industry that would jump in also but those would be the WMA commentators. Thank you Mr. Chairman.

BOARD MEMBER GINGERY: Thank you Mr. Loomis. I appreciate your time and effort and as usual we find this very helpful in our review as a board. I made it clear when I started that I'm going to try to keep this informal and when you do have a question raise your hand and we'll stop and go over that. Thank you again. Yes?

PAUL OSBORNE, EPA: Mr. Chairman, I'm Paul Osborne with the Environmental Protection Agency. I think it would be useful to just comment on one statement that was just made on what EPA protects as far as underground sources of drinking water. It was mandated by Congress in the Safe Drinking Water Act and in the House Report that basically lays out their intent to set out regulations that protected existing and future or potential underground sources of drinking water. Our basic definition is waters that are less than 10,000 mg/l per liter and the aquifer is capable of supplying a significant quantity of water which was defined as the amount of water needed to supply a public water system of 25 people or more. Even though the aquifers that are being mined have water that usually would exceed in radium and uranium, they still are less than 10,000 mg/l per liter and are certainly capable of supplying a public water system if they wanted to treat for those things. That was the purpose of the exemption process. We have an exemption process that was designed to allow mineral extraction, i.e., uranium, salt, oil, etc. and so we go through that process but in the case of oil of the unit that's being exempted has to be capable of commercial production the same way in the minerals that the zone that is exempted it has to be capable of mineral production in the concept of the outer boundary ring of monitor wells, it was felt at that time that was certainly the mine field was shown to be commercially produce able so that was clearly exemptable under our criteria and what the concept of the outer ring was, was that was a buffer area that would allow the industry to have monitoring wells so that they could basically monitor for indicator parameters that would allow them to prevent things that would exceed MCO such as uranium and radium from going off out through the boundary ring. It's our understanding that that concept works pretty well so in a affect when Wyoming got the program, the agreement was that we would go to the outer ring and that that would provide a sufficient buffer. That's where we stand at this moment.

BOARD MEMBER GINGERY: I believe we want to get started down the pathway. I do have a question for you but I believe I'll wait for that section and keep it in some continuity.

ROBERTA HOY, LQD: We'd like to delay the discussion of revisions, Chapter 7, Sections 1-5, until we get to Chapter 11, Section 19 which also deals with revisions. That way we can deal with both sections at the same time instead of dealing with it twice. So if we start on Chapter 11, Section 1, we'd be starting on page 9 of the draft proposed rules.

The first section in Chapter 11 is set up like the other LQD rule definitions. We've kept existing definitions and we've done some editing and they are definitions that are adopted from EPA rules generally because they're frequently used in the EPA rules so it would be easier to go ahead and adopt it and have it there. We also adopted definitions from Water Quality's rules. We weren't planning to go through definition by definition. We were just going to go through the ones which we've received comments.

Primarily what we're working off of are comments from WMA that we received in the last week. There may be others but these are the ones we know about. I'll continue this in alphabetical order.

The first one is injection wells which is Chapter 11, Section 1(i) on page 14 of the draft rules. The concern, if I'm understanding it correctly, is there was an existing definition. One change we made was to take out *for the purposes of in situ mining* because all this chapter deals with is in situ mining so it was redundant. Then we added a sentence about using a well for both injection and recovery of production. We added that because over the life of a mine you may have wells that get used both ways but there are certain requirements for injection wells. One of the primary ones being mechanical integrity testing. What we're trying to be sure is that we captured...once a well is used as an injection well even if it gets flipped around for a recovery well or something else, it's still considered an injection well for the purposes of the requirements of maintenance and testing and that type of thing. That's what we're trying to clarify. Now there's other places you can do it. Chapter 11, Section 1(c) which is on page 10 of the draft rules talks about what a Class III well means. A Class III well is an injection well. The first sentence there basically was copied from Water Quality's rules and it had language that we struck which says *which injects for extraction of minerals, or products, or recovers recovery fluids, minerals or products*. So they had both under the Class III definition. We had split it up into trying to define it both under injection and under recovery well. You could do it either way. What we're just trying to be sure and capture is the fact that an injection well, once it's ever used for injection and becomes a Class III well, there are specific maintenance requirements and there are specific things that you need to do to make it no longer a Class III well. Just the virtue of using it for recovery instead of injection doesn't negate the Class III requirements once they're instituted. You have to formally say it's no longer a Class III well. So whether we do it under the definition of injection well or recovery well or whether we do it in the definition of Class III well.

BOARD MEMBER GINGERY: Does anyone have heartburn one way or the other on this?

DONNA WICHERS, COGEMA: Yes, we do Mr. Chairman. I'm Donna Wichers with COGEMA Mining. I guess you have our comments. Our comments on this particular definition is that we would like to see it simplified and to use just the straight EPA definition for injection wells which is also listed in the comment and that is injection well means a well which fluids are being injected. It's very simple. If a well was once a recovery well and if we want to use it for injection, it becomes an injection well. EPA's UIC program is for injection wells. It does not discuss recovery wells but we always have that requirement. Anything that we injection into, we have to make sure that it complies with construction, integrity, and operational requirements as provided by the permit license, the rules, and EPA regulations. So, we're asking that this just be simplified and go with the EPA definition.

PAUL OSBORNE, EPA: EPA had discussed this with the state and the reason that we sort of came up with this is that if it is an injection well it is an injection well forever. The idea behind this is to capture those injection and recovery wells that switch back and forth because we have to have a way of ensuring that once the well is an injection well that it is covered by the program and that it is properly tested and that it is properly plugged and abandoned so that if you have a recovery well and you switch it to an injection well you just can't simply say, "I don't have to do mechanical integrity on this because it's now a recovery well again." You have to test it because it has been used as an injection well.

DONNA WICHERS, COGEMA: I believe that is covered elsewhere.

PAUL OSBORNE, EPA: At any rate as far as covering, the intent was to simply make sure that because if we ran the program we actually have permits where we have an injection and recovery well and we basically regulate them for the purposes of mechanical integrity and plugging and abandonment as injection wells because ultimately they will be plugged and abandoned according to the plan but they're allowed to switch back and forth which is not to say that an operator cannot come in and say, "I want to switch this well into not being an injection or recovery well and make it into a monitoring well and here is why it is protective of the underground sources of drinking water" and then they would be taken out of the program all together by making it into a monitoring well. That was the concept behind the injection and recovery and I guess however it's handled is up to the LQD board as long as when a well switches back and forth, once it is an injection well we're just concerned that it is tested and abandoned properly.

ROBERTA HOY, LQD: Much of this revolves around the concern in Chapter 11, Section 7(a)(iii) which talks about the requirements for mechanical integrity testing and we're changing that rule as well and once we get to it, it will certainly be a topic of discussion, but the way it's been interpreted is that you test once every five (5) years of use. If you're using an injection well some of the time for an injection well and some of the time for a recovery well and then you don't use it for anything for a while, it gets very difficult to track. It really should be once every five years which is the EPA's intent and the way theirs is written. So this is where the example of the maintenance and testing issue that we're trying to clarify that injection well is injection well until you formally don't make it an injection well.

BOARD MEMBER GINGERY: For clarification, the comments from industry, I don't know about the rest of my colleagues but I had actually left my residence yesterday so if you think we are a little hesitant on this I have to say I just received this so I really haven't had a chance to read it so help us through it.

RICK CHANCELLOR, LQD: Donna mentioned that she thought this issue was taken care of in another place in the regulations.

DONNA WICHERS, COGEMA: It's addressed elsewhere in here about switching from injection to recovery wells and this is just a simple definition of injection wells. I believe there is a simple definition for recovery wells but it's addressed later and I think it's in the mechanical integrity section when we talk about converting wells from injection to recovery.

BILL KEARNEY, POWER RESOURCES, INC.: You might want to remember too that predominantly we're talking about uranium here today but these type of definitions do apply to other minerals like trona where it's likely they may not switch wells back and forth so to be consistent with EPA, that's kind of what we're here today about is to meet EPA's requirements and they have some nice, simple definitions.

RICK CHANCELLOR, LQD: I guess the issue is to try to capture some place to avoid misinterpretation of having an injection well and later switching to a recovery well does not necessarily remove the requirement for mechanical integrity testing. So, how can we capture that to make sure that ten years from now we're not arguing over that?

DONNA WICHERS, COGEMA: I think you addressed that in Section 7(a)(i) on page 64 and it's throughout the mechanical integrity testing section.

RICK CHANCELLOR, LQD: I was looking at Section 7 and didn't see it spelled out clearly.

DONNA WICHERS, COGEMA: There is a section where it talks about well conversion and I thought maybe it was in the mechanical integrity section.

PAUL OSBORNE, EPA: I believe that well conversion was when you were going to convert a well to something like a monitor well or some other conceivable purpose. I might add that in our experience, we haven't dealt with trona, but we've dealt with nacolite which is a similar mineral and we've also dealt with salt and we've dealt with copper and all of those operations generally use injection wells and recovery wells back and forth. It's part of the recovery process and I can't speak for trona specifically but I know that in the nacolite industry they have to use both in order to really recover the maximum product because solution mining will occur at one end of their salt process and so they have to switch to the other.

BOARD MEMBER GAMPETRO: Rick, is there any reason why we can't just say that some place? Maybe we could say if it's ever been used as an injection well that the mechanical requirements....that's what it is even if it's switched back and forth.

PAUL OSBORNE, EPA: It's also the plugging and abandonment in general.

BOARD MEMBER GAMPETRO: Well, all the requirements. Can't we just say that and move on?

RICK CHANCELLOR, LQD: I was seeing if it was said some place else but I don't see it.

DONNA WICHERS, COGEMA: I can't find it Rick.

RICK CHANCELLOR, LQD: I agree, that would be a simple way to address it.

BOARD MEMBER GAMPETRO: Sounds like everybody is in agreement on what we want, we just need to get the words together to say it.

ROBERTA HOY, LQD: Well, one suggestion could be to go back in Chapter 11, Section 1(c) on page 10. At the beginning of that on what was struck which says Class III includes both injection and recovery, we could unstrike that language and put it back in. It came out of Water Quality's rules so it's existing language.

BOARD MEMBER GINGERY: Would that satisfy the aspect there?

RALPH KNODE, POWER RESOURCES, INC. (PRI): Doesn't that then tie all wells into it whether they've been used as injection well or not? That's too broad then.

RICK CHANCELLOR, LQD: Yeah.

RALPH KNODE, POWER RESOURCES, INC. (PRI): What was said by Mr. Gampetro would be perfect with us if they just find the appropriate place.

BOARD MEMBER GINGERY: Are we finding anything that's close to that?

ROBERTA HOY, LQD: You might be able to insert something in Chapter 11, Section 8. I don't know exactly where you'd put it. That's why we put it with the definitions because it was the first place we ran into it and it was just easier to put it there.

BOARD MEMBER GINGERY: I believe I'm agreeing with my colleague up here that I would think that the sooner you could define that then it would carry through so I would think possibly getting back to Chapter 11.

RICK CHANCELLOR, LQD: Where in the regulations does it cover mechanical integrity and those lie?

ROBERTA HOY, LQD: Chapter 11, Section 7 is mechanical integrity and then Chapter 11, Section 8 talks about the conversion and plug in requirements.

RICK CHANCELLOR, LQD: So it would cover both those sections?

ROBERTA HOY, LQD: Correct.

BOARD MEMBER GINGERY: Yes sir?

PAUL OSBORNE, EPA: In reading this language that is presently in Chapter 11, Section 1(i), I think that it actually does meet the concern of the Mining Association because it basically says that if the well is used for both injection and recovery that it's considered an injection well. That allays our concerns that basically it's detected and plugged and abandoned as an injection.

BOARD MEMBER GINGERY: Comments?

RICK CHANCELLOR, LQD: Going back to Jim's proposed language, could that be tacked on to Chapter 11, Section 1(i) instead of our added language? I think it says that if it's an injection well it stays an injection well until.....

BOARD MEMBER GAMPETRO: In perpetuity.

RICK CHANCELLOR, LQD: Or until approved to be converted?

ROBERTA HOY, LQD: Okay, so if we said.....I'll try to change this here (on the laptop which is projected on the screen).

DONNA WICHERS, COGEMA: Mr. Chairman, we're willing to move on. We don't want to get hung up on the first thing that we start with but we would be willing to accept the current language.

BOARD MEMBER GINGERY: Okay, can we maybe work on that and when we come back we'll make sure we have the right wording? Rick, would that work?

RICK CHANCELLOR, LQD: It's up to you.

BOARD MEMBER GINGERY: We'll be coming back to review this before we vote on it and we'll make sure that all of us have an understanding with the language. Yes Jim?

BOARD MEMBER GAMPETRO: This is just a point of order. Could we always just say what page we're on? I'm spending a lot of time looking for stuff.

BOARD MEMBER GINGERY: Okay. Yes?

SANDRA GARCIA, LQD: Donna, are you wanting to keep what's in the Proposed Statement of Reasons as is or to keep what was suggested?

DONNA WICHERS, COGEMA: I think we were saying that in order to move on to the more substantial issues that we would accept the language that is in the current proposed rules.

SANDRA GARCIA, LQD: Thank you.

BOARD MEMBER GINGERY: Alright. Any other comments before we move on?

ROBERTA HOY, LQD: The next topic deals with the definition of underground source of water and it's Chapter 11, Section 1(v) which is on page 19.

The EPA rules use the term underground source of drinking water. We modified that somewhat to say underground sources of water primarily so that we could capture both the EPA concerns and the Water Quality Division (WQD) concerns in their classification system in Chapter 8 that there were instances in which conceivably you might have water that would fit the Water Quality (WQ) classification scheme but not necessarily fit in the EPA classification scheme which is why we didn't just adopt the EPA language directly.

BOARD MEMBER GINGERY: Comments from the audience?

BILL KEARNEY, POWER RESOURCES, INC.: This requirement potentially far exceeds what's required by EPA. The EPA's safe drinking water program requires the industry to protect an underground source of drinking water which as it tells you there what the definition basically is. Paul Osborne from EPA already went over it which has to serve or potentially serve drinking water to a public water system fewer than 10,000 milligrams per liter (mg/l) of total dissolved solids. What the division has done here is tied this to any water use basically that's in the WQD Chapter 8 regulations. They've included such things as industrial use water....consider that drinking water....it just goes far beyond what the EPA requirements require and a lot of it has to do with differences with the WQD Chapter 8 regulations to try to make something like that fit with the EPA things. They never have since the late 1970's when they came up with the in situ regulations and the UIC program, this stuff really never worked from the beginning and we're still here talking about it today.

ROBERTA HOY, LQD: Actually there's some similarities. The EPA definition depends on the TDS of 10,000 ppm or less. Then it also talks about the supply aspect of it or it could.....10,000 ppm TDS or less and that has sufficient water to provide for a drinking water system and there's the definition of drinking water system there (on screen).

The WQ classification is very much the same because it says industrial is anything less than 10,000 ppm. It doesn't put the qualifier of quantity on there. It just says less than 10,000 ppm TDS. That's all it takes to be classified as industrial. They're very similar in that respect and we we're trying to maintain the.....we don't want to get into a separate classification scheme from the WQ classification, we're trying to maintain the relationship with that so we only have one classification scheme. I also don't think we have the authority not to use their classification scheme.

PAUL OSBORNE, EPA: I would have to agree with what Roberta said because when we delegated the program we were very concerned about not disturbing Wyoming's classification system because it is very close to ours but what she said that we had also noted was the only thing that's missing really in my mind is that there's not a qualifier which contains a sufficient quantity of groundwater to supply a public water system. That is the quantity part of the equation. The quality of it is anything less than 10,000 and that's basically how our system works. I would say though that from the stand point of quantity, the agency's guidance and what we basically looked at is what that means is about 5 gallons a minute. I seriously doubt that they're going to be mining in a uranium aquifer that's only going to produce 5 gallons a minute. So, really, it's probably a mute question but if you wanted to add in the language that says *which contains a sufficient quantity of groundwater to supply a public water system*, I don't know that that wouldn't upset your use of classification system because what Roberta said about Class IV is true, anything less than 10,000 is considered to be Class IV if it can't be classified as another class. Greater than 10,000 milligrams per liter in Wyoming's system is a Class VI groundwater.

BOARD MEMBER GINGERY: What was the last comment on that?

PAUL OSBORNE, EPA: Greater than 10,000 milligrams per liter is considered by Wyoming's use of classification system to be a Class VI groundwater.

DONNA WICHERS, COGEMA: Class IV (B). Class VI is just too bad for anything. Unsuitable for use.

BOARD MEMBER GINGERY: That's why I'm asking the question. I was a little confused on that VI.

DONNA WICHERS, COGEMA: Actually Class IV which this definition does include, includes both Class IV (A) and IV (B). Class IV (A) is less than 10,000. Class IV (B) is greater than 10,000 TDS.

RALPH KNODE, POWER RESOURCES, INC.: That clearly goes beyond what EPA requires.

RICK CHANCELLOR, LQD: Donna, if I understand you right, under WQ's classification system, I, II, III, & IV (A), all those, less than 10,000 milligrams per liter, would satisfy EPA's definition of underground sources of water?

DONNA WICHERS, COGEMA: No, it would not because of the quantity requirement.

RICK CHANCELLOR, LQD: If you had the quantity requirement in there then, all WQ's classification of I, II, III, and IV (A) fit EPA's definition of underground source of water. Is that a true statement?

DONNA WICHERS, COGEMA: Yes.

RICK CHANCELLOR, LQD: So, when we say or those that can be classified as a known source of water in Chapter 8, are you concerned that that language goes beyond I, II, III, and IV (A)?

DONNA WICHERS, COGEMA: There is language in Chapter 8 that talks about vadose zone and other areas that are not probably classified as I, II, III, or IV (A) and that does give us some problems.

RICK CHANCELLOR, LQD: So do you feel that addition of the quantity qualifier to this would satisfy your concerns?

DONNA WICHERS, COGEMA: Yeah, incorporate EPA's.

BOARD MEMBER GAMPETRO: My concern there would be what EPA has defined as a significant water source that works in Pennsylvania or some place else which might not be the same for us here. Just to take that into consideration. Water is not that plentiful here as it is in many places. Possibly what might not be considered a significant source some where else could be around here. Something to think about.

ROBERTA HOY, LQD: One of the blue covered regulations you have in front of you is WQ's Chapter 8 and we had invited a WQ representative to be here today but I don't know if they're coming or not. They also, where we use the terminology *known source of supply*, if you look in Chapter 8, Section 4(c) of the WQD regulations which is on the bottom of page 4, it talks about *waters which are known sources of supply and appropriated for uses* so we're not using the terminology *known sources of supply* without some parameters or the vadose zone type thing that Donna was concerned about.

DONNA WICHERS, COGEMA: So, Roberta, does your definition cover the vadose zone?

ROBERTA HOY, LQD: Well, we're specifically saying that those that can be classified as a *known source of supply* so I guess the thing would be if WQD would classify it as a *known source of supply* and put in the vadose zone. I don't know that they would. Again, they have the authority in the classification process.

BOARD MEMBER GINGERY: Are you saying to us that since yours makes reference to this Section 4(c) that we're not changing anything?

ROBERTA HOY, LQD: Right. We're relying on what WQD classification would be in that circumstance.

BOARD MEMBER GAMPETRO: So what is the guiding factor here? *Known source of supply* or *significant source of supply*?

PAUL OSBORNE, EPA: I believe *significant* in my mind would be the.....

BOARD MEMBER GAMPETRO: That's the EPA's?

PAUL OSBORNE, EPA: Well we have significant and of course the quantity or quality. So, I don't know if one beats the other but certainly adding something about the quantity, I don't know if that's going to disturb WQ's classification system and I can't answer that but certainly it is in our group.

BILL KEARNEY, POWER RESOURCES, INC.: Paul, there are rules that say five gallons a minute or is that a policy?

PAUL OSBORNE, EPA: If you basically back calculate from twenty five water systems that works out to be about two gallons a minute. We told the NRC that it was our policy based on a lot of areas where people use two to five gallons quite regularly on individual well systems but we opted from somewhere between two gallons to five gallons. It has been put out in policy to the NRC with regards to the WIPP Site. I think in there they may have talked about the range between two to five gallons a minute but it does work out when you crunch the numbers to be about two gallons a minute.

BILL KEARNEY, POWER RESOURCES, INC.: To serve 25 people?

PAUL OSBORNE, EPA: To serve 25 people.

BILL KEARNEY, POWER RESOURCES, INC.: But that's like a policy. It's not a regulation?

PAUL OSBORNE, EPA: Well, it's in the regulations from the sense that the policy came out of what we said in the regulations and when we crunched the numbers that's what we came out with. So we said our experience is somewhere between two to five gallons a minute.

ROBERTA HOY, LQD: There's something else to consider. In WQ's classification scheme, they also recognize water that's being used. Their classification depends first on use and then on ambient water quality. So if somebody is using water for lets say livestock, even though it doesn't meet their water quality standards that are in Table 1 in Chapter 8, they will still classify it as a livestock water quality. They go first by use and then if nobody has a well in it then they go by ambient water quality so the baseline information that's collected is provided to WQD by LQD and we ask them to classify the water. So, in trying to capture both EPA and WQ's concerns, we also have to capture that aspect of use that WQ will recognize an existing use even if it differs from their standard.

BILL KEARNEY, POWER RESOURCES, INC.: I don't think the industry has a problem with that.

BOARD MEMBER GINGERY: I didn't quite get that last part but it sounds like everyone is in agreement. For my clarification the reference to Chapter 8, Section 4(c) would remain, correct?

ROBERTA HOY, LQD: Yes.

BOARD MEMBER GINGERY: Okay, thank you.

BILL KEARNEY, POWER RESOURCES, INC.: This is a pretty big issue. I just meant that as far as what Roberta had said about if someone is using the water that's the classification it is. We don't have any problems with that. If somebody is using bad water and they're drinking it, it's not a good thing but we don't disagree with that. That is how the WQ division classifies water.

BOARD MEMBER GINGERY: Larry, do you have any comment on that?

BOARD MEMBER MUNN: No. I can't imagine that anyone would be using the water that will be of interest for uranium extraction for very long.

RICK CHANCELLOR, LQD: So, I guess you'd still feel better if the quantity limited from EPA was attached to this rule?

DONNA WICHERS, COGEMA: I guess by not having the full EPA definition in here, it, in affect, becomes again more stringent than EPA requirements.

RICK CHANCELLOR, LQD: Say there's a case where somebody was using the water even though it did not meet the quantity definition of EPA by having the reference of Chapter 8 of WQ's rules, it would still bring that in if it was being used.

ROBERTA HOY, LQD: I'm just concerned that the boundary of LQD authority to modify WQ's classification system.....we just don't have the authority to do that. As long as we just cross reference it directly but if we change it that we will be in an area over which we don't.....

RICK CHANCELLOR, LQD: If we say *or* though, we're not really changing.

ROBERTA HOY, LQD: I would suggest asking the Attorney General's Office on that one.

DONNA WICHERS, COGEMA: If you strike the reference to WQ and the regulation and just put in EPA's definition, you would be there.

RICK CHANCELLOR, LQD: I don't think we'd be there because WQ's definitions are different than EPA's. As Bill mentioned, it's been that way for decades and it causes some problems and the WQ definitions are slightly different and that's what we're trying to do is not to tread on those rules which we cannot change but I think if we said *or* we're still applying WQ rules. If WQ rules are, I guess, more clear on the definition, than that would be enforced.

BILL KEARNEY, POWER RESOURCES, INC.: I guess it's my understanding that when these rules get done, if they ever do get done, that the WQ rules that pertain to in situ mining will go away and it will simply just be, here's the rule that regulates in situ mining and if it says an underground source of drinking water for ISL purposes, the EPA definition....boom, boom, boom. That's nice and clean.

ROBERTA HOY, LQD: That's true for those rules that apply only to in situ but because the classification system is much broader than that you wouldn't be.....even with these that classification system works really good and it'll still apply to everyone.

PAUL OSBORNE, EPA: I'm still concerned about making sure that we don't disrupt WQ's classification system because it seems to me that that classification system comes into play during the restoration process and during the decision making as to Class of Use that it's restored to and from that stand point you still have to rely on WQ's groundwater classification system.

ROBERTA HOY, LQD: That's probably a good point. Maybe the thing to do would be to work through some of those sections where it does come into play and then we can come back to this definition and see if we do need to revisit or if there is some way that we need to change it because seeing the definition without understanding how it gets applied is probably somewhat more difficult than once you see how it plays into the other parts of the regulation.

DONNA WICHERS, COGEMA: Agreed.

BOARD MEMBER GINGERY: I gather we'll just move on.

MARION LOOMIS, WMA: Mr. Chairman, to follow up on something Bill said and I might be wrong here but the Environmental Quality Act gave approval for in situ to the Land Quality Division (LQD) so if the LQD rules dictate what will happen, I think that takes precedence over something else that's in another divisions rules because LQD has exclusive jurisdiction over in situ mining. So if LQD addresses it differently than WQ addresses it, LQD rules are the ones that they have to comply with. I think you could develop these rules that would be different from WQ and they would be what the industry would have to comply with not with what WQ has. You may not wish to do that, but I think if you do, that would conform with the Environmental Quality Act.

ROBERTA HOY, LQD: To some extent, I don't disagree with that, however, the concern is that the primacy for the underground injection control program was granted to the Water Quality Division. We have the Class III wells because it's mining related. That's what's in the Memorandum of Agreement that you were talking about that we have. I'm so concerned about changing ours without the authority issue and I think we need some input from the Attorney General's office to make sure that the classification system covers all aspects of the state rather it's ranching, industry, or drinking water but we can't tread on WQ's toes inadvertently.

BOARD MEMBER GINGERY: The Memorandum of Understanding between the two parties is more just administrative and not so much regulatory, is it?

RICK CHANCELLOR, LQD: I believe it is. I think it clarifies that LQD would either lead on the UIC portion of the in situ permit. I don't think the MOU went into talking about authority for regulations. Marion brings up a good point whether or not we'd want to do it would be more of a departmental type of a question possibly for the Director.

BOARD MEMBER GINGERY: You feel that we're treading on some pretty thin ice.

ROBERTA HOY, LQD: I believe so.

BOARD MEMBER GINGERY: Comment?

BOARD MEMBER MUNN: I guess if you just say if it's known whether it's good water, bad water, a lot of water, or a little water, if it's a known use then that gets primacy and then say it meets the classifications that would fall within the 10,000 ppm and then just say and is capable of supplying 25 taps because that's what.....

PAUL OSBORNE, EPA: A significant quantity of water.

BOARD MEMBER MUNN: That doesn't change the WQ's classification of type 1 or type 8 water or whatever if they don't address quantity. You're using their classification plus you're putting that quantity requirement on it that brings it into compliance with the EPA. Essentially, that would say that if you've got a little pocket of good water but it's too small to supply then it's not going to be covered under this mining regulation which apparently the Land Quality board has the right to do.

BOARD MEMBER GINGERY: You know if we went that way Larry and they could still check with Council to see if we went over too far but that sure makes a lot of sense to me and it's fairly clear and everyone would have the same understanding. What do you think about trying it at least, Jim?

BOARD MEMBER GAMPETRO: You're going to have to watch the *and* or the *or* there. The *and* would eliminate the use. In other words, if someone was using it as drinking water but there wasn't enough water there for 25 people then.....

BOARD MEMBER MUNN: No, if you just say *known source* first, it's covered. If they're using it, even if they're squeaking a quart a day out, if they're using it they get to do that. It's a known use.

BOARD MEMBER GAMPETRO: Okay. So the *and* is between the quality and the quantity.

BOARD MEMBER MUNN: Yes and then you follow their quality requirements and put in the quantity requirement as well.

ROBERTA HOY, LQD: If you read Chapter 8, Section 4(c), it isn't just whether or not someone's using it but there's also the provision if they could use it. That's where you get into the ambient water quality. So, what they're saying is if they could use it for livestock, the first thing is they look at if somebody is using it. Maybe they are, maybe they're not but there's an enormous amount of reserves in Wyoming that aren't being used. What they're saying is that if it isn't being used then you look at ambient water quality. If it meets livestock then it is WQ's livestock criteria.

BOARD MEMBER MUNN: But that would be less than 10,000, right?

ROBERTA HOY, LQD: Correct.

RICK CHANCELLOR, LQD: It would seem to me that if you put an *or* there...known source cover or EPA's definition, we satisfy EPA and the mines interest of having a quantity there. I think we're still following WQ's known use type issue. I think it would work that way.

BOARD MEMBER GINGERY: I think I could go along with that. The rest of you?

BOARD MEMBER PROFFITT: Rick, I like your comment but would that necessitate a change in what you have here?

RICK CHANCELLOR, LQD: Yes.

BOARD MEMBER PROFFITT: Okay. Can you be specific about which *or* or *and* you're changing then so I can look at exactly what we're talking about here.

RICK CHANCELLOR, LQD: I would say that a underground source of water (USW) means those that can be classified as a known source of supply pursuant to Chapter 8, Section 4(c), Quality Standards for Wyoming Groundwaters, Water Quality Division Rules and Regulations (as amended March 12, 1993) or those aquifers or portions thereof which have a total dissolved solids content of less than 10,000 milligrams per liter and have a significant quantity.....is that the right words from EPA?

PAUL OSBORNE, EPA: And which contain a significant quantity of groundwater to supply a public water system is what's in our language.

BOARD MEMBER GINGERY: Okay, I think we've pretty well beat that one unless someone else wants to comment. Let's take a lunch break right now.

BOARD MEMBER GINGERY: Gentlemen, both of you gentlemen are Representatives, correct?

DAVID EDWARDS, REPRESENTATIVE HDG: No, he's a Senator and I'm a Representative.

BOARD MEMBER GINGERY: Senator, excuse me. I believe both, or one of you, would like to make a comment before we get started, so go right ahead.

REPRESENTATIVE DAVID EDWARDS: Yes, sir. I certainly appreciate the fact that we've got a respecting environment and we've got to make rules and regulations to do that but I want to keep in mind, and I'd like everybody to keep in mind, what we're really doing here. We're protecting an industry. This organization is the last uranium mine in the United States. Now they do have a mining operation in Nebraska which somehow seems to get by just as well as this one without quite as many rules and regulations that are perhaps as stringent. Why do we need uranium mines? I say it's critical to national defense as well as to power generation. We have 103 nuclear power plants in the United States and that's probably the most efficient generation of electrical power that exists. We also have 12 nuclear powered air craft carriers and those are very important to national defense as well as about 100 submarines that are all nuclear powered. Now I spent a lot of time on carriers in my navy career and the USS Enterprise was one them. That ship has been steaming for 40 years on nuclear power so I think we want to keep these things in perspective. This uranium industry, a major part of which the United States exists right here in Wyoming, we've got to keep them going. I urge you to keep that in mind as you go through these definitions of words. Again, let's respect the environment but let's respect the industry and try to make it as painless as possible to keep that industry viable and working in this state.

BOARD MEMBER GINGERY: Thank you. Senator?

SENATOR JIM ANDERSON: Thank you. I'll make my comments brief. I'm here to speak on behalf of the constituents, the people that live in my district, probably more so than industry although, we're highly supportive of the industry that we have in our county. I would like to simply say that the significance of this industry in our county is certainly big. There are about 80 jobs within the facility itself and about 20 jobs through the drilling operation so it's certainly one if not a fragile industry it's certainly frail. It's frail at a time when I think it's behooves us in Wyoming to do what we can to keep it going as viably as we can. We, in the last session, passed a severance tax exemption for bringing up the price to \$14 and it's not made it there yet. We hope someday that it does make it but certainly I think it's up to us as advocates of the people of the State of Wyoming to do what we can to make our industries as competitive as possible. This is a highly competitive industry even though it's been nurtured in my county. There's one other competitive facility in Nebraska and certainly competitive facilities in Canada. So, I would simply say that I appreciate your position which is somewhat like Solomon and you have to make decisions between the economy and the environment, industry and the environment, but I would hope that as you do that and it's been mentioned today in regards to the relationship between the regulation, statute, and law and if there's anything that we have a responsibility to, that is to provide the laws that we feel it takes

to make a statement and help the economy. I would ask this panel to take a restricted adherence to what the statute is and make sure that we have compliance with the regulations and the law. I would certainly thank you for your time and appreciate what you do. Tough job. Thank you very much.

BOARD MEMBER GINGERY: Thank you very much and thank you for coming today. Any other comments before we get started. Okay, let's see if we can stay awake for the next few hours. Please start.

ROBERTA HOY, LQD: We're on the last definition on which we received comment and I think we can deal with it fairly easily. It has to do Upper Control Limits and it's Section 1(w) in Chapter 11 on page 20 of the draft rules. The comment was that in the definition we had included the term *statistically*. The Upper Control Limits are what are used to determine when something goes on excursion. Because the term is used so frequently in the rules, we took the term out of the guidance document that's existed for many years and went ahead and put it in rule. We had included *statistically* but as WMA pointed out it's not always that statistically and after talking to LQD staff we don't have any issues with taking the word *statistically* out unless you have something Rick.

RICK CHANCELLOR, LQD: No.

ROBERTA HOY, LQD: With that, I believe we're done with the definitions.

Section 2 which begins on page 22 includes all the general requirements. Again, we've set this up very much like the existing Chapter 11 and it's like many of the other rule sections that you start with definitions and then you have general issues. There have been comments on two of these sections and we'll start with Section 2(b) which is also on page 22 of the draft proposed rule.

The comment has to do with the fact that we have included reference not only to the Wyoming groundwater quality standard but also to EPA water quality standards. We did that primarily for one reason. When you have water that's less than 10,000 ppm TDS and meet the other criteria of EPA, you must get an aquifer exemption from EPA to demonstrate that there are mine able resources within that exempted area. However, outside that exempted area EPA's concerns still apply. So, let's say you have an excursion and it extends beyond the exempted area boundary, the concerns would be not only the Wyoming Water Quality standards but the federal ones as well. That's why we included the cross reference to the EPA's Maximum Contaminant Levels which we generally call MCL's.

RICK CHANCELLOR, LQD: They suggested adding perhaps a phrase at the end saying *for areas outside the exempted aquifer* as it applies to the MCL. If I understand the intent of industry's comment, the EPA MCL requirement would apply at the exemption boundary.

DONNA WICHERS, COGEMA: I don't know that it makes any difference but we had suggested putting it in after the citation for 40 CFR 141 as amended July 1, 2001 but I don't think it probably makes any difference.

RICK CHANCELLOR, LQD: I think this may be clearer to show that that part only applies outside the exemption boundary where in your version someone could interpret it to implying to both outside and any place else.

BOARD MEMBER GINGERY: Was that taken care of then?

BOARD MEMBER PROFFITT: Have we heard from EPA?

PAUL OSBORNE, EPA: I think that's fine because migration off site is in fact our primary concern. That more than takes care of it because monitor wells are going to detect anything before an MCL ever gets there.

BOARD MEMBER GINGERY: Out of curiosity, if I'm on the right track here, in this state, we've never had anything reported beyond the monitor wells that would be a threat to the aquifer, have we? We've had a good track record of staying within our designated area, correct?

RICK CHANCELLOR, LQD: We've had excursions at the monitor well ring. We had a number of those. I can't say for certain if they were to the point of threatening MCL's. I don't know that.

DONNA WICHERS, COGEMA: Excuse me Mr. Chairman, when we have an excursion, typically we do analyze a lot of the constituents and, our company as far as I know, has never come close to MCL's. I would guess that's probably the same for Power Resources. We use indicators as upper control limit parameters that are detected very quickly, are very mobile, and we pick those up before anything else is moving out of the zone. So it's an early warning system. When we see that, we can control the operation before it just goes on and on and on.

BOARD MEMBER GINGERY: Some people think this is a huge issue but I think the state and the industry have really worked hard to make sure we have these safe guards. I just kind of wanted that into the record. What I'm trying to say is that it's working. Let's move on.

ROBERTA HOY, LQD: The next section on which we've had comment is Section 2(e) which is on page 23 of the draft proposed rules.

This has to do with the effective date of the proposed rules and I believe the concern if I'm understanding it correctly is that there are some aspects of the existing operation that were not necessarily changing, saying you have to go back and change those. I think the issue of most concern is well construction requirements and we're not saying in there that you have to go back and reconstruct existing wells. I think there's some concern that it would radically change several existing things but that's not necessarily the case. Well construction was what I thought was their primary concern in reading their comments.

BILL KEARNEY, POWER RESOURCES, INC.: That is the primary concern as it's written. One could interpret it to mean you have to come in compliance with all the new requirements and that basically would be impossible to do. So, we would suggest that it be reworked by the division to tell us what parameters they want revised. Is it just the permit itself or stuff in the field? Obviously, we'd have to redo our permits too which is a permit application which is a very big job.

BOARD MEMBER GINGERY: Let's see if I'm following this. I thought when I read that over that this would go into effect when DEQ board accepts and eventually gives the official sign off on it.

ROBERTA HOY, LQD: We're saying that one year from when they're actually signed. That isn't an issue. The issue is how much do they have to go back to existing operations and redo. We're not saying they have to go back and reinstall wells to meet new well construction requirements. That's the big concern.

BOARD MEMBER GINGERY: All they're really asking is everything up to that one year is grand fathered in in a sense.

ROBERTA HOY, LQD: Right. Well, there will be some things that will be grand fathered. I think it's more permitting the standards and things like restoration requirements. Physical buildings and things that are already built and installed and that type of thing don't necessarily change.

DONNA WICHERS, COGEMA: The well construction wells are in and they're cemented in the ground and there's not anything you could do about it. Another example would be like the well covers have to be water tight and I'm assuming this is the boxes on top of the well heads. I could be wrong but something like that when we have 15,000 wells, well over 1,000 wells that have these boxes. They're not water tight. They're not sealed. That means that we would have to go back and do that. There are little things throughout the regs. that could have a large cost impact to us. We don't know which ones apply and which ones don't. That's our concern.

ROBERTA HOY, LQD: I'm wondering if the provision in the last sentence where it says, *the Administrator shall review such evidence and shall advise the operator in writing of such additional information or procedures necessary to satisfy the provisions*, if that would be the place where flexibility would be allowed if the operator says they're changing these things and they submit that and then the Administrator says, "Yes, that's sufficient."

RICK CHANCELLOR, LQD: Can we enhance the discussion in the SOR to give us some examples of the items that we do not intend to be physically reconstructed to give us some guidance along the lines of what Roberta is saying? It probably won't be all inclusive because you can't think of every little thing that may come up but it would give us some guidance as to the types of thing we're looking at.

ROBERTA HOY, LQD: We've had similar provisions in other rules. Almost every rule will say somewhere the effective date is such and such. I don't know that we've ever done any more than something like what you're saying. We haven't tried to spell out in rule each and every instance in which we.....

RICK CHANCELLOR, LQD: If you do it in the rule, you'd probably forget something and cause problems later. Do it in the SOR's with examples, but not inclusive, it gives the train of thought and the direction which it'd take to try to apply this rule.

BOARD MEMBER GAMPETRO: Rick, would it be helpful if you could obtain from the industry representatives a list of the things they're worried about and then you could address those in your listing?

RICK CHANCELLOR, LQD: Yes, I think that would be helpful if the industry could give us some examples like the header houses, the well boxes, the existing wells, and give us a list of what you think of that we could put in here to bolster our discussion.

DONNA WICHERS, COGEMA: Okay. We can do that.

BOARD MEMBER GINGERY: Does everyone feel fairly satisfied with that? Okay, let's move on.

ROBERTA HOY, LQD: The next three sections of the proposed rules, Section 3, 4, and 5 are basically in one or two sections now in the existing rules and essentially breaking them up into logical units. So, Section 3 is the baseline requirement before permitting and in the early stages of permitting, the baseline soils, groundwater, and that type of thing.

Section 4 is the actual mining operation. The rules applicable to mining operations.

Section 5 is applicable to the restoration requirements and reclamation requirements or the wrap up at the end of mining.

That's the structural difference between this and the existing rules. We just broke it up into more logical units. My understanding is that we don't have any comments on Section 3 so we'll go on to Section 4.

DONNA WICHERS, COGEMA: That's correct.

ROBERTA HOY, LQD: Section 4 begins on page 38 of the SOR and includes several subsections and the two that have received comment are in Sections 4(a)(ii) which starts on page 39 and then in 4(a)(xii). Section 4(a)(ii) which starts on the bottom of page 39 discusses the mining schedule. All mining permits are required to have a schedule of some description and we realize that this schedule will change based on economics, contracts, and all that sort of thing. That's why there's all the provisions in the rules to be able to revise the permit. We're trying to be sure that there is some kind of frame work around this with a schedule so we have some idea when they start, what they anticipate, how long they'll be mining, and how long they'll be restoring.

The concern is with 4(a)(D) which is on page 40. That's a new rule section which says the operational parameters that will be used to determine when mining will be considered complete. The reason that we included that while we have schedules in the existing permits is that those schedules have changed significantly over the years. In general well fields are staying in existence much longer than originally anticipated so to help alleviate concerns that you are reclaiming, once you're done with a certain area then you go ahead and restore it. The term of art from coal mining is contemporaneous reclamation. In other words, you backfill as you go along so you don't leave this enormous pit. It doesn't transfer exactly to in situ but there's some frame work for how the decision will be made when a well field goes from production to restoration. Again, it's based on concern that it has been longer than originally anticipated in several of the well fields.

BOARD MEMBER GINGERY: Comments? Yes, go ahead.

BILL KEARNEY, POWER RESOURCES, INC.: I guess our position on that is that probably the greatest determination of what Roberta is talking about when something goes from production to restoration is economics and the market conditions and the facilities that are there at the site. We don't think that LQD should really be privy to that type of information and dictating when mining is complete. We update that in the annual report each year, where these things are at and what we're doing and it's covered by a surety and it's updated every year. I guess this is one item whether there's an EPA requirement for this type of information.

BOARD MEMBER GINGERY: Yes?

MARK MOXLEY, LQD: Just to put this in perspective, in a normal surface mining operation, it's readily apparent when mining is complete. You can see that the mineral is gone. In an in situ mine, it is not apparent at all when mining is complete. We're charged with developing a time schedule that will encourage the earliest possible reclamation consistent with the orderly and economic development of the property. How are we to do that without some criteria from the operator? You just cannot see when that mineral is depleted.

BOARD MEMBER GINGERY: Yes?

BOARD MEMBER GAMPETRO: If the mine becomes economically infeasible, let's say, for a period of a year and the price of uranium goes down and you want to basically kind of lean back for a while and not waste money pumping something that you can't make money on and then a year later the price goes back up and you want to get.....is that what we're talking about here to a certain degree? I mean, that could happen, couldn't it?

BILL KEARNEY, POWER RESOURCES, INC.: Yes.

DONNA WICHERS, COGEMA: Yes, and it does.

BOARD MEMBER GAMPETRO: I can understand those economic considerations. What is the position of DEQ on that? Is that something that's allowed? And if it is, how do you deal with that so that you don't define them as being closed when they don't really don't want to be closed yet and remediate but also so that you don't have a situation where it's forever open so that they don't ever have to remediate. I would think that it has to come down somewhere in between there because I think I can see both sides of this issue. So, how do you deal with that in rules?

MARK MOXLEY, LQD: There are provisions for interim mine stabilization whereby the operator can say, "As of today, this deposit is not economically producible and we want to moth ball it for five years." Those provisions are already in the regulations under interim mine stabilization. What we're asking for here is some help, I guess, from the operator in putting in writing when it is that they will be done mining so that there's an end point so it doesn't just drag on forever. Like I said, we're charged with making sure that they have timely reclamation. Well, how are we to do that if we don't know when the mining is done?

BOARD MEMBER GINGERY: Yes, go ahead.

DONNA WICHERS, COGEMA: I think the answer to that is we update the schedule in the annual report every year and we increase our bond or whatever it is that we need to do. DEQ, at that point, is aware of what our plans are. They have every opportunity at that point to say that they think we've been down in this particular area too long, we want to know what you've going to do. Part (D) is asking for operational parameters that we are going to use to determine when mining is considered complete. When you get into economics we can't always tell by the pumping rate and the lixiviant fluid concentration and groundwater elevations. Those aren't always things that are used to determine when mining is complete. I guess our concern is that once this is in the rules, that someone is going to be looking at this and saying it should be completed because of the groundwater elevation. To us, it just doesn't make sense. We should update the schedule on an annual basis in the annual report. That's what the annual report is for.

BOARD MEMBER GINGERY: When I read this, I took it a little bit differently than where the conversation is going. The proposed time schedule for the mining of each well field.....I took it to mean that you would certainly know when or you probably wouldn't be in the investment business of this even though things can get a little shaky but you pretty well know that you're going to be on that site, just to pick a date, 20 years, but I also agree with you on the annual report where it mentioned that there would be some adjustment but I would find it interesting that I put 20 years and my report comes in and I add a year and maybe the next report I think it has to show some stability to it or you wouldn't be there. I'm sure that you're not out there without really some good facts that this particular site will produce for 20 years or 50 years, whatever it is, and I can't see how that's going to vary too much even though there could be an economic down turn. We know the capability, do we not? We don't know financially what you're going to get but isn't it a little bit more stable in what we're trying to say here?

DONNA WICHERS, COGEMA: As Mark said very accurately, when you're in surface mining you know when you've removed all the ore. Underground, the recovery rates for in situ can vary depending on the area and the hydrologic characteristics and whatnot. So you could get anywhere from 60% recovery to maybe as high as 90% recovery. It just depends on the operation. You go in with a plan that says we're going to achieve 80%. Well, if you're only getting 60%, you end up mining longer. If you get 90%, perhaps you're done quicker. So, there is some variability.

BOARD MEMBER GINGERY: Not to be argumeantive, but when you started mining and you have a permit out there, you had a good idea or you wouldn't have made the investment, that it's going to last for a period of time. I would say there would have to be some pretty big changes maybe in the technology or the finances that we would see a real radical change if you say that particular site will take approximately 20 years, well all of us can't quite see that it'd probably vary 10% one way or another, wouldn't it? I don't see this thing changing that often. Yes sir?

TOM NICHOLSON, COGEMA: We're sitting in a building where that kind of decision is a problem all the time. Oil and gas fields, how long is Salt Creek going to last? It's very similar to that.

ROBERTA HOY, LQD: I think that's what we're driving is the intent of this section is that if the decisions on which they're driving.....how long that well field will remain in production shift over time, that we need to understand that more than just saying that the schedule changes and it now moves out five years, what was the driver? Obviously, we don't need the economics part and we're not asking for that but if there was a change.....let's say when you originally set up you're ion exchange system and your target concentration of uranium was x and your fluid that was being fed in and you changed your exchange media and now you can have a lower concentration or you had some excess capacity so you could just keep running one well field for longer even though you're not necessarily extracting at a very efficient rate but you have that space available. Okay, what is the driver for extending the schedule?

TOM NICHOLSON, COGEMA: I'm curious as to why you even care about the time schedule? What is the driving urgency to know what the time schedule is?

BOARD MEMBER GINGERY: Yes?

MARK MOXLEY, LQD: My concern is not really how long they're in production. If they're in production, that's fine but as I said before, we really have no way of knowing if the pumps are running, I guess we're to assume that we're still producing and in fact those grades are going to drop but there's always still going to be some uranium there. You're going to produce uranium even when you're in restoration. It's different than a regular surface mine. You design your mine around a certain stripping ratio. A certain ratio of overburden to coal or whatever and economic decisions are based on that. It's easy to tell when a pit is finished and they're no longer mining coal. That's when we say, "Okay, if you're done mining coal, you need to reclaim it." Here, we don't know if they're done mining uranium or not unless they tell us that at a certain point they're going to quit. There's just no way to know. If the pumps are running, I guess we can assume they're still producing and they probably are but you could draw that out forever. Like I said, it's our job to make sure that we do get some reclamation at some point in time and we don't just keep running the pumps forever.

BOARD MEMBER GINGERY: Go ahead sir.

GLENN MOONEY, LQD: There is one other party that we need to consider here which is the surface owner. In most cases, uranium, being a claimable mineral, the surface owner is different from the mineral owner. Prior to mining, he often signs a surface owner consent agreement that says that they will mine this property and after reclamation get the property back within a limited number of years. Well, if it keeps dragging out, he'll never know when he gets his property back. There's reason for putting a limit on how long they can operate the property which is not necessarily theirs. They're operating under a damage agreement sometimes with the surface owner.

BOARD MEMBER GINGERY: Are we dealing with any statute or law that says that the producer has to give this type of information?

RICK CHANCELLOR, LQD: Not exactly this type of information. There's a requirement for a schedule of mining and reclamation activities. I think the concern here is that once that well field is mined out that restoration begin. I think that's the basic issue here. As Mark said you can run the pumps and you'll still produce some uranium, it may not be much but you'll still produce. So, the question is when should a well field start being restored to make sure that timely restoration takes place? That's what we're struggling with here is how to ensure that once it's mined out, when do you start restoration?

DONNA WICHERS, COGEMA: Rick, when we're producing uranium, the mineral owner is getting royalties. If it's on state land, the state is getting royalty. The surface owner is getting damage payments. In answer to the Chairman's question, the annual report, statute 35-11-411 says an operator shall file an annual report, blah, blah, blah.....one of the things that we have to supply, the extent to which the mining operations have been carried out, that's part A. Part B - is the progress of all reclamation work. Part C - is the extent to which expectations and predictions made in the original or any previous reports have been fulfilled and any deviation there from including but not limited to the quantity of overburden removed, the quantity of minerals removed and the number acres affected. We do this every year. To me that answers the question.

BOARD MEMBER GAMPETRO: Is it possible that a mine could continue to operate producing very low levels, have people still working there, and it'd be more economical for them to continue to do that than to just close it and remediate? I mean, that's the issue here. If they can't save any money by doing it then why would they do it? Can they save money by just running it with a skeleton crew and not really producing anything? Don't they have a bond also? Is this something that could actually happen that they would just keep running it to avoid remediation?

RICK CHANCELLOR, LQD: It'd cost money to keep running at a low level. It'd probably cost more money to restore, perhaps.

BOARD MEMBER GAMPETRO: So they could save money then?

BOARD MEMBER GINGERY: But is that really the question or not?

BOARD MEMBER GAMPETRO: Whether it's the question or not, it's the issue because if you're not going to save any money by doing it, then you'd be crazy to continue to do it, right?

BOARD MEMBER PROFFITT: Well, I saw it as kind of a due diligence deal where the buyer has a certain amount of time to check on the books and go through the process on a transaction and it'll also allow the seller to get on with his business and this is kind of what DEQ is saying. They want to know when they're going to get on with their business and put this behind them, essentially. So it's kind of a due diligence.

BOARD MEMBER GAMPETRO: I understand, but if you've got people that you're paying salaries and benefits to and if you kept going long enough it could become more expensive than just remediating it if you're not producing anything.

BOARD MEMBER PROFFITT: But that's only one alternative. Maybe it's.....and I think there's a history of this in the mining industry where you make a large amount of money and then you shift all that money into third party accounts and then you say, "Well, we're bankrupt now." If you can catch it early.....

BOARD MEMBER GAMPETRO: That's what the bonds for.

BOARD MEMBER PROFFITT: Well, the bonds don't carry their weight out of the whole thing but if you can stay on top of the end product then you can do it. I guess my question to the industry or both sides, DEQ too, what is it that we can put into the annual report that would pick up on what you're trying to get at here and meet this without putting in a whole new section? It sounds like there's a basis to start with in the annual report. Why can't we just add to the annual report or change the wording in the annual report to make it fit this problem?

RICK CHANCELLOR, LQD: Do you include in the annual report a uranium recovery amount in each well field?

DONNA WICHERS, COGEMA: Rick, we provide pounds produced.

RICK CHANCELLOR, LQD: For the whole mine or for well fields?

DONNA WICHERS, COGEMA: Typically, in our case, we've done it for the whole mine. We could do it for well fields.

RICK CHANCELLOR, LQD: I think by well field, we'd provide information to say that this ? flat lines and you're not getting anything out. We'd then ask the question, then why aren't you restoring? So that could probably solve the issue.

ROBERTA HOY, LQD: I think too what we're asking for here is that when they start so that when we get the annual report that these were the operational parameters that they were thinking about when they started this. This is what their schedule was based on when they started. As we've gotten forward in time, they could say in the annual report, "What we were thinking were going to be the driving forces when we started this have shifted somewhat, here's what the shift is." So you could almost say this would be like the baseline decisions which may change over time.

Another suggestion that might help would be is if in the very last phrase that says that there is a well defined point in time and modify that so that maybe the concern that Donna expressed that we're trying to make the decision of when they switch it off and on, we get away from that and say that we have, and I can't think of a phrase to put in there, but to help describe the schedule or something like that if that makes sense. In other words, to provide a basis for the schedule or something along that line.

RICK CHANCELLOR, LQD: I do think maybe, although in situ is different from other mining operations where it's clear when things are mined out, you take any mineral that's mined, you know, some companies lose money in the mining operations so they give all the parameters you want and if you look at the parameters, they're losing money. They may choose to keep on mining for a variety of reasons that perhaps we should not be concerned about. So, I'm concerned with putting parameters in here is somewhat meaningless because they can lose money mining and it's probably not our business if they loose money mining. Some companies do that. I do think it would be helpful if they have, it doesn't talk about it in the annual report, show the uranium production by well fields so we can track that to see when there's no more uranium coming out and then we can go back and ask the question, "What are you doing here? Why aren't you restoring because you're not getting uranium out of the well field and now it's time to think about something else."

PAUL OSBORNE, EPA: You know, I just have a slightly different perspective on this. Somebody said that EPA's rules don't necessarily address this. While they don't address it per se in so many words, we have a similar concern which we can address that our rules give us authority to basically address in the permit which is the amount of time that wells are shut in, I mean if a whole well field was shut in for over a few years, we would basically have the authority to ask the company to present us with information that shows that you're actually going to use this and if not, we would like you to start working on basically closing these wells because we're concerned about the length of time that these wells have been shut in. While we don't address the situation of the mine per se, we do want to have the authority to basically say, "Has the well field really out lived it's usefulness and shouldn't you be restoring so you can plug and abandon it?" I can't directly address how the language should be worded. I just wanted to express that somewhere we would hope that the Land Quality Division can basically make a determination as to whether they should require a certain well field begin the restoration process.

BOARD MEMBER GINGERY: Any other comments on this? We have a choice to leave it as it is or I think the other point was to change something in the annual report.

BOARD MEMBER PROFFITT:reason like this to change the annual report?

RICK CHANCELLOR, LQD: No, the statute gives us pretty broad flexibility as to what to require in the annual report so we could require that operators give us a well field production and we can determine when a well field is no longer producing and ask the question why aren't you in restoration now?

BOARD MEMBER GINGERY: That would be probably more meaningful even to you.

RICK CHANCELLOR, LQD: I won't mention names but some uranium operators didn't make much money. So economics, operational parameters, grade cut-offs or price of yellow cake is meaningless because they may decide to use money for contractors.

So I assume we go to the Statement of Reasons (SOR) to explain why we took this rule out and mention that the board recognized a better way of doing this would be through the annual report on a well field basis, that way, in case a future operator doesn't want to do that, we say it was a recommendation of the board and have more force behind our request.

BOARD MEMBER PROFFITT: And it's more adaptable to the situation.

DONNA WICHERS, COGEMA: So we're deleting number (D)? Yes? Thank you.

BOARD MEMBER GINGERY: Well, let's move on then.

ROBERTA HOY, LQD: The next one is the very last subsection in Section 4(a)(xxii) which is on page 46 of the draft rules. This comes from bringing over WQ's rules so that the things that are applicable to in situ as much as possible are in one place. Also, there are state engineers provisions that address this same....we didn't include them in the SOR's but there are things in the State Engineers Office (SEO) rules in part 3 of their rules Chapter 4, Section 2(c) and my understanding is that the comment is primarily that there are things in here that are impractical like water tight covers given the type of covering that the wells do have on them.

The other issue has to do the applicability of any of WQ's rules on well construction to in situ. That's probably the bigger issue and we should probably go ahead and address it now because it affects several subsequent sections, primarily Section 6.

In the materials in front of you, there are two more chapters from WQ's rules. One of those is Chapter 9 and the other is Chapter 11. Much of what we took is from WQ's Chapter 11. I have the cross references here. Chapter 11, Part G, Section 61(n) and 62(a). Those in cross reference, WQ's Chapter 9, Section 2(y). The Section 61(n) is on page 141 of Chapter 11 and then the 62(a) is on that same page at the bottom.

When the State of Wyoming received primacy for the underground injection control program, part of the basis for getting primacy were these regulations. That's why you have to go back to Chapter 9, Section 2(y) which is on page 9-3 of WQ's Chapter 9. It says special process discharge is a subsurface discharge for the purposes of and that includes recovering uranium. So despite the title of this chapter which is misleading, it talks about trailer parks and everything else and I can remember being confused when I first came to work, it was like what does this have to do with well construction? Part G is applicable to special process discharge which includes uranium mining.

They were specifically referenced in I think it's a Memorandum of Agreement or I'm sorry, I think it's WQ's application to EPA for primacy. What we're doing is taking those pieces of the WQ Chapter 11 and incorporating them in here. That's where these requirements came from. That's the bigger issue. You'll see quite a bit of this when we get to Section 6 of these rules. There are many things that were transferred from WQ's Chapter 11 and that's why because of this special process.

DONNA WICHERS, COGEMA: I have a general question maybe before Bill responds. If that was part of the primacy back in 1979 or 1980 whenever this happened, why have we never been required to install wells according to Chapter 11?

BOARD MEMBER GINGERY: Anyone have an answer on that?

BILL KEARNEY, POWER RESOURCES, INC.: It should be known that our approved permit application spells out how we're going to construct wells and all that kind of stuff and it's never followed these.

BOARD MEMBER GINGERY: It never referred to Chapter 11?

BILL KEARNEY, POWER RESOURCES, INC.: No.

BOARD MEMBER MUNN: Is the intent here to go back and require this on existing wells?

RICK CHANCELLOR, LQD: No.

RALPH KNODE, POWER RESOURCES, INC.: We put in 200-300 wells a year so we're concerned about what happens from today forward.

BILL KEARNEY, POWER RESOURCES, INC.: We're more than ready to discuss what these new well construction requirements would cost and what it would end up doing to us but I think it would be good to just cover this one on a maintenance first and then like Roberta said we could just jump ahead to Section 6 and take care of this right now because it is a major issue and these are things that are related to Section 6 and Section 4. The requirements in the proposed regs. about a maintenance plan with water tight covers, again, the covers that are on, are injection wells. They're not water tight and for those of you who have been out there those brown or white covers are to protect the surface facilities and are far from water tight. The wells can be marked and clearly seeing - that's not a problem to do that. The area surrounding these wells are kept clear of brush or debris, for the most part we do that, but again it would be a matter of interpretation on how clear that needs to be and then the monitoring of monitoring equipment is appropriately serviced and maintained so that the monitoring requirements in that other section can be met. The bottom line is when we jump ahead here to Section 6, it should become obvious that these well construction and maintenance regulations were not written for ISL mining. That's probably the main reason that the DEQ has never really imposed them for the last 20 years which means they probably didn't apply. We should take the opportunity here now to clean this up and this is just one of those things that's gone on forever where you have Land Quality and Water Quality rules conflicting. If we could move ahead and look at the comments that the Mining Association has on Section 6 on page 4 of our comments that would be appropriate. When you look at that, our other position that we have is that these requirements far exceed anything that EPA has for in situ mining wells and Paul can talk to that.

PAUL OSBORNE, EPA: We would require that you submit a plan for maintenance. I would say that our regs. don't address what's in that plan but we would probably discuss it and say that we think this is what it ought to be. I think that our rule was flexible for looking at what your maintenance plan was and whether or not it would ensure that the operation was protected.

BILL KEARNEY, POWER RESOURCES, INC.: Right. More importantly the EPA regs. don't specify how the wells are to be constructed. That's really the most important part of this.....

PAUL OSBORNE, EPA: Not specifically.

BILL KEARNEY, POWER RESOURCES, INC.: We submit the information for the agency to judge if these well construction procedures are adequate and that's what's been done in Wyoming for over 20 years but now we've gone ahead and specified that you have to have a certain size hole and a certain amount of cement which exceeds what the industry has done and has some very serious cost implications.

BOARD MEMBER GINGERY: Roberta, should we go back to where we left off?

ROBERTA HOY, LQD: Well, in the interest of making progress on these sections, I think I can suggest a fairly straight forward fix for this one because the issue of the well construction, in terms of casing size and drill hole size, is a much larger one. We could say something like the wells are covered and the covers prevent intrusion of surface water, for the maintenance plan. I mean, it isn't so much that they're water tight. I mean the fiber glass covers aren't the issue but the idea is that there is some kind of cover so it's not exposed to the atmosphere whether it's a monitoring well, production well, or injection well. We can modify this fairly easily to get this section dealt with and then I agree that going on to Section 6 is probably a good thing particularly as we have people here who are here for that and cannot be here tomorrow.

RICK CHANCELLOR, LQD: On the water tight seal, just briefly through Chapter 11, are they really talking about just sealing the well itself as opposed to the well house on top?

ROBERTA HOY, LQD: No.

RALPH KNODE, POWER RESOURCES, INC.: That's not what it says.

ROBERTA HOY, LQD: The well house.

RALPH KNODE, POWER RESOURCES, INC.: It covers and recovers our water type. That's not talking about a well seal.

RICK CHANCELLOR, LQD: I was looking here in Chapter 11 to try to find that.

ROBERTA HOY, LQD: In Chapter 11, Section 70(a), it says very much the same thing in the State Engineers regulations but what they're driving at is that you keep anything intrusive from the surface that you don't want in there out of there.

BOARD MEMBER GINGERY: Were you going to use that as an example or actually make a change?

ROBERTA HOY, LQD: I'll try to make a change.

RALPH KNODE, POWER RESOURCES, INC.: What section were you referring to?

ROBERTA HOY, LQD: Chapter 11, Section 4(a) 22.

BOARD MEMBER GINGERY: Yes sir?

MARK TAYLOR, LQD: In the State Engineer regulations where they're talking about a cover, the purpose here reads that all bents and measuring points and other openings on the well shall be constructed as not to allow pollutants into the well. I think that's the type of language we're looking for.

RICK CHANCELLOR, LQD: That would appear to just apply to the well itself, not to the box over the well.

ROBERTA HOY, LQD: That's what is said in Chapter 11, Water Quality's rules and regulations. That's what they're talking about is the well head.

RICK CHANCELLOR, LQD: Just the well itself, not the box covering the well.

DON MCKENZIE, LQD: Well head, water tight.

DONNA WICHERS, COGEMA: Don, what page is that on?

DON MCKENZIE, LQD: I'm looking at page 145, Section 66(a), openings.

ROBERTA HOY, LQD: So if we just borrowed that language: are sufficiently covered to prevent or to protect against entrance of surface waters or foreign matter.

BILL KEARNEY, POWER RESOURCES, INC.: This is an example where these regulations were, in my eyes, obviously written for tech water wells, you know municipal wells are in your house and no one ever and no one ever thought when they wrote these that they were going to be applied to in situ mining. If our production wells or injection wells have a small opening and a mouse goes in it, this water is severely contaminated. So I really think what we need look at when we get into this discussion on well construction in the Water Quality regs. as well as the State Engineer regs., that they were not developed for in situ mining wells. It's for other types of wells. For drinking water wells and things like that.

RICK CHANCELLOR, LQD: But in Chapter 9 of the Water Quality rules they say in situ mining as a special process discharge well.

BILL KEARNEY, POWER RESOURCES, INC.: Right. It's our understanding that this type of stuff that's in the Water Quality regs. is all going to go away once the new in situ regs. are promulgated.

TAPE 2 (July 30th)

BILL KEARNEY, POWER RESOURCES, INC.: I guess Rick is right but the industry has been going for over 25 years and we've never been required to meet these requirements. To be quite honest with you, I probably don't know of any industry that has met these requirements. I bet municipal wells have but I doubt that if somebody goes and drills a water well at your house that they're going to do all the things that these regulations require. That's the bigger issue. I think we have the opportunity here to clean it up and you'll really see where there's some problems in Section 6.

BOARD MEMBER GAMPETRO: What would be the down side if contaminants do get into one of these wells?

MARK MOXLEY, LQD: I think it would be particularly important on a monitor well to seal the top of the well. You don't want dead mice or surface waters entering your monitoring well. The injection and production wells.....I don't know.....there's probably room for some discussion there.

DONNA WICHERS, COGEMA: You know, the injection wells are sealed because we're injecting but the recovery wells typically have a plate on top where the pump is and it's not water tight but the monitor wells, yes, we should do a good job of protecting those.

BOARD MEMBER GINGERY: In the back please.

DON MCKENZIE, LQD: I can't explain the evolution of Chapter 11 of the Water Quality rules and regulations in relation to the in situ mining. I agree with Bill up to a certain point because I feel that a number of standards in this chapter that do apply to all wells, and we can debate that later when we get to Section 6, but the one thing that's not in our Section 6 that's proposed and we haven't talked about yet in Chapter 11 of the Water Quality regs. is that there is an allowance for the Administrator to allow deviations. I don't know if that's what took place with in situ and I don't even want to try to explain that but that is something else to consider even in developing Section 6 because I don't think that's really clear. I think there are other ways to complete wells even in poor in situ mining. Let me talk at some length about that. There may be some flexibility here but we don't have to get down and speed through everything in Chapter 11 because it may not apply.

BOARD MEMBER GAMPETRO: I would just think though that I would feel very uncomfortable at just being at the mercy of whoever the Administrator happens to be. Rick is a very reasonable man but he's also mortal, you know, and so I think if there's a tremendous conflict.....if the real issue is simply on the monitoring wells and not wanting contaminants and that's very understandable then I think we need to deal with that. I think if the definitions are in conflict between LQD and WQD, we have to deal with that. If they're not proper to the situation, let's deal with it.

BOARD MEMBER GINGERY: Yes sir?

GLENN MOONEY, LQD: In my opinion, I don't think it's a good idea to have a water tight well cap because water tight also implies it's gas tight and methane build up is always a hazard with water wells so I think there is a need to have a vent. In fact, with the coal mining monitoring wells we require them to vent them because of the ? skewed by having gas build up. There is a need for a vent system and the cover as well should not be water tight because again it would be air tight and you'd have gas build up.

BOARD MEMBER GINGERY: The covers that I saw seem to be pretty secure but they're not water tight, is that correct?

BILL KEARNEY, POWER RESOURCES, INC.: They're covered by the rain but if you were.....

BOARD MEMBER GINGERY: But you don't have too much trouble with.....

BOARD MEMBER GAMPETRO: They're water resistant?

RALPH KNODE, POWER RESOURCES, INC. (PRI): I believe maybe we're having some confusion amongst the group here of what we're talking about. When I speak of a well cover it would be a larger round or square box, a couple feet in diameter, a couple feet high, that basically sits over the top of the well and the well head protected from weather and animals bumping against it, from freezing, and that type of thing. They're not weather tight, water tight, air tight and I see no reason why they would need to be. The well head which is being referred to in some of these conversations is the top assembly on the casing that's coming out of the ground. That in the water well industry is typically sealed so contaminants cannot go in or out. In our industry, as Donna has mentioned, our production wells would not have a water tight seal but they would be basically close to the environment. Our injection wells would be sealed but they would have vent system as was suggested to allow the build up of gases to escape without building to dangerous pressures that could cause a safety situation. I just wanted to clarify that when you're talking about a well cover, to me that's this larger loose fitting, generally protecting device as opposed to the well head which usually has more protection depending on the application.

BOARD MEMBER GINGERY: I'm glad you clarified that. So Roberta, what are we talking about in this case? Are we talking about the well head or one of the box covers that protects the system?

ROBERTA HOY, LQD: It's a cover. So, I think if you said sufficiently covered to protect against entrance of surface waters or foreign matter that that would cover most.....

RALPH KNODE, POWER RESOURCES, INC. (PRI): I don't really know how you protect in all cases against surface waters. If you have a rain storm, I mean, a gallon of water runs underneath that, is that entrance of a surface water? Probably. Does it effect the integrity of the well? I don't think so.

RICK CHANCELLOR, LQD: I thought we were talking more about the well head being covered.

RALPH KNODE, POWER RESOURCES, INC. (PRI): Now you know why we're confused.

RICK CHANCELLOR, LQD: When I read through the WQ rules I don't see a box being required and I don't know if we require a box down where the well head is covered and not just opened to the atmosphere.

RALPH KNODE, POWER RESOURCES, INC. (PRI): That would make more sense to us.

GLENN MOONEY, LQD: I would suggest that maybe we say that the casing has to be elevated. That would keep out almost all surface water as long as it's not flush with the ground. Well heads, commonly, are elevated 1 to 2'. That's ample protection against almost all surface water unless it's down in the stream channel which is another issue we'll get to later. As long as we have some elevation above the ground surface, surface water hasn't been an issue in my experience.

BOARD MEMBER GINGERY: How does industry see?

RALPH KNODE, POWER RESOURCES, INC. (PRI): That's standard procedure. Our wells would be typically 1 to 2' minimum above ground level.

BOARD MEMBER GINGERY: I'm trying to remember when you had us out there, it seems like they were standing up fairly tall.

ROBERTA HOY, LQD: You still need the cover aspect as well though. I've seen plenty of monitoring wells sticking up 4' above the surface but there's no cap on it which defeats the purpose.

RALPH KNODE, POWER RESOURCES, INC. (PRI): Again, are we confusing a well cover with a well head seal?

ROBERTA HOY, LQD: Well, I think what we're trying to do here is be generic and say you need something.....we can say a well cover has to be this and the well cap has to be this but we're trying to be generic and say the top of the well needs to keep stuff out of the well, basically.

RALPH KNODE, POWER RESOURCES, INC. (PRI): I don't think we have a problem with that concept.

BOARD MEMBER GINGERY: The gentleman in the back?

DON MCKENZIE, LQD: The WQ Chapter 11 does distinguish between a cover and a well opening, Ralph. It's in Section 69, page 148 titled Well Construction, Completion, Development and Evaluation and it's specifically in (b) which says, *the well opening shall be closed with a cover to prevent the introduction of undesirable material into the well and to insure public safety whenever the well is not in use or when maintenance is being performed on the well.* So there is a distinction between the two at least in the WQ regulations.

RALPH KNODE, POWER RESOURCES, INC. (PRI): I guess I'm not sure what the concern is here. Is it to keep animals and foreign matter and surface water out of the casing? In my mind that doesn't require what I call a cover, that requires a proper well head. Maybe my terminology isn't.....

BOARD MEMBER GINGERY: I've come to the conclusion that since it's in Chapter 11 and that's where we started and we're still trying to figure out what to do with it. Is that what we're trying to accomplish is what's in those regs.?

ROBERTA HOY, LQD: Correct.

BOARD MEMBER GINGERY: They seem to be, as far as I can tell, the mining industry is already doing this. So have we set the parameters fairly well for what we're talking about, the cover? Go ahead.

MARK MOXLEY, LQD: I think our concern is not with the cover structure, it's with the cap.

RALPH KNODE, POWER RESOURCES, INC. (PRI): And I would agree with that.

MARK MOXLEY, LQD: We don't really care if you put a box over it or not. What we want to make sure is if the well head is capped. We still see a lot of open monitor wells. It's a concern.

BILL KEARNEY, POWER RESOURCES, INC.: Should we just address monitor wells?

DONNA WICHERS, COGEMA: Can we say monitor wells shall be capped and properly vented?

ROBERTA HOY, LQD: Well, do we want to put that much.....I think we were just trying to write something more generic and say.....

RALPH KNODE, POWER RESOURCES, INC. (PRI): Okay. We took it as you were trying to write something very specific.

MARK MOXLEY, LQD: I don't think we want it to be air tight or water tight. We want to prevent the entrance of foreign material. I'm not sure how to say it.

BOARD MEMBER GINGERY: So, you're saying a cap system that would have the safe guards to prevent any foreign materials entering. If they have to put a vent on it, that's something they do already, I believe.

BOARD MEMBER GAMPETRO: And is it strictly the monitor wells that you're concerned with?

MARK MOXLEY, LQD: I'm not sure. I would hate to exempt these other wells because you might conceivably be monitoring those other wells. I don't know. Is it that big a deal to put a cap on these other wells?

RALPH KNODE, POWER RESOURCES, INC. (PRI): They're typically capped anyway to one degree or another.

MARK MOXLEY, LQD: Right.

DONNA WICHERS, COGEMA: What Roberta has may work.

RALPH KNODE, POWER RESOURCES, INC. (PRI): Conceptually, I agree 100% with what you're saying. I just (voice fades).

BOARD MEMBER MUNN: You do want to definitely get rid of the word water tight out of there because there's a definition on page 141 of Chapter 11 which says, *it's impermeable to water except when under such pressure that structural discontinuity is produced*. I mean, you don't want to seal them like that, I'm sure.

ROBERTA HOY, LQD: Well, if this language will work where it just says wells are sufficiently covered to protect against entrance of undesirable material into the well and to insure public safety whenever the well is not in use or when maintenance is being performed on the well. I'll change the citation. That's basically what Don was reading out of the WQ regulations.

RALPH KNODE, POWER RESOURCES, INC. (PRI): My question would be, how do you perform maintenance on a well when it has to be covered?

BILL KEARNEY, POWER RESOURCES, INC.: You might have a 12-14" well that's a water supply or something and you don't want it open so some kid falls in it. We have 5 1/2" wells.

PAUL OSBORNE, EPA: You know, those public water supply wells that are covered, obviously when they're maintaining them, might have that well open so I don't see that's the problem here for you either because presumably when you're.....

RALPH KNODE, POWER RESOURCES, INC. (PRI): It says wells are sufficiently covered, blah, blah, blah, when maintenance is being performed.

ROBERTA HOY, LQD: No, it's the opposite because it says whenever the well is not in use.

RALPH KNODE, POWER RESOURCES, INC. (PRI): So I'm just reading it backwards is what you're saying.

BOARD MEMBER GINGERY: Yes?

DON MCKENZIE, LQD: I think we're still confusing covers with well heads. We're interested in the well head. That's what I heard Mark say.

BOARD MEMBER GINGERY: I think everyone went to well heads now.

DON MCKENZIE, LQD: And if we're talking about well heads, well heads is construction in Section 6, it's not a maintenance, in my opinion so I think this could go away. Maintenance is the markings and clearing debris within some radius from the well head, in my opinion.

ROBERTA HOY, LQD: I guess it would be to cover the unanticipated conditions. It would be nice to have something generic that says somehow you need to cover the well and then when you get to well construction, then we can talk about the actual.....

BOARD MEMBER GINGERY: So your point here is that we want it covered and we're going to leave the details to industry as how to cover them to meet this criteria?

MARK MOXLEY, LQD: If we just cut it off where we say *to protect against the entrance of undesirable materials into the well.*

RALPH KNODE, POWER RESOURCES, INC. (PRI): That's what we were suggesting.

DONNA WICHERS, COGEMA: Yes, that's fine.

BOARD MEMBER GINGERY: Okay. Now, is everybody happy?

DONNA WICHERS, COGEMA: Yes.

BILL KEARNEY, POWER RESOURCES, INC.: Yes.

RALPH KNODE, POWER RESOURCES, INC. (PRI): Yes.

BOARD MEMBER GINGERY: Let's take a break.

BREAK (tape 2 continued)

BOARD MEMBER GINGERY: Let's get started.

ROBERTA HOY, LQD: We're done with Section 4 so if it's alright with the board we'll skip to Section 6 because it all has to do with well construction and then we'll go back to Section 5.

Their comments are both general and specific. We've addressed the source of why we used Chapter 11 requirements at all. In other words, when you go to look at the definition of special process discharge that that includes in situ mining. The specific comments start in Section 6(b)(i) which is on page 54 of the draft proposed rules. This has to do with location of wells within different types of drainages. Traditionally LQD distinguishes between ephemeral, intermittent, and perennial drainages. A lot of the surface mining regulations that you all dealt with talk about if it's ephemeral you could put a road over it but if it's intermittent, do you have to do certain things? This is the same type of thing. An ephemeral drainage, installing a well is not an issue but when you start getting into intermittent and perennial drainages it does become an issue. We were trying to go through the records and look to see if anybody has any wells intermittent or perennial drainages.

DONNA WICHERS, COGEMA: Yes we do.

ROBERTA HOY, LQD: Okay. Which one?

DONNA WICHERS, COGEMA: Christensen Mine and the Willow Creek Drainage. They were built with pit less adaptors below surface.

BOARD MEMBER GINGERY: If you do have those, did you follow the procedure then that's listed here or what took place?

DONNA WICHERS, COGEMA: This simply says it's prohibited. There is no procedure. These wells were installed in 1987.

BOARD MEMBER GINGERY: Okay. Yes, go ahead while she's looking.

MARION LOOMIS, WMA: Mr. Chairman, I think we need to keep in mind and remember that if we had a surface mine out there, there would be no intermittent drainage, we would take the whole thing out. If you had an alluvial valley and it was a coal mine you wouldn't be mining it but other than that with intermittent drainages, they're gone.

BILL KEARNEY, POWER RESOURCES, INC.: Or perennial.

MARION LOOMIS, WMA: Yeah, or perennial. To say that you can't develop them seems like when you've got an industry that creates much less impact than a surface mine and then to preclude them from putting a well in an intermittent stream when if, like I said, it was a surface mine it would be long gone and we'd have to reclaim it and put it in when we were done and put it back but it'd be gone.

ROBERTA HOY, LQD: The basis for that provision was in part in Chapter 3, Section 2(f)(i) of the Land Quality rules which is on page 3-11. That was part of the concern was that it's talking about topsoil and movement of unconsolidated materials and the stream channels because generally they are, as it was said, they're taken out and then there are provisions we're replacing them. I think what we were looking at is the provisions for protecting those drainages during well installation and that not knowing that there were any that were in the intermittent drainage that we wouldn't have an issue with it. So what we need to do is probably address intermittent. I don't think anybody has any in perennial. What's West Canyon Creek?

MARK MOXLEY, LQD: It's an intermittent stream. We have a definition for an intermittent stream and it says a stream or a part of a stream that is below the local water table for some part of the year. Our concern is putting a well in the channel of that stream that will be under water basically. You're saying you do have wells in that situation right now?

DONNA WICHERS, COGEMA: Uh huh.

MARK MOXLEY, LQD: So, there's flowing water right around the well.

DONNA WICHERS, COGEMA: Very close by.

MARK MOXLEY, LQD: Are you actually in the channel of the stream?

DONNA WICHERS, COGEMA: Yeah.

RALPH KNODE, POWER RESOURCES, INC. (PRI): A few of them are actually in the channel.

DONNA WICHERS, COGEMA: They may not have water on them all the time but at some point.....

BILL KEARNEY, POWER RESOURCES, INC.: When a flood comes through

RALPH KNODE, POWER RESOURCES, INC. (PRI): The stream is dry a fair portion of the time.

BOARD MEMBER GINGERY: If everyone could speak a little louder.

MARK MOXLEY, LQD: We did see at the mine in Nebraska, they have some of those and I think they set like a culvert around them.

RALPH KNODE, POWER RESOURCES, INC. (PRI): They're not in the drainage themselves but they're immediately adjacent in the flood plain.

MARK MOXLEY, LQD: Do we have a provision for that?

GLENN MOONEY, LQD: When I saw this language I objected to it too because drainage to me means the whole valley. I wanted channel to be inserted in there as long as they can keep it out of the channel itself and of course a channel to certain hydrologists can have several meanings like there's a two-year return event channel which is a very small one or you could go all the way up to the 100-year. So, perhaps we could work out some language where they keep it out of the channel except for some rare instances. Industry should be relatively happy with that anyway.

DONNA WICHERS, COGEMA: You know with our well spacing ,we typically could stay out of the channel.

BOARD MEMBER GINGERY: So am I getting any consensus around here that we're really discussing a channel instead of a drainage?

RICK CHANCELLOR, LQD: It goes back to what we did at Irigaray when they put those wells real close to the channel, so we required additional protection of the well head so when the flood event did come it did not wipe out the well. I think with the larger culvert and I can't remember if you submitted those into the bond or what but additional techniques were required.

DONNA WICHERS, COGEMA: Many different techniques. They were quite different.

ROBERTA HOY, LQD: Well, here's some suggested language: if a well must be located in an ephemeral or intermittent drainage, this is getting to Glenn's point about drainage versus channel, steps shall be taken to protect the well from damage due to erosion etc.. Installation of wells in intermittent or perennial channels is prohibited and then we could cross reference the definition of channels if need be.

RICK CHANCELLOR, LQD: Could you also discuss in the Statement of Reasons (SOR) where we talked about the drainage versus channel to make sure it's clear to everybody that we're not talking about the whole drainage area and that we're just talking about the.....

BILL KEARNEY, POWER RESOURCES, INC.: How about the word like live stream channels or active or something?

RICK CHANCELLOR, LQD: Active stream channels?

BILL KEARNEY, POWER RESOURCES, INC.: Yeah, something to define where the water is.

BOARD MEMBER GINGERY: Wouldn't an intermittent stream have a channel that is active part of the year and not the other part of the year?

RICK CHANCELLOR, LQD: I think that's why we need to beef up the SOR's to explain what we mean by active channel to keep out of that part of the channel that's active part of the year.

ROBERTA HOY, LQD: In the coal rules, don't we use the actual term like thalweg when we get into more of the geomorphic terminology?

RICK CHANCELLOR, LQD: I can't remember.

BOARD MEMBER GINGERY: I think we did plus something else. We went over that a couple times and we did change the wording.

RICK CHANCELLOR, LQD: On our road rules.

BOARD MEMBER GINGERY: Yes.

ROBERTA HOY, LQD: So maybe we could borrow some of that language and put that in here.

RICK CHANCELLOR, LQD: See if it fits.

ROBERTA HOY, LQD: Okay.

BILL KEARNEY, POWER RESOURCES, INC.: That's a pretty tough term for us uranium people! Although, I know what it means!

BOARD MEMBER GINGERY: Nod your head if you feel satisfied with the wording. Okay. I think we can move on then.

ROBERTA HOY, LQD: The next comment is in Section 6(h)(iv)(A) and (B) which are on page 62 of the draft proposed rules.

BILL KEARNEY, POWER RESOURCES, INC.: Roberta, in the first paragraph, don't we want to cover 6(c)?

ROBERTA HOY, LQD: Oh, okay, I'm sorry. We'll go to 6(c) which is the next one which begins on page 55 of the draft proposed rules.

I believe the primary concern with this one is the difference between the casing diameter and the drill hole diameter. In the WQ rules, there is a requirement that the drill hole diameter be 4" larger than the casing hole diameter or you wind up with 2" of annular space all the way around the casing, minimum. Existing in situ wells are generally not constructed that way. It's a smaller annular seal. The question was asked earlier why was it allowed to do that. I can't speak to that. It was before my time and it's true it's in the approved permits but we're saying from here forward given some of the concerns about the MIT failure rate, that type of thing, that we need to start going to the more standard larger annular space between casing and drill hole.

BOARD MEMBER GINGERY: Comment?

RALPH KNODE, POWER RESOURCES, INC. (PRI): I would like to have Roberta expand upon the relationship between the MIT failure rate and the size of the annulus between the casing and the ground. I believe that's what you just said.

ROBERTA HOY, LQD: We've never tried to make list of all the reasons for MIT failures. There's several. With some of them it's pretty simple if the surface casing cracks. Some of it is screws in the casing, etc.. The thing is, there's also reasons that we don't know and when you seal a well there's a couple different ways to do it. One way to do it is to fill the actual casing, you're putting cement through the casing and you push it down and it goes out the bottom and up the sides. Another way to do it is to run a turny pipe down between casing and the drill hole wall and pump your cement in and push it up from the bottom. The smaller that annulus is the more difficult it becomes to insure that the irregularity of the drill hole wall doesn't touch the casing. The quality of that seal depends on having cement all the way around. So, the smaller it is, the more difficult it becomes to do it. That's where the concern is.

RALPH KNODE, POWER RESOURCES, INC. (PRI): What does that have to do with MIT failure rate? The MIT test for those that don't know is a pressure test that you test and document the integrity of the casing material. You're not testing the integrity of the annular material.

ROBERTA HOY, LQD: Right.

PAUL OSBORNE, EPA: That's not true.

BOARD MEMBER GINGERY: I think the gentleman in the red here is first.

OSCAR PAULSON, KENNECOTT URANIUM COMPANY: Again, Roberta, you're talking about touching of the casing against the bore hole wall. I mean, that's why you put centralizers in there to keep it centered and keep it properly spaced to begin with.

ROBERTA HOY, LQD: Right, but if you have 100' spacing between centralizers then think about that length of casing. You're right, the MIT is testing the casing but the reason that the casing has become weakened which one of them can be because it doesn't have a good seal whether it wobbles, whether it's got something pushing against it....I mean, that's where part of the concern lies.

RALPH KNODE, POWER RESOURCES, INC. (PRI): Okay, then I'll propose a scenario. If we took 800' of 200 lb. rated well casing material, laid it out here in the street with no support whatsoever and applied 200 lbs. of pressure to that, would there be a leak? I don't care if it's laying down, at an angle or straight up and down. That casing has a rating which that rating is in no way dependent upon any annular material around it.

ROBERTA HOY, LQD: In my experience with well construction, the reason these things fail....I mean, just the handling of it, having it on the truck, sending it down the hole.....

RALPH KNODE, POWER RESOURCES, INC. (PRI): That's why we perform a mechanical integrity test of the casing prior to it being put into operation to demonstrate to you, to me, and to the public, that that well has integrity. The integrity lies in the casing material, in my opinion, not in the annular material.

PAUL OSBORNE, EPA: Can I address this?

BOARD MEMBER GINGERY: Yes.

PAUL OSBORNE, EPA: That's not in fact correct. EPA's MIT requirements are: a) that you have to show that there are no leaks in the casing or tubing and packer if you have that in the well and, b) that there is no possibility of fluid movement adjacent to the casing and that means in the case of uranium mining, normally we would basically require that you run a radioactive tracer or a temperature log or something like that. With the type of casing that you use it's difficult to do that and especially with the shallow nature of the operation. So, the regulations are set up that if you can't run a temperature log because of the construction that basically you'd have to have cementing records that show that the cementing is adequate to prevent migration adjacent to the casing and I think that's where, to me, the importance of.....you know the pressure test isn't going to show that and so the importance of having an adequate annulus so that you get adequate cement all the way around is to ensure that in fact when you're injecting you're not going to have migration adjacent to the casing. So normally you would displace and you would have a cement return. Now we can argue about whether or not the size of the annulus....I mean, you know, I can't prove that the size of the annulus makes a difference but when you have enough of an annulus to get circulation, that's all we're concerned about.

RALPH KNODE, POWER RESOURCES, INC. (PRI): And I would not argue with that concept and we would also be required to provide detailed cementing records and cement return records and I agree that that is what your concern is about to make sure you don't have water migration from one aquifer to another.

PAUL OSBORNE, EPA: Right.

DONNA WICHERS, COGEMA: And we do all have that.

RALPH KNODE, POWER RESOURCES, INC. (PRI): And that's standard practice. Where we're seriously concerned about is as you said, can you demonstrate that having 1" versus 2" is less safe.

PAUL OSBORNE, EPA: Can't.

RALPH KNODE, POWER RESOURCES, INC. (PRI): Okay, but because it makes somebody feel better, you would impose severe economic impacts on the industry?

MARK TAYLOR, LQD: Cementing of wells is what I did for eight years before I came to work for the DEQ and this technology is very exact. You need to have a regulation. You need to have a guideline. Right now there's nothing. Anybody can do anything they want for the annular seal. The thickness of that annular seal is important. There's been a lot of cases where we'll run cement bond logs and they're like acoustic logs and they'll hear the pipe basically. If the pipe is rattling it'll sound like a dinner bell if you put your hand around that and go clap, clap, clap. Okay, the annular space is directly proportioned to that bond. The more annular space we have, the better bond we have.

BILL KEARNEY, POWER RESOURCES, INC.: If I might add, Mark, you probably know this, Highland alone, and at Donna's operation, is on the order of probably 4-6 thousand wells all together and if over the last 20 years those annulus' weren't sealed properly we'd be seeing some type of contamination of the overlying zone. We have monitor wells in the overlying zone and at least at our operation we haven't seen that. There's no instances where we feel that we're getting migration out of the production zone up to an aquifer. I think the history on that's pretty good.

MARK TAYLOR, LQD: But I think there has been those where you're seeing basic excursions out of zones and you attribute them to a geologic nature or an old drill hole or something like that. The other end is the micro annulus behind the pipe or between the formation. You're not going to get an absolute seal so there are micro annulus' back there and these seals have to be there for all time. That annular seal is there for 100, 200, 300.....pick a year. Once that annular seal is set, it's set.

BILL KEARNEY, POWER RESOURCES, INC.: Also, the confining units that we deal with that are just above the sand all pinch in so naturally you have the formation coming in and forming a water tight seal as well as the cement and that's why when we log a hole we have to do it right away because the hole closes up.

MARK TAYLOR, LQD: Again, the natural seal, some of that which you're talking about is the natural leaving but again, that's taking away your annulus and that happens. That natural seal is not an absolute seal versus the cement.

BILL KEARNEY, POWER RESOURCES, INC.: I think on a more generic case, since my name was down on this one to talk about it, in summary we are really concerned that these well construction standards that were taken out of the WQD rules have never been applied to in situ mining. When you look at these it's pretty apparent they were developed for water wells, public water supplies and things like that and the cost associated with this is quite substantial. That's why Ralph is here to go over this cost. I'd like to introduce Ralph to do that now as to what this increase would do.

RALPH KNODE, POWER RESOURCES, INC. (PRI): Mr. Chairman, I have a hand out for the members. We make a statement in the Wyoming Mining Association comments that we anticipate or calculate a 67% increase in the cost of a well installation and I'll maybe just go through that. I have no argument with the concepts that are being discussed and that is you need to have well construction materials that are appropriate for the job. You need to have the annular space filled properly with the right type of material and you have to have records that document that. We think we've been doing that as an industry not only in Wyoming but in other states for 20 or more years. I don't know of any cases that we have seen vertical excursions of mining solutions which has traveled up the annual region and formed an excursion in some higher aquifer. I personally don't know of any and maybe the state has records but I kind of doubt it. If you just want to go through this simple handout, the current practice, and I believe it's the same in Wyoming, both operations or all three operations, the same in Texas and Nebraska, we would drill normally an 8" what we call a 7.875 reamed hole. We would place in that a 5" outside diameter casing, sometimes 5 1/2". In our case, it's all 5" diameter casing so you're getting three additional inches, not four of total annular space, not 4" if you understand what I'm saying. I've listed the cementing costs and materials. I've listed the installation costs which would be the drilling costs, other miscellaneous materials, and that could be from having to dig a larger drill pit to using more bentonite in the system or whatever and then the total cost of a well installed today.

If we went to the required regulations, the next standard size drill bit, it doesn't go just perfectly beyond to get to the 4", so the next standard size drill bit is 9.8". The cement cost not only more than doubles because of the increase of annular space but the requirements also now call for the use of a straight neat cement slurry which when I say neat cement slurry, that's only slurry and water. It doesn't allow the use of bentonite unless there's special permission from the Administrator. Addition of bentonite to cement for well cementing jobs, in my opinion, is very common not only in the mineral industry but in oil and gas industry. So you can see the cement costs triple. The drilling costs increased by \$2,000. Other materials increased and you've basically taken a \$6,000 well and have turned it into a \$10,000 well. Now what additional safety is the general public afforded by charging industry 60-70% more for the installation of on an individual well?

I might add as a final comment, well installation is the single largest component of an ISL mine. That's basically your mine instead of your scrappers and your haul trucks. You're putting wells in to deliver the ore back to your processing facility. You're looking at taking a cost component that probably makes up over 30% of our total costs and then increasing that by 70%. It is just nearly a death blow.

BOARD MEMBER GINGERY: Industry up to this point has kind of set what standard they felt was effective not so much on regulations but.....

RALPH KNODE, POWER RESOURCES, INC. (PRI): I think it's more than that. In our permit applications, we would detail the construction materials, the size of the casing, the size of the drill hole, the properties of the material that fills the annular space. We would detail piping diagrams, well head diagrams, all of that, and we would be held to that standard for the life of the mine. That is reviewed by the State of Wyoming and approved and it's also approved by the Nuclear Regulatory Commission. This, what I call an industry standard, has been reviewed and approved by state and federal regulatory agencies for decades and I am not aware of any problems resulting from the amount of annular material.

BOARD MEMBER GINGERY: Annually, based on those operating in the uranium field, how many wells are we talking about then?

RALPH KNODE, POWER RESOURCES, INC. (PRI): An operation like ours would install close to 300 wells a year, so take 300 x \$4,000.

BOARD MEMBER GINGERY: Yeah, I was trying to get the magnitude of this. Yes?

REPRESENTATIVE DAVID EDWARDS: Mr. Chairman, I'd just like to ask this gentleman a question. Since Canaco does the same thing in Nebraska, are they required to enlarge these holes in Nebraska? The federal regulations are the same in Nebraska as they are here so why are we going to tighten it up if they're not being tightened up in Nebraska?

RALPH KNODE, POWER RESOURCES, INC. (PRI): I can answer your question and that is the well construction techniques used at the Power Resources, Wyoming operations are identical and actually are brought from Nebraska. They're identical.

If I could add one more thing, there were problems inherited by PRI with well integrity. In my opinion, it had nothing to do with the amount of annular material but 3½ years ago we committed to the DEQ to even upgrade our well installation techniques, to add more centralizers because there were none required or none being used anyway at the time and we changed our casing materials, our joint connection techniques and use of centralizers so we feel like we've gone above and beyond already what was required and then now it's going to some whole new proposed level. Like I said, it's economically, if not a death blow, it's extremely close.

REPRESENTATIVE DAVID EDWARDS: But the question was, do you have to drill a bigger hole in Nebraska?

RALPH KNODE, POWER RESOURCES, INC. (PRI): No sir.

REPRESENTATIVE DAVID EDWARDS: So, why are we applying a tougher standard in Wyoming?

BILL KEARNEY, POWER RESOURCES, INC.: I think Paul could probably answer this but it's our understanding on the review of the federal EPA regulations that there's no specific minimum on design and construction standards. You just present the information like Ralph said, like we've always done in our application and then that's reviewed for applicability. Is that correct?

PAUL OSBORNE, EPA: That's correct. It's up to the state. I mean, if the state feels that there is a reason or that there is some concern, the state can certainly apply a standard as long as they can show that there is adequate cementing that takes place that you have returns to the surface that are sufficient to indicate that you've got a good cement job. That doesn't mean you have a good cement job but you've got to go on the best details that you can present.

ROBERTA HOY, LQD: The source of the larger annular space is not just in WQ's rules. If you look at several of the major books on well construction, if you look at EPA guidance documents, what else is on that list?

MARK TAYLOR, LQD: The Army Corp. of Engineers. National Groundwater Association. Every state or federal agency that I've looked at, either their guidelines or regulations specify an annular seal say a minimum of 2".

BILL KEARNEY, POWER RESOURCES, INC.: Mark, wouldn't that usually be like the water wells and stuff that aren't as deep?

MARK TAYLOR, LQD: No. They're dealing with a lot of different type of wells.

BOARD MEMBER GINGERY: Rick, since this seems to be some standard, fairly technical, we could go ahead with it being researched and a professional opinion to be made, can't we? I'm trying to figure out what to do here. I don't think any of us up here can answer what the standard is. Industry is out there putting wells down and they seem to be accomplishing something and then we hear that a number of the federal agencies have strict standards so is there some way we can look, I don't know if we're going to solve this problem today, but can we look into it and leave it that by the time that it goes to Council that they would have that data to deal with?

RICK CHANCELLOR, LQD: We could do that. I think it'd be important to also talk to the WQD since it's their regulation. I think it would be important to get their opinion on this. Also in addition, EPA obviously does not require specific standard so we can get together more information and let the Council decide if we get through our rules tomorrow. If not, we can come back to you with that information.

BOARD MEMBER GINGERY: Okay. My feeling is that it's one of those things. It's someplace out there and I don't know if we have it all together here today. I think everybody agrees that the function has to take place, it's just the details are killing us here. Anyone else have a comment? Larry?

BOARD MEMBER MUNN: There have to be thousands of wells installed and my question would be how many of these have failed? Is there a case history of 1" of seal is insufficient and those wells all fail and 2" always works? You know, what's the case history?

BILL KEARNEY, POWER RESOURCES, INC.: It's just the opposite. If we had failures you'd be seeing fluid in our overlying zones and certainly the mining companies don't want that to happen so if the cementing was inadequate it would've been changed a long time ago. There's really not a record confirming that there's any problem at all because of that. I think that's why we're so concerned with that and the cost. It's kind of like reinventing the wheel here after 25 years.

BOARD MEMBER GINGERY: Yes sir?

MARK TAYLOR, LQD: Robbie, if you could put that slide on mechanical integrity test failures up, I'd like to point something out. A mechanical integrity test does test the casing but what it also tests is the annulus. If you have a leak through your casing, your annular seal should also be a seal. So, if they're both leaking, that fluid is leaking through the casing and it's leaking through the annulus and that is your failure. There's a large number of failures in your industry.

RALPH KNODE, POWER RESOURCES, INC. (PRI): I would agree, there's been a large number of failures and I would also say if you are aware of the situation, it's due to well construction techniques and materials, not to the size of the annular space.

MARK TAYLOR, LQD: It is very people dependent, okay. The whole placement and mixing technique is very people dependent. If we go with this 2", we feel ensured that those mistakes that occur are going to be minimized in the product that we get.

RALPH KNODE, POWER RESOURCES, INC. (PRI): Isn't the annular material porous? Doesn't it allow water to move through it all the time?

MARK TAYLOR, LQD: Well, when you say porous, it is a degree less permeable than the adjacent formation.

BOARD MEMBER PROFFITT: Is this built around a premise that there's irregularities in the drill hole where you would have.....

MARK TAYLOR, LQD: Yes.

BOARD MEMBER PROFFITT: Is there another way to approach this? Can you catch it before the casing is installed through the irregularities? Can you minimize the irregularities or set standards on the irregularities that would catch this problem?

MARK TAYLOR, LQD: They would have to run caliper logs to actually see the size of the hole before they ran the casing into it to get some idea what really is down there. Things happen, like formations that swell and eave, there's things that fall off and lodge, chunks if you will. There's also mud filtrate that as you go through a coarse formation the mud will actually plate off on the walls of the hole and that creates a bad bonding because you've got native drilling mud in there. So, there are a lot of conditioning techniques that can be done. There can be scrapers and reciprocals. There can be surfactive washes to get all this out. All this is very, very costly or you can centralize it more than every 100' like at every collar you'd want to run a centralizer. A centralizer is this bow shaped thing that gives you standoff. The pipe stands off from the wall of the bore hole. That ensures a good sheath all the way up and down that pipe. Then, when all this is said and done, we can run acoustic logs on these wells if they're convinced that their techniques are working. They will show us whether or not we have.....and I've talked about this before.....again, very cautiously, and I'm not sure everybody even wants to know the answers to what is back there behind those pipes but in many, many cases there is very poor cement.

Also, the smaller the annulus, you get into a viscosity they call a rheology of a fluid. As that fluid moves up the outside of the pipe, when it's small, it probably goes into what they call lameter flow and your sealant material actually fingers in and around the pipe leaving a ratty incomplete bond. The larger the annulus, you're in what they call plug flow and it works like a piston in fact. It actually squeegee outs all the mud and the rock chips and stuff so if you keep it in plug flow with a larger annulus, you're going to get a better bond. All this is documented. I've got tons of books, the Halliburton Industry, the Dallas Lumershea, many, many resources that say you want to keep it in plug flow and you want to stay with the largest annulus that you can afford.

RALPH KNODE, POWER RESOURCES, INC. (PRI): That you can afford. That's the key.

MARK TAYLOR, LQD: And, again, that annulus, that's the best environmental protection we have.

RALPH KNODE, POWER RESOURCES, INC. (PRI): I would disagree. The best environmental protection you have is the proper material for the well itself. That's your first line of defense, is the well casing. Only if that well casing fails do you then have to depend upon your annular material.

MARK TAYLOR, LQD: No, because you're going to have co-mingling behind that pipe between the aquifers. Natural co-mingling which we don't even want. Let alone from your industry, if I have different classes of water, I don't want those co-mingling.

RALPH KNODE, POWER RESOURCES, INC. (PRI): Oh, I agree and there's been no history of that that I'm aware of.

BILL KEARNEY, POWER RESOURCES, INC.: The other thing for the folks up front, when we cement these wells, say they're 600-800 feet deep, we do it the first way Roberta said where the cement is put into the top of the well, comes out the bottom of the well, comes up the outside, all the way to the surface so you know that the cement went all the way up. Now there might be little places where it missed or whatever but over 600 or 800 feet, for the most part, that baby is sealed. That cement is coming all the way up until you see it and then it's topped off there so that's how you build a well.

RICK CHANCELLOR, LQD: I have a question for Donna. Do you know your MIT failure rate?

DONNA WICHERS, COGEMA: What it used to be or? No, I don't know the rate exactly Rick. We did have an area in unit 5 that we had several failures but we think that was due to the joint installation. We're not attributing that to a cement bond failure. We're attributing it to the way the well was put together at the joint. All of our failures, we think we can identify under reaming which cuts through the pipe and the cement. I mean, that was a man-made failure problem with a joint.

RICK CHANCELLOR, LQD: The reason for the question, just to be fair and to get a proper perspective, I know PRI historically in the past had few to a lot of failures in the well construction techniques and their joint construction. I was wondering if your operation, being a different company and doing different things, if there's a similar or a substantially different failure rate because of your techniques as opposed to PRI?

DONNA WICHERS, COGEMA: I don't know what their failure rate is. I would say on new wells our failure rate was, what, 3%?

RALPH KNODE, POWER RESOURCES, INC. (PRI): Yeah, maybe.

DONNA WICHERS, COGEMA: About 3% on new wells I think is what we were seeing. I think we had a higher rate of failures on the second test.

RICK CHANCELLOR, LQD: The second five years?

DONNA WICHERS, COGEMA: Yeah, but I can't tell you right off what that rate is but we did similar things throughout. When we went from Irigaray to Christensen, the newer operation, we went with a larger diameter reamed hole with just exactly the same size as his, 7 7/8", and we went with 5" casing that had the splined joints and you screw the casing together and whatnot. We may be talking maybe 1 3/4" of cement rather than 2". I don't know what the difference is.

?: And centralizers every 80'.

DONNA WICHERS, COGEMA: But we can't say that any of our failures are directly due to the cement. I'm just looking at these costs and I'm thankful we're not in production because we would not be if we increased our well development costs by \$4,000 a well. That would put us out of business.

BILL KEARNEY, POWER RESOURCES, INC.: To back up what Ralph said on the failures, Power Resources did a tremendous amount on investigative work on this with down hole cameras so we have a pretty good handle on why the wells broke.

DONNA WICHERS, COGEMA: So did we.

BOARD MEMBER GINGERY: Mark?

MARK MOXLEY, LQD: Ralph, you eluded to the fact that you changed your well casing three years ago. What did you use before and what do you use now?

RALPH KNODE, POWER RESOURCES, INC. (PRI): What had been used prior to my arrival was typically a schedule 40 or a 106 lb. pipe with bell ends that were glued and then screws inserted in there with the thought apparently that that would help hold the joint together. What we found and what you see when you come back five years later, typically those screws have....if they've gone 1mm into the inside of the casing because the coil levels have corroded away and then because you're injection well is under pressure there's a conduit to get out into the annular space. What we committed to the State of Wyoming, in 1999 or early 2000, we committed to not using that technique or those class of materials at all. We went to a certain brand of casing which has a mechanical joint, a spine-groove type joint. We don't put a screw in any piece of casing. We upgraded to either 200 or 250 lb. pipe.

MARK MOXLEY, LQD: So it's like an STR.....

RALPH KNODE, POWER RESOURCES, INC. (PRI): STR 17.

MARK MOXLEY, LQD: What size pipe are you using?

RALPH KNODE, POWER RESOURCES, INC. (PRI): The outside diameter of the pipe, not the bell, is 4.95. Now the bell, we're a few inches off, so it's a little bit bigger.

BOARD MEMBER GINGERY: I believe we need to do a little bit more review. What was your suggestion back to me Rick as to how we'd handle this?

RICK CHANCELLOR, LQD: Well, if we anticipate that we do not get through the whole rule package tomorrow when we close that when we reschedule a continuance of the meeting that we have additional data for you to consider. Maybe some more references that Mark spoke of and possibly information from the operators such as type of failures and the failure rate. Something to allow you to make a better judgement.

BOARD MEMBER GINGERY: And if I was following your conversation we should look at the previous materials that we're using and the new materials that you brought forward.

RALPH KNODE, POWER RESOURCES, INC. (PRI): I would suggest that, when you start seeing failure rates that were demonstrated and I think we can document it, is due to improper selection of casing materials or improper installation of those casing materials which without regulation we've committed to never using those techniques or those materials again because we don't want to see a failed well either. There's absolutely no reason why a mining company would want to see fluids escaping out of their wells into a drinking water source because it's nothing but expensive for us to go and clean that thing.

DONNA WICHERS, COGEMA: I know another reason why our failure rate was lower and that's because if the drilling contractor installed a well and it failed, he paid for it. That was built into our drilling contract. I don't know that other people have that but the driller became very, very careful in the installation of the wells. When you build that into the contract they become very aware.

RALPH KNODE, POWER RESOURCES, INC. (PRI): I might also suggest Rick that if you're going to bring back some additional information, you might contact the Dept. of Environmental Quality in Nebraska because the program that's in use today, the only operating in situ mine in Wyoming, is the exact program, materials, quality assurance program that's been in place over there since the mid 80's and they not only have new well MIT records but five and ten year well MIT records using 7 7/8" holes, 4 1/2" casing normally outside 5" casing, and the materials that were used so at least then you're comparing the techniques and the materials being used today to something that's been used for almost two decades.

BOARD MEMBER GINGERY: Well, it looks like we've got some work to do and maybe we'll follow Rick's suggestion here and that will be an item coming up when the material can be provided to us. Roberta, do you want to move to the next wonderful subject?

ROBERTA HOY, LQD: Now we go to Section 6(h)(iv)(A) and (B) which begins on page 62. I'm not sure that I understand the WMA comment. This section, has to do with requirements for monitoring wells and it says, in determining the number, location, frequency of monitoring and it lists some of the criteria that go into selection of monitoring well locations and sampling frequencies. Apparently (A) and (B) which have to do with groundwater quality and proximity of injection operations to points of withdrawal are of concern but I'll have to let you all describe it.

BILL KEARNEY, POWER RESOURCES, INC.: It's too bad Donna left because I think this is one of her comments. I think the concern here Roberta is that the federal requirements probably refer to a population relying on a USDW when the proposed regulations talk about any of the WQ classifications in Chapter 8. I think that's the issue.

ROBERTA HOY, LQD: If that is the concern, the WQ regulations are very clear that they are concerned about not only existing but potential use of the groundwater in part because of the rural nature of the state. That's why we didn't go strictly with the EPA which, also, if you look at the congressional record, when the UIC program was established there is also significant reference in there to both existing and potential uses.

BOARD MEMBER GINGERY: We're waiting on you. They told me you were the expert on this.

DONNA WICHERS, COGEMA: I think the basis of our comment here was comparing the state regulations with EPA and this goes back to the discussion we had earlier this morning. The difference between a USDW for EPA is a public water supply and the state USW (underground source of water) which is all zones, any water bearing zone. We're saying that for EPA the

population relying on the USDW affected or potentially affected by the ejection operation, the population of people. Number 2, the proximity of the injection operation to points of withdrawal of drinking water. So that is the EPA requirement whereas we were saying under that state proposal that it's the same, the uses of any aquifer affected or potentially affected. This goes back to the previous comment that we had this morning on the differences between USW and USDW for drinking water.

BOARD MEMBER GINGERY: Do you see that a conflict with your agency?

PAUL OSBORNE, EPA: Not at all. As we discussed previously, when primacy was granted there was considered that we didn't want to disrupt the State of Wyoming's water quality classification system which can be more protective and there's nothing in our rules that say that the state cannot be more stringent than the EPA rules especially when it comes to the groundwater classification system. We don't see it as a conflict. It's certainly not a conflict for us for the state to be more stringent in this area. As I said there was a general agreement when we wrote the Memorandum of Agreement and the various documents that went into the primacy package. It was that we weren't going to do anything to disrupt the water quality classification system that had already been established by DEQ.

DONNA WICHERS, COGEMA: That's the whole basis of our comment is that we're making these regulations consistent with EPA to make sure we retain primacy, yet, we're making these more stringent. Again, that's sort of a basis of our over all general comments this morning. Do we really need to be more stringent? That was our comment in this regard.

ROBERTA HOY, LQD: They're not more stringent than what already exists. I mean, we're already taking these factors into account because we're using the WQ regs. as their classification system which is the basis including the protection of both known and potential uses. We're trying to incorporate elements of WQ rules that we need to help clarify these in here.

PAUL OSBORNE, EPA: To me, as I envision it, you're merely codifying what I guess we felt you, the state, was doing with the existing WQ classification system when they would look at the monitoring wells and decide whether or not the numbering of monitoring wells proposed by the applicant, the company, was consistent with that being necessary to protect to the level of the classification system. So, I just see it as a means of codifying what I believe to be already being done by the staff of the Land Quality Division in concert with the Water Quality people. I don't see it as a real conflict. I just see it as merely putting the language in the regulations that I think we thought was already coming from the WQ side in their chapter.

RICK CHANCELLOR, LQD: We are not applying new standards here. The Water Quality regs. have been this way for decades and they've been applied this way since the conception of the program so it's not like we're applying new, stricter WQ standards on these monitor wells, it's been there all the time. We're not applying a new standard to this area it's just that WQ has always been more, I guess, stringent in their water classification than EPA and it's always been done this way so I would hate to undo what Water Quality has been doing for a couple of decades.

DONNA WICHERS, COGEMA: I don't know that we're asking you to do that. I think we're just reminding you that this is another instance where, again, the regulations are more stringent than EPA.

RICK CHANCELLOR, LQD: And this should be noted that this is an area that the State has chosen historically to be more protective of the groundwater than EPA has been, so I think it should be noted but it doesn't change how we've been doing things in the past for the future.

BOARD MEMBER GINGERY: Would that be really adverse to industry if you've really been doing all of this already other than in the wording and I accept your statement but how on the ground is it really going to be anything different than what you're doing right now?

DONNA WICHERS, COGEMA: For this particular item, I would say no.

BOARD MEMBER GINGERY: We don't want to get ourselves into doing something devastating to either the environment or to the industry when it isn't necessary.

RICK CHANCELLOR, LQD: Do we need to beef up our discussion in the SOR explaining the difference between more so what we have here and the difference between EPA's and the State's historical classification?

BOARD MEMBER GINGERY: Yes, we need to clarify the positions that have come forward here between the state and certainly the view point of the industry. I don't think we're that far apart. I think it's more the philosophy of where you're going this time and next time.

DONNA WICHERS, COGEMA: I think for us it's more and more of these regulations are more stringent. As Ralph whispered to me, the more nicks you get you bleed to death! We were just, I guess, making a statement on that particular one.

BOARD MEMBER GINGERY: Jim, what do you see in this?

BOARD MEMBER GAMPETRO: Just what I said before, if you look at population, we don't have as many people. The federal regulation is based on population. If we did that we probably wouldn't have a regulation. In terms of water, we have a lot less water. It's understandable to me that the state might be a little bit more stringent on protecting what little we have.

BOARD MEMBER PROFFITT: Yes. That was well said. I was going to say almost the same thing. This seems particularly important to me to stick with the standard that's been established already.

BOARD MEMBER GINGERY: Larry, we're not bouncing off the wall on this are we?

BOARD MEMBER MUNN: No, no. I see some interesting contrast when we're pumping water in the Powder River Basin, at a large rate, some of which is less than 500 ppm solids that were going as far to protect 1,000 ppm of water but that's probably another issue.

BOARD MEMBER GINGERY: Okay, let's move on.

ROBERTA HOY, LQD: With that, I believe were done with Section 6. So at this point we would go back to Section 5(a)(ii) which starts on page 48 of the draft proposed rules.

This has to do with the restoration requirements for restoration of groundwater quality after mining. Again, this goes back to what we were discussing this morning with the existing classification system. The definition of groundwater restoration is in statute and it includes returning it to a use equal to or better than the uses that existed prior to mining. Those uses have traditionally been

defined using the Water Quality Division's classification system which are Class I, II, III, and IV(A) and (B). This reflects the reliance on that classification system. The other thing that it also reflects in the existing rules was that there was a two-part approach that what you started with, you strived for going to background. So you've have a certain background water quality for chloride, uranium, selenium, etc. which was your primary focus. However, you at least had to get back to Class of Use but that was the standard. That's the way it's been written for a long time. This reflects that. First it says the goal is to get to background presuming that background is probably better than the class of use. Then it says the standard is Class of Use.

RICK CHANCELLOR, LQD: The language taken here is also almost identical to the language that the joint LQD and WQD boards approved in 2001. In that statement of clarifying the restoration requirements for in situ, the two boards decided to retain language that talked about a goal, not a standard, of using BPT (best practicable technology) to get as close to back ground as BPT allows. They clearly stated the standard was Class of Use. We feel this is in concert with the statute because the statute says Class of Use or better so they envisioned that you could get a little cleaner than Class of Use. That's why it's worded that way to state there's a goal that's getting close to what it was before but clearly the standard is the Class of Use.

BOARD MEMBER GINGERY: And the concern?

DONNA WICHERS, COGEMA: What I would like to read to you is the statute, the wording of the law. Groundwater restoration means the condition achieved when the quality of all groundwater affected by the injection of recovery fluids is returned to a quality of use equal to or better than and consistent with the uses for which the water was suitable prior to the operation by employing the best practicable technology. There is no mention of return to background. There's no mention of using BPT to go to background. It is a use based standard and that was the intent that the legislature had when they passed this law back in 1979. I agree with Rick to a certain extent, this has been a controversy since 1979 because in 1980 the Land Quality Division and Water Quality Division promulgated rules that incorporated this new concept of background where the law said use. Since that point, this has been a controversy between industry and the DEQ. In very recent years, we've had several initiatives to correct this situation. First, as Rick stated, the joint WQD & LQD advisory boards approved a new restoration policy that recognized that the standard is Class of Use in November 2001. You were reviewing the existing regulations and the goal of background was in the regulations so you incorporated that into your policy. We were not happy with that but we were happy with the fact that you recognized that use is the standard. This is an opportunity for us to clean up the rules. Furthermore, in October 2002, the WQD advisory board met and approved the deletion of restoration to background in their Chapter 8. After that the Environmental Quality Council (EQC) approved those changes in January 2003. However, the regulations were not signed by Governor which was due to an apparent deficiency in some public comments that were not addressed properly but it is WMA's understanding that the WQD will bring these same regulations before the Council again, hopefully in October along with this rule package. I guess what we're recommending is some new language and we have given that to you in our comment and what we're saying is to strike the language *the condition and quality of all affected groundwater will be returned to background or better*, which DEQ has done and put in *using best practicable technology*. Strike the *goal is to return the*. The way it would read is, *Using Best Practicable Technology, the affected groundwater in the production zone will be returned to a quality of use equal to or better than, and consistent with the uses for which the water was suitable prior to the operation*. That's the language of the statute and that's what we believe needs to be in the rules. Our recommendation is that we strike the background language and leave it at the statute language.

BOARD MEMBER GINGERY: Rick, when we came out of that joint meeting I thought we were in the bounds of the statutes and we were just trying to clarify it, was it not?

RICK CHANCELLOR, LQD: I think the issue comes down to when the statute talks about *equal to or better*. What does *or better* mean? The question is how do you capture that in rule? I can't argue with this because it's pretty much verbatim out of the statute so my challenge then to you would be how do we incorporate what is meant by *or better*?

DONNA WICHERS, COGEMA: Because it is a use based standard. I would say that it means a better use. We could be.....the water quality.....looking at the ambient quality maybe is a Class III and maybe you go to a Class I or something like that but I think the key is that we're always Class V so perhaps you return the water to something better than that but I think it is a use based standard.

PAUL OSBORNE, EPA: You're not always a Class V because you're gonna go back to say a Class III or a Class II, right?

DONNA WICHERS, COGEMA: In our opinion we are always Class V because it is an exempted aquifer and it is always an exempted aquifer.

PAUL OSBORNE, EPA: Not in the face of the system that's embodied by the State of Wyoming's groundwater use. The primacy agreement was that the restoration would be required and that you would return it to the Class of Use.

DONNA WICHERS, COGEMA: Which is Class V.

PAUL OSBORNE, EPA: No, it's the existing class of use.

DONNA WICHERS, COGEMA: When you look at the classification system, our water can be nothing but Class V because it is mineral/commercial. That's what it is.

ROBERTA HOY, LQD: The difficulty is, and this goes back to what we were talking about this morning, the classification system. Class IV is anything less than 10,000 ppm TDS. There is no other restriction on it. Usually the water is classified parameter by parameter so you could have a chloride that's Class I, a sodium that's Class II but then everything else is going to fall in the Class III standards. It becomes Class III if the least common denominator, if you will, that drives the classification. That's in part where background comes from. In other words, the chloride, if you go by the classification scheme, had a better use. The thing is, with all the changes that have been tried, address the WQ rules up to now, like the joint board meeting, the policy was the radium treat ability. That was the prime goal that WQ has the ability to say if you can treat this parameter you can set a higher number for it that was 100 for radium. The decision was that it's not necessarily a good idea to have that treat ability limit for radium so let's take that out. The thing about the changes that have been proposed for the WQ rules is they don't address all the sections that need to be changed to deal with these other criteria because Class IV has it's own restoration requirement. I think it's in WQ's Chapter 8, Section 4(d)(vii)(E) and (F) which talks about if it's a Class IV water, which again, is anything less than 10,000 ppm TDS. It doesn't say anything else about what it can be used for. You have certain restoration requirements. Radiological parameters must go to background or MCL's, so it ties into the EPA. Again, because of our reliance on this classification scheme, there are certain things that need to be dealt with that haven't been changed yet because even Class V as it's written now in Section 4(d)(viii) says you will restore the groundwater to uses, I've forgotten exactly how

it states it, but the thing is it includes all the uses for which it was suitable before and again that may only be Class IV(A) because it's less than 10,000. Those haven't gone away. They'll still exist and therefore to change what our target is, because the other target still exists, and Paul is right, when we applied for primacy, it specifically talks about these other classifications. It says Class V comes into being at the time that the permit is issued. Again, Class V carries restoration requirements with it in the rules as they stand now. Unfortunately, it's very convoluted.

DONNA WICHERS, COGEMA: But it's my impression that Class IV cannot apply to our operation because a discharge into an aquifer with Class IV(A) or (B) groundwater shall not result in radioactivity concentrations or amounts which exceed the standards for Class I through III and Special (A) or in concentrations or amounts which exceed background concentrations of the underground water, whichever is greater. This is a uranium ore body. It is radioactive. When we mine it, we are going to have uranium, radium, radon gas levels that are above background because that's what we do. So, it was my impression that we had perhaps discussed this amongst ourselves and that Class IV really can't apply to a uranium ISL ore body. Class V is the designation that applies because Class V says that it is mineral/commercial. It's found closely associated with commercial deposits of minerals. So that's our water.

PAUL OSBORNE, EPA: You know, as we discussed this during the primacy negotiations, I guess you could call them that, the DEQ basically committed in their program descriptions to all and EPA Class III commercial injection activities will not be allowed if the aquifer cannot be returned to at least the potential premining use of the water and that was that they would designate it as whatever the use was II or III and then for the purpose of mining they would classify it for the purpose of mining as Class V and then it would be returned to the premining use.

BILL KEARNEY, POWER RESOURCES, INC.: Does any other state do anything like this?

PAUL OSBORNE, EPA: The other states don't have quite this type of use system that we're dealing with that I know of. I can't speak for Nebraska but I don't believe.....

DONNA WICHERS, COGEMA: I don't know what went on between the state and EPA during the primacy discussions but reading this out of Chapter 8, we shouldn't be mining and restoring because we cannot meet the Class IV designation and we can't meet Class I, II, or III because of the inherent radium, radon gas, uranium concentrations in the background water. This is a uranium ore body. It is mineral/commercial.

ROBERTA HOY, LQD: There's two issues. One is that unfortunately *mineral* is not defined in the WQ regulations. Coal is a mineral but no one has suggested that the groundwater in the coal aquifer be.....simply because by virtue of it being in the coal aquifer is Class V. When you have your backfill recharging, what it must return to is what it was before which is generally Class III, Livestock and that's the concern that when we're reviewing the permits and when we start getting backfill WQ data, that it is at least trending if not already there towards Class III. Mineral is a sand and gravel so there's a practicality issue as well because they haven't ever gone beyond to try to better and provide an interpretation of what they mean by mineral.

RICK CHANCELLOR, LQD: Let me ask a question of maybe both operators. PRI has done restoration in Wellfield A and COGEMA has done almost both Irigaray and Christensen Ranch. From what we've seen on the restoration efforts, we are satisfied that BPT has been applied in a general sense that's on old data but I think we probably feel that you applied BPT and most likely

the state will sign off on the restoration efforts. Do you feel if going the route you want to go, would you change anything in your restoration efforts or would you say, "Well, I don't have to restore as much as I did before?" The reason I ask the question is because I think what you've done to date, the state is fairly satisfied that you have met what we feel the requirements are to use BPT to restore to groundwater regardless of classes and all that stuff. We feel you've used BPT. Would you say you don't have to do what you did in the past because now you don't use that standard or is your goal the same to do what you've done today to get signed off of restoration?

BILL KEARNEY, POWER RESOURCES, INC.: There's a major compounding thing that I heard today and that is that we haven't talked about the aquifer exemption area yet. If the aquifer exemption area stays in the monitor well ring and we have to meet MCL's, that's a whole new dimension that we've never discussed before and that's a real big deal.

DONNA WICHERS, COGEMA: That means we'll probably have to do more than what we're doing.

RALPH KNODE, POWER RESOURCES, INC. (PRI): With that significant caveat aside, the answer to your question is I think we would be prepared to do the exact same amount of work that we've done in the past. We're not sitting back here thinking if we could just get the state to agree to this we don't have to do anymore restoration or we only have to do half as much restoration. That's not our point. Our point is that the statute says class of use. We think we bring it back to class of use and it should be approved.

DONNA WICHERS, COGEMA: The problem is in our permit because it was in the regulations and we were required to have it in our permit, we have to attempt to go to background. Well, we can get to a certain point maybe with eight to ten pore volumes that things are looking pretty good but to continue to attempt to get to background, I mean, we spend a lot of money and we pump a lot of water and we have results but for the amount of work that we're doing we're not improving that ground water quality.

RALPH KNODE, POWER RESOURCES, INC. (PRI): In fact we're wasting that states resources after some point in time. One more thing for the board that I think needs to be remembered at least in my opinion, we'll spend a huge amount of time and money attempting to restore that aquifer back to class of use. When we finish, that water will still be unfit for human consumption because of the inherent radium and radon levels that are there so if we're trying to take some mineral down to here, when we're leaving the radium where it was right here, the whole concept is a little hard to swallow. The answer to your initial question, would we change our restoration procedures, I think no, we would be prepared to do substantially the same amount of restoration.

RICK CHANCELLOR, LQD: So the challenge to us here is to find some way to get the same end result we got today but to give comfort to both parties. I think the end result that you've achieved that we've looked at, we feel you've done what you should do and so the challenge is to find some way to put that into words. I'm not sure what you provided here really does that for me, necessarily. I know that what we put here does not give you comfort either because it goes too far. I don't know if what you gave here is enough clarity that you'll do the same thing you did so far.

DONNA WICHERS, COGEMA: It's what's in the law.

ROBERTA HOY, LQD: As an example, in (C), what we tried to do is better define things so that when we say best practicable technology, these are some of the things that we're looking at to further refine that concept. So we're trying to provide clarification of what they've done so far that we can

say, yes, they've made it to BPT. Okay, how do you decide that? Well, these are the parameters that would go into that decision on our part.

MARK MOXLEY, LQD: The statute clearly requires that the operator has to employ best practicable technology to clean up that aquifer as best he can. I speak from first hand experience because I was in charge of the Bison Basin Groundwater Restoration and I think the key is to define in your permit what the best practicable technology is. How many pore volumes are you going to treat? I mean, spell it out.

DONNA WICHERS, COGEMA: We do that.

MARK MOXLEY, LQD: It should be a never ending process as diminishing returns. I think if you just spell out exactly what that means for your operation.

DONNA WICHERS, COGEMA: But Mark, we have done that and then we get into arguments on looking at the statistics of the baseline to see whether we've met that number or not. No matter how many pore volumes we do, we always do the required number unless it's obvious, but it's after we've done more than what's in our permit that we get into these discussions about the variability of background whether it's met use or whatever.

MARK MOXLEY, LQD: I think when you define in your permit what the best practicable technology is, it's a double edged sword. We found out at Bison Basin, the reclamation plan said six pore volumes and by gosh that's what we had to live with. We couldn't go beyond that.

DONNA WICHERS, COGEMA: Beyond?

MARK MOXLEY, LQD: We wanted to do more. We would've done more but the surety and the other responsible party would not support that so we were stuck.

RICK CHANCELLOR, LQD: A little bit of background information: Bison Basin was an in situ operation that we forfeited the bond on so we did the restoration ourselves. That's what Mark is talking about first hand experience that we forfeited the bond and we did the restoration and I guess what Mark is saying is the surety company said the permit says six pore volumes, don't do any more.

MARK MOXLEY, LQD: Right.

DONNA WICHERS, COGEMA: Well, we're through at Christensen Ranch!

BOARD MEMBER MUNN: Can I ask a question on the clarification on the Class of Use? I've been reading through the definitions again and it looks to me like if there's enough radioactivity there that you're going to want to mine it and it is Class V and you don't have to apply to have it being labeled Class V, it meets their definition of Class V water at the start, right? I mean, it's radioactive.

DONNA WICHERS, COGEMA: That's what we think.

ROBERTA HOY, LQD: That's not how it's been implemented.

PAUL OSBORNE, EPA: As I understand it, the way it was explained when we had our agreement, it was that the zone to be exempted by us had to be shown to be commercially produce able. Not just have high radium or high uranium but commercially produce able which is a whole different idea and that the state was going to go in and figure out what area it was that they would make their Class V classification and match the area that was produce able, commercial.

RICK CHANCELLOR, LQD: So the Class V designation does not come until we issue a permit saying it's mineable.

BOARD MEMBER MUNN: But if it has the radioactivity it won't be in Class I because Class I can't have above these limits that are put here. So, if it's not in Class II because again it has the same limits and it's not in Class III then you only have a couple buckets left. One of them is Class IV and the other one is Class V.

BILL KEARNEY, POWER RESOURCES, INC.: Don't forget Class VI.

BOARD MEMBER MUNN: You're down at one of these levels and if you have to come back to the same use then it would be that same class, right?

DONNA WICHERS, COGEMA: Which we say is Class V.

BOARD MEMBER MUNN: According to the statute. No mention of background. You're going back to the Class of Use.

DONNA WICHERS, COGEMA: Right.

ROBERTA HOY, LQD: Again, we're delving into a area where it's WQD's authority and how they implement and how they interpret that our authority is limited.

BOARD MEMBER MUNN: Yeah, but I'm reading their book here. Their definition says it can't be Class I because it's too radioactive, that's a toxic substance. Class I, II, or III, or Special A shall not contain biological, hazardous, toxic or potentially toxic materials or substances in concentration or amounts that exceed and then they give the table and there's a statement of radioactivity numbers.

PAUL OSBORNE, EPA: One of the things as it was explained to us that they were looking at was treat ability because obviously you can't drink 3,000 TDS water straight out of the tap but yet people take 3,000 TDS water and make it drinkable. So, that's the whole idea behind the concept of future USDW's is to provide some avenue for treat ability now or treat ability in the future to get certain constituents that are a problem out of the water and so the idea originally was that DEQ felt that some of these constituents were treatable and that they would take those into account when they basically classified the existing use of the water. Now we can apparently argue about what that treat ability level is and the cost and stuff like that and at any rate, that's the issue.

BOARD MEMBER MUNN: Does the process degrade the water and other parameters? You're taking the radioactivity out so I think that would be fine. Does it degrade it in other ways?

BILL KEARNEY, POWER RESOURCES, INC.: Yes.

BOARD MEMBER MUNN: And does it degrade it irretrievably?

PAUL OSBORNE, EPA: No.

ROBERTA HOY, LQD: No.

BOARD MEMBER MUNN: You could treat that if someone wanted to go there and drill that and treat it, they still could treat it. So then you haven't changed the class of use I would say.

ROBERTA HOY, LQD: The way it's been implemented to date is when the baseline information is submitted, it gets shipped upstairs, if you will, we're on the 3rd floor and WQ is on the 4th floor. We take the baseline water quality data and we send it upstairs and we ask them to classify it. It comes back down and it's Class I, II, III, or IV with the proviso that these areas, and it delineates well fields once the permit is issued, will become Class V. Class V has not been treated as an exclusive classification to date. Again, this is delving into a different divisions authority and policies which is beyond what.....I mean, we've always relied on this classification system.

BOARD MEMBER GAMPETRO: Let me ask you a question. If it's Class IV water and it's now classified as Class V in a certain area because it's going to be mined, when we say it has to be returned to it's previous use, does it have to go back to IV?

ROBERTA HOY, LQD: Right.

BOARD MEMBER GAMPETRO: Well I don't see the problem either then. If it's III when it goes upstairs and it's classified as Class III and then they say but this area is going to get a Class V because it's going to be mined, they then have to return it to Class III, right?

ROBERTA HOY, LQD: Right.

BOARD MEMBER GAMPETRO: I still don't understand the problem.

BILL KEARNEY, POWER RESOURCES, INC.: Let me make a couple of points on that.

I worked at DEQ a long time ago. I think the reason it's in Class IV is by default. It doesn't fit into I, II, or III so they say it's Class IV and there's no parameters in there but like Larry pointed out, it can't really be Class IV because it's full of radioactivity anyway.

Paul brought up the issue of treat ability and that was an issue that we got resolved last year in the joint policy. Number one: you don't want people treating this water and taking the radium and stuff out because then you have some treatment system that's going to collect radium and be a gamma source. Secondly, logic would say, if you could treat any water in Wyoming, why do you have this horrendous Chapter 8 of WQ rules and regulations that sets these different classes when you could say we could treat everything to drinking water. It doesn't make any sense. That's some of the logic that was used to get rid of this treat ability thing. If you can treat everything you know with economics, a consideration is you've got to protect everything to drinking water. So, that's some of the logic that was used.

BOARD MEMBER GAMPETRO: Rick, why do we want this baseline in there? What does it do for us?

RICK CHANCELLOR, LQD: As far as going back to the goal of background?

BOARD MEMBER GAMPETRO: Background, I'm sorry.

RICK CHANCELLOR, LQD: The original intent of that language in the current regulations I think goes back to the part of the statute that says *Class of Use or better* and trying to define what that better involved. To the policy statement we try to reassure people that going to background is just a goal. The standard clearly was Class of Use but the statute clearly also means that if you clean up the water better than Class of Use, it says *or better* so that's in there. I think what the discussion is getting off track on, we're getting bogged down into Class of Use and maybe not zeroing in on best practicable technology (BPT) and what that means. To me it means you clean it up until the diminishing returns and you then stop. You don't stop necessarily at premining class of use because it can be easily cleaned up to be better than what you mined and left it as. If the mines feel that in their interpretation of how it should be done, they still do the same type of restoration and get to the same point they are today and if we feel using our interpretation of the rules that you get to the same point you are today, then maybe we should try to work some language to get to that point and not get hung up on Class of Use because WQ is considering maybe changing that and we could talk about that all day and it may be mute because they may go to the board meeting or the Council and change that whole system. I would advise looking more at using best BPT and what that really means to assure that we get to the same point that we are at today.

BOARD MEMBER GAMPETRO: Could that be the language to go to the best practicable technology to the point of diminishing returns and use that as your intent?

RICK CHANCELLOR, LQD: I think (B) on page 49 spells out the concepts to be applied of how do we determine if they applied BPT? I don't know if we need to beef that up to say BPT may be cleaner than premine Class of Use. Applying BPT may result in something cleaner than premine Class of Use?

DONNA WICHERS, COGEMA: Yes.

RICK CHANCELLOR, LQD: And then put that in that section perhaps.

BOARD MEMBER MUNN: Well your statute allows for that now. The *or better*, that's like saying you can pay \$10 for this movie ticket or you can give me \$20 if you want to. Many people aren't going to give \$20 unless that's all they have and you don't have change and they want to go bad. I mean, you might clean water up, you might take things out and end up with better water and that's fine. I think the intent was not to penalize somebody for ending up with Class III water instead of a Class IV that they started with.

RICK CHANCELLOR, LQD: Correct.

DONNA WICHERS, COGEMA: And it requires us to use BPT.

BOARD MEMBER MUNN: You know, the statute says they have to go to the same class of use that was when they extracted it.

BOARD MEMBER PROFFITT: Mr. Chairman, this discussion seems almost deja vu to the one we went through before and it was best available technology we were working off of and it seemed like energy came up with the practical to come up with this. I thought we already fought this battle on best available technology and this was the compromise, the language that we have now before us. I fail to see the argument.

DONNA WICHERS, COGEMA: The argument was that we did not have.....it was the two-prong system. Number one: we had to restore to background then if we spent our last dollar and pumped all the water that we could possibly do then they would allow us to return to use. The statute says use. So, the policy clarified that the standard is Class of Use but because the current regulations still had the business about background, it was left in the policy that there would be a goal to return to back ground. Industry accepted that because it was a review of the current regulations. Now we're changing the regulations and we want to get that out of there because it is not consistent with the statute which is a use based standard not a background issue. That's where we are today.

BOARD MEMBER GINGERY: If I was following Rick, we still get to the same point but we're not in argument with the words. Is that what you were trying to express to us?

RICK CHANCELLOR, LQD: I think I was trying to say is that we both feel comfortable with what they've achieved on the ground today and if we can ensure that that same level of effort will be done in the future, I think we'll be satisfied in the future. I think a lot of the discussion we've had here is over language and not necessarily geared toward the end result that has been proven to be achievable based on what they've done.

BOARD MEMBER GINGERY: It's a quarter till 5PM and the meeting tomorrow starts at 8:30 and maybe this is a good time to think this through over night. I think we're very close if we follow the parameters that Rick brought out. Maybe we can have that ready by morning. Did I see any other hands up? Yes?

BOARD MEMBER MUNN: Marshall because this is a rule package, I see something on page 48 and the suggestion here is using best practicable technology the goal is to return the affected groundwater in the production zone to the pre-mining average background water quality. Okay, is that a goal or is that something that you're going to get hammered on if you don't do it? I think that's where the concern is. If you're saying the goal is to get to background means you are legally required to get to background or we'll use all of our enforcement muscle against you, then that's an issue.

DONNA WICHERS, COGEMA: We still read it that way.

BOARD MEMBER MUNN: If you're saying you have to return to use, that's the bottom line, we'd like to do better than that if we can. I mean, that's a different statement because you've said that you basically have to return it to use to meet bond release and any other considerations.

RICK CHANCELLOR, LQD: We do not view (A) as being a hammer.

DONNA WICHERS, COGEMA: But it's in regulation.

RICK CHANCELLOR, LQD: But a goal is different than a standard that's why we wrote it that way because it ties into when you apply BPT. What's your target?

DONNA WICHERS, COGEMA: Use or better.

RICK CHANCELLOR, LQD: But if it's a Class V, there are no standards, so what do you do?

DONNA WICHERS, COGEMA: There are no standards for Class IV.

RICK CHANCELLOR, LQD: Except 10,000. So the question is, and here's the issue I think the state is looking at, if WQ changed their rules and it remains Class V or it goes to Class IV with really no standards, what do you shot for as far as restoration? Do you just apply your best practicable technology until you stop improving or what do you aim for when you do that? I guess that's a question we tried to do here to give you a target. You may not reach a target and most likely won't but at least with a target you know where to go to.

OSCAR PAULSON, KENNECOTT URANIUM COMPANY: I know we discussed this a number of times in the past and one of the targets then in that case when you restored to Class of Use was that you have your aquifer exemption in which all of this is going on and the key then would be that the water in the exempted aquifer does not degrade the class of use of the surrounding waters and that was the goal you then should be looking at when it comes to restoration at least those are the things that have been discussed in the past.

PAUL OSBORNE, EPA: One of the things that we provided in comments recently to Rick was that concern that was just raised and that was that in our regulations. It doesn't really talk about restoring to Class of Use but it does talk about the director having the authority to apply whatever restoration is necessary to assure that adjacent underground sources of drinking water, which is what these are, that are outside of the area that's classified as Class V mining would not be in danger and endangerment is generally in our regulations classified as when MCL's are violated. So, we have suggested that some language be added to this section that would basically give the director the authority after restoration or as part of this restoration that the operator show through modeling, groundwater monitoring or a combination thereof, that the restoration had been adequate so that there would be no endangerment outside what EPA would call exempted. In the State of Wyoming there is no such thing here as an exempt aquifer because the DEQ does not have an exemption standard. They don't have an exemption definition. It is all done by classification of use and that's what makes it so complicated is that what we had to do was we had to basically appoint this in the primacy agreement with our exemption process and we still go through that process in that you apply for this and the state gives it to us and then we say we would consider it to be exempt but it's not truly exempt under the law of the State of Wyoming. You have to understand that in the State of Wyoming, the DEQ does not recognize an exemption. They recognize a class of use and they have said we will restore this to the existing class of use and in the days gone by when they included treat ability, we were assuming and had been given assurances that this approach to background would be such that there wouldn't be endangerment outside. Now, all we're asking is that a demonstration be made that in fact that's the case. I certainly believe that you probably would be able to demonstrate that. It is just that it has to be demonstrated.

DONNA WICHERS, COGEMA: I think there is new proposed language to cover that.

PAUL OSBORNE, EPA: The language that we had suggested was that they had something from 146.10 and that hasn't actually been done but we've talked about doing it and the decision was made that it would be brought up here at this meeting so that everybody could talk about it. That's why I thought I'd bring it up before we left. You have our letter that you can share with people.

BOARD MEMBER GINGERY: Roberta, what do we have left for tomorrow besides this wonderful part?

ROBERTA HOY, LQD: Actually we have introduced the concepts of many of the more controversial topics so there won't be so much explanation. You know, we've talked about the classification system and that type of thing. Section 7, 8, 10, 11, 12 have some comments and again almost all of these touch on some aspect of what we've already talked about. So, either we can resolve it fairly readily by some or it may depend on when we come back with additional information or something like on the well construction issue. There's quite a few sections left but I'm not sure it's going to be quite as painful as it was today. We've done the learning curve part of it if you will.

BOARD MEMBER GINGERY: Look at those tonight and we'll tackle them at 8:30 in the morning. I appreciate your time today. There were a couple of them that we got bogged down on but we did make some progress. I think we have a better understanding. At this time I will continue the meeting at 8:30 tomorrow morning. Thank you for your time and effort.

TAPE 2 - JULY 31, 2003

BOARD MEMBER GINGERY: Good morning. Let's get started on this continuation meeting. A lot of people would like to see if we could rap this up by noon so we'll try to work on that. Rick, do you have anything for us this morning?

RICK CHANCELLOR, LQD: No sir.

BOARD MEMBER GINGERY: Okay. Let's get started.

ROBERTA HOY, LQD: We're now to Section 7 which starts on page 64. This section has to do with mechanical integrity testing of the Class III injection wells. There are two sections which we have received comment. The first of those is Section 7(a)(i) which is on page 64. The comment if I'm paraphrasing this correctly, has to do with exempting injection wells in areas where restoration and stabilization monitoring have been completed. Basically, the requirement is every five years for testing which is what the proposed rule change is and that's what the EPA requirement is, every five years. What industry is asking for is relief once a well gets to a certain point if an area is restored even though they haven't had the complete sign-off yet. They're asking that they not have to do the testing. We have two concerns about that: one is that I'm not sure that would meet EPA requirements. The second is that until we have completed the sign-off process, we may need to come back in.....the other thing to is a well is tested once every five years so let's say it tested in 2000 and then in 2001 they said that area was restored. That's a fairly close time after it was last tested so you could feel reasonably confident that those last test results might still be good but if it were the 4 ½ years after the last test and they were now asking for an exemption, that would be 4 ½ years in which you could have had a well failure and you wouldn't know because you hadn't tested them that long and then you're granting an exemption without knowing the status of the well at the time you're granting the exemption. The EPA requirement also includes that once you are done you have to prove mechanical integrity before you can abandon the well so even if you had an exemption, let's say it sat another three years before you were ready to plug and abandon it, you would still need to do an MIT then, that exemption doesn't extend forever. Every five years is just easier to track and it meets the EPA requirements.

BOARD MEMBER GINGERY: Comment?

DONNA WICHERS, COGEMA: Good morning. Yes, the comment from industry is that MIT, mechanical integrity testing, is for injection wells that are being injected into. The purpose is to make sure that you have a competent well. Once you have finished your restoration, you are no longer operating these wells. They're sitting there, they have clean water in them. As Roberta said, it may go on for five years or whatever but this is an expense that we do not feel is necessary because we're actually through with the well. We're waiting for approval of the restoration in this area and the wells are no longer used as injection wells. We don't see the need to continue to do this five year testing.

PAUL OSBORNE, EPA: Normally under the EPA's injection program if the well has been shut in for two years then we would say plug it and if you're not going to plug it then we would basically require that the operator do the MIT on a regular schedule just to make sure that it's not actually an avenue of inner communication even though it's not being injected into doesn't mean that there couldn't be a chance of some communications.

BOARD MEMBER GINGERY: I missed the part about the two years.

PAUL OSBORNE, EPA: Well, in our permits we usually put in, based on our regulation, that if an injection well is basically shut in for two years then the operator would either have to demonstrate a need or plug the well. People come in all the time and ask to extend that for one reason or another. For example, they're going to start operations again or something like that so we usually just require a demonstration of the need of the well and it's usually pretty simple. If a well is shut in for longer than that and the five year period comes up then we would ask that the operator test the well whether it had been used or not.

BOARD MEMBER GINGERY: Yes?

BILL KEARNEY, POWER RESOURCES, INC.: Good morning. I have a question for Paul. The folks that you're talking about that come to you for this, it probably isn't Class III wells, right? It's pretty much like a Class I type deal?

PAUL OSBORNE, EPA: No, it's Class II principally, principally oil and gas, but we have had some wells related to salt mining and nocolite solution mining that people have come in and left the wells shut in for longer periods of time because they aren't sure whether or not they're going restart mining or if they're going to convert that well into a monitoring well. We recently just had some wells that were shut in for four years and they decided that they were going to turn it into a monitoring well so they tested them for mechanical integrity and then re-completed them as monitoring wells in the upper zone and plugged off the lower zone.

BILL KEARNEY, POWER RESOURCES, INC.: But in general, the operations you're talking about might have a few wells or tens of wells, not thousands and thousands of wells like we have.

PAUL OSBORNE, EPA: Right.

BILL KEARNEY, POWER RESOURCES, INC.: We have our first well field that's been restored for four years so we sent Rick a letter recently saying that these MIT's, the five year ones, need to be done here in the next year and we really don't intend to do them because it's restored and we don't have any intention of using these wells again and they would have been plugged years ago if the DEQ had approved the restoration. I mean, we'd have them plugged and sealed and be done so the delay on getting the restoration approved this causes situations and it's very expensive to do these tests. Additionally, precedence has been set which is in the letter to Rick over in Nebraska, Region 7 and the Nebraska DEQ has said, "Yeah, and when you're restoration is done and you're going to be plugging them in the near future you don't have to do these mechanical integrity tests," so that's the type of information we would like you to consider.

DONNA WICHERS, COGEMA: I'll add to that. In the State of Texas where we have three operations, we have 22 well fields and that is also the case. We are not required to do five year MIT testing for wells that have gone through restoration.

PAUL OSBORNE, EPA: For wells that what?

DONNA WICHERS, COGEMA: That have gone through the restoration phase. They're no longer used as injection wells.

BOARD MEMBER GINGERY: But they have not been signed off on then?

DONNA WICHERS, COGEMA: Yes they.....well.....

BILL KEARNEY, POWER RESOURCES, INC.: Well, ours have.

DONNA WICHERS, COGEMA: Right. That's right. When you're through with restoration whether you have sign off or not, you're not required to do MIT testing.

RICK CHANCELLOR, LQD: I have a question for EPA. Roberta said that prior to abandoning the well that you require an MIT testing to determine.....

PAUL OSBORNE, EPA: We have done that and I can honestly say, to my knowledge, we haven't done it for Class III wells.

DONNA WICHERS, COGEMA: That's typical for Class I.

PAUL OSBORNE, EPA: Well, Class II we've done it and Class I we've done it. One of the reasons is the wells are generally a lot deeper and so what we're concerned about in a situation like that is that fluids that are greater than 10,000 would migrate upwards into zones that are less than 10,000. That in itself is more of a concern to us to make sure that the casing has some integrity and so that we can determine if we have to require the operator to put in additional plugs to isolate any holes that might be in the casing. That is principally where most of the MIT's.....it's not to say that we might not require a MIT test in a Class III well but we have not done so at this point. I can't preclude a circumstance that might require the Director to require that on his or her discretion. It depends on the situation. They might have some knowledge that would say that we're concerned about this area and so we want you to run an MIT on this well or that well on a case-by-case basis. Certainly our regulations provide the director that kind of discretion when we're running the program.

BOARD MEMBER GINGERY: Yes sir?

STEVE INGLE, LQD: A couple of points, one is in Nebraska, which Bill mentioned, that the MIT's were suspended by the Nuclear Regulatory Commission and not EPA. Secondly, Bill mentioned the expense. Highlands current bond for the well fields that Bill was talking about is roughly \$1400 for this upcoming year for MIT's at \$71 a well and \$1400 is a third of the well field. The total well field MIT cost to them is according to their bond is roughly \$4200.

BOARD MEMBER GINGERY: Thank you.

BOARD MEMBER GAMPETRO: If I understand this correctly, the reason that someone would want to test the mechanical integrity of a well that's going to be plugged anyway is that you may have to do different things when you plug it?

PAUL OSBORNE, EPA: Correct.

BILL KEARNEY, POWER RESOURCES, INC.: But that's for a deep well like 10,000 feet that's being used to inject waste but we're kind of talking about apples and oranges here.

RICK CHANCELLOR, LQD: I guess the question for EPA, in the case that industry is talking about where say in year four they submit to the state restoration data for the well field and the state reviews it but that review goes longer than one year and so the five year period comes up but we're in the middle of our review of restoration, does the state have discretion to say, "We're close to ending our review of the restoration to allow you to plug the wells therefore you do not have to do MIT in year five if you plug like in year six?" or something like that.

PAUL OSBORNE, EPA: Our regulations actually do give the director the discretion to require MIT's more frequent than five years or obviously if the well was operating then they would have to run the MIT's but if a well is shut in, yes, our regulations do give the director, I can't tell you the exact citation of where it is, but it give the director the authority to require MIT's or not require MIT's in a situation where they're not operating and you're still reviewing their restoration, I would say that you would have the discretion to go either way depending on whether you thought there were some potential threats.

BOARD MEMBER GINGERY: What was proposed to us in the booklet here? Are we just restating what EPA already has or are we going beyond that?

RICK CHANCELLOR, LQD: That's why I asked Paul the question if the state had discretion in this area or not because I think that's what it comes down to. If the state has discretion we may not have the choice to make any changes as industry requested. If EPA gives us the state discretion on that than we have that option.

BOARD MEMBER GAMPETRO: Let me ask that other question again because I got two answers, one yes and one no. Can you think of a situation in which because of a mechanical integrity test on a well that's no longer being used, the Class III wells, that you would require them to do additional work when they plug it or abandon it?

RICK CHANCELLOR, LQD: If there's a case where say something happened to the well field and something ran over the well casing and damaged it that might be a case where we would say, "Let's check the well out first." There may be but in most cases probably not.

DONNA WICHERS, COGEMA: Mr. Chairman, what industry has recommended in our comment is we would like to see the following phrase added to the proposed rule right at the very end and it simply says, *or is located in an area where all phases of restoration have been completed and no further injection is anticipated.* We did provide some language if you're looking for that.

BOARD MEMBER GINGERY: Read that to me again.

DONNA WICHERS, COGEMA: We recommend adding the following phrase to the end of this proposed rule *or is located in an area where all phases of restoration have been completed and no further injection is anticipated.*

BOARD MEMBER GINGERY: In so many words, you're still meeting that five year requirement but not beyond that if you meet these criteria.

DONNA WICHERS, COGEMA: Yes, except for the wells in areas where we've completed all of our work. We don't want to test those anymore.

ROBERTA HOY, LQD: If we do this in 40 CFR 144.51(q) which is the side-by-side for Section 7(a)(i) it says *or on a schedule determined by the Director* that we include something like if the Administrator approves it because we obviously have some difference of opinion at times over whether or not restoration has been completed and no further injection is anticipated. So, to alleviate that the Administrator will have the opportunity to review whatever is being submitted and the decision is his or hers to say. That would be something like the EPA rule that.....

BOARD MEMBER GAMPETRO: I would feel more comfortable with that myself. It leaves the discretion to the Administrator. The language from the industry would just remove those wells from consideration for testing if they were located in a certain part that's no longer being used. Other than the unusual event where one of them might be damaged or something it wouldn't really be a problem but if that did happen you wouldn't have the discretion then to go back and have that one tested and dealt with differently.

BOARD MEMBER GINGERY: How do you feel about that? Could industry work with the director on that because it's kind of a timing situation or individual events out there that are taking place, correct, and you don't want to be caught up in a lot of expense if it's not practical but there could be an event that needs to be further.....

BILL KEARNEY, POWER RESOURCES, INC.: The administrator really does have the ability to make us do anything he or she desires if there's a problem. He can call and say he wants Kearney to do back flips because of this and he really has the authority to do that. The problem we have is these type of regulations are more stringent than EPA and costs money but I think that's a reasonable compromise for sure.

BOARD MEMBER GINGERY: Okay. So let's look at the language over here.

BOARD MEMBER GAMPETRO: Instead of saying *or until the Administrator determines that no further injection is anticipated* that it says *unless the Administrator determines that no further mechanical integrity testing is required*.

BOARD MEMBER PROFFITT: Is there a waiver provision anywhere else where you could grant a waiver that could be referenced?

RICK CHANCELLOR, LQD: Well, in a side-by-side this rule that talks about mechanical integrity testing, EPA will give is the director flexibility in the schedule and so I think it's appropriate here to put that same flexibility in there so it's tied just to this section.

BOARD MEMBER GINGERY: You want to take the mechanical integrity testing out because it could be more than just that, correct?

RICK CHANCELLOR, LQD: In my opinion, the mechanical integrity testing would be tied to further injection activities so perhaps in our Statement of Reasons we could explain there's that tie to injection activities.

ROBERTA HOY, LQD: So, do you want something more like the language by the (ii) or do you want something more open ended like.....

RICK CHANCELLOR, LQD: I think (ii) is okay as long as we talk about in the SOR that we anticipate this provision being used where a well field is under review for restoration and the five year period comes up we may weigh that testing pending the outcome of our review.

BILL KEARNEY, POWER RESOURCES, INC.: Another instance could come up say where we have a whole well field to do and we don't want to do it in the winter, we want to wait for the summer being that it's a lot more cost effective to do it in the summer. That's something that could come up.

ROBERTA HOY, LQD: How about if we said this, *the schedule for mechanical integrity testing can be modified due to circumstances such as restoration, weather, and similar.....*

RICK CHANCELLOR, LQD: Or maybe just go back to what you had originally as determined by the Administrator and then put this language in the SOR because it's starting to get a little wordy.

ROBERTA HOY, LQD: Okay.

BILL KEARNEY, POWER RESOURCES, INC.: Do we want to say something in the case that the well is no longer being used for injection that the Administrator can.....

RICK CHANCELLOR, LQD: Well I think it goes back to what's going on in the well field. There may be reasons why a well may not be used for injection but it's pretty clear that it's going to be re-used for injection within a year or two and in that case we'd say there wouldn't be a waiver.

SANDRA GARCIA, LQD: Roberta, is it *or until the administrator determines that no further injection is anticipated* or the other one?

ROBERTA HOY, LQD: Which one do we want?

RICK CHANCELLOR, LQD: I would just say or the administrator determines.....

BOARD MEMBER PROFFITT: Yeah, leave out *until*. I don't like that *until* in there.

BOARD MEMBER GAMPETRO: Due to a cessation of injection, weather conditions and such?

ROBERTA HOY, LQD: I think he wanted to put that in the SOR's to leave this more open.

RICK CHANCELLOR, LQD: We probably need to have the word *schedule* in there to be more in line with EPA's rule.

ROBERTA HOY, LQD: If we just stopped it there then it leaves it wide open.

RICK CHANCELLOR, LQD: I think that's okay.

ROBERTA HOY, LQD: And then we'd put this in the.....

RICK CHANCELLOR, LQD: Statement of Reasons as to what type of circumstances the Administrator would do a different schedule for.

BOARD MEMBER PROFFITT: The criteria and the reasoning, is that what you're saying?

RICK CHANCELLOR, LQD: Yeah, sort of explain the rationale we would use to show what we mean by that.

BOARD MEMBER GINGERY: Out of curiosity, what is the usual length of time to work with them and sign off on the restoration and move on?

BILL KEARNEY, POWER RESOURCES, INC.: You don't want to ask that!

RICK CHANCELLOR, LQD: The system has not been well greased yet. We hope to improve our efficiency and timeliness of that effort but we have not done a good job to date of doing that.

BOARD MEMBER PROFFITT: The term reasonable is rather flexible, is that what you said?

RICK CHANCELLOR, LQD: I never used resonable.

ROBERTA HOY, LQD: There has been one released! It's not like we've never released one.

DONNA WICHERS, COGEMA: And it was a very short time period too.

BOARD MEMBER GINGERY: Alright, everyone was fairly happy with this I take it and we can move onto the next one.

ROBERTA HOY, LQD: The next section on which we received comment is Section 7(a)(iii) which is on page 66 of the SOR's and the comment is similar. The proposed rule says, *shall be demonstrated at least once very five years*. I supposed we could put similar language - just take that phrase that we put in 7(a)(i) and put it here to allow for that flexibility because the comment from industry is similar that if it's an area that they think has been restored and it's under our review that they're asking for some relief on the schedule. We could add that flexibility that we added in 7(a)(i) to this since that seems to be something that we can do and still meet EPA requirements.

BILL KEARNEY, POWER RESOURCES, INC.: Would it make sense to combine these two things into one. It seems somewhat redundant.

RICK CHANCELLOR, LQD: Is (a)(i) the initial MIT test?

ROBERTA HOY, LQD: Correct.

DONNA WICHERS, COGEMA: But then it has maintaining a schedule of integrity.

RICK CHANCELLOR, LQD: So the question would be if (a)(i) is the initial, could you take the shall be maintained until it's probably converted, is that really in (a)(iii) then?

ROBERTA HOY, LQD: So I could take the side-by-side that says on the schedule determine and move that part of the side-by-side to.....I can do that.

RICK CHANCELLOR, LQD: Because I think (a)(i) is just the initial one saying you can't inject until you do an MIT where (a)(iii) is really talking about continuing MIT's.

ROBERTA HOY, LQD: So, *prior to commencing injection*. So we'll just strike all this (making changes on the laptop which is projected). Okay, let's see if we've captured this. What we're doing in 7(a)(i) is just saying *the operator of a Class III well shall establish mechanical integrity as defined in Section 1 of this Chapter for each well prior to injection*. That takes care of the first part of the EPA requirement in 144.51(q).

Then when we get to 7(a)(iii) we would have, *Maintenance of the mechanical integrity of each Class III well, which has not been plugged or converted as required by Section 8 of this Chapter, shall be demonstrated at least once every five years or on a schedule determined by the Administrator* and then we would include the side-by-side which has the comparable EPA requirement.

BOARD MEMBER GAMPETRO: Then in your reasons and rationale, you're going to indicate that if injection is no longer being done and weather and whatever.....

ROBERTA HOY, LQD: Right, I'll move the rationale from the SOR's in (i) and I'll put that in (iii) instead.

BOARD MEMBER GINGERY: Isn't there some reasonable expectation that once the company has informed the Administrator that they've completed it and the state has reviewed it that this doesn't linger? Does EPA have any time table so it just doesn't keep sitting out there? In the regulations for EPA is there some kind of a time table?

PAUL OSBORNE, EPA: The only time table that we have is that if wells have been shut in for two years, they should be plugged or returned to operation or a demonstration being made that there may be some reason to utilize these at some point in the future. Obviously, a lot of that comes in to play in oil and gas types of operations as we were talking yesterday about the economics. Well, in my mind that certainly plays in here. Also, we may have a need for those in restoration or you may have some wells that have been sitting for more than two years as we know simply because the price of uranium ? or some other mineral. So, that flexibility is provided to the Director as far as allowing the operator to come in and say we haven't plugged these wells because we're still waiting for approval of our final restoration. Does that answer your question?

BOARD MEMBER GINGERY: I see where you're going and I think I'll just drop it there. Okay, is everyone in agreement? Let's move onto the next issue please.

ROBERTA HOY, LQD: The next section on which we received comment is Section 8(c) which begins on page 73 of the SOR's. This whole section has to deal with the requirements for plugging drill holes and for repair plugging of wells. So there's two separate thoughts. The first part of this section deals with drill holes and then it goes into wells because there's somewhat different plugging concerns. **(TAPE 3)** Section 8(c) is talking about repair or plugging of a well, and the phrase of concern is the very last sentence which says, *the operator may resume injection into the repaired well upon written notification from the Administrator, that the operator has demonstrated mechanical integrity.* The concern is that it is not an EPA requirement and it's somewhat burdensome to send a notice all the time. I was thinking that there is no side-by-side shown, but I was thinking that there was some type of requirement but there may not be.

BOARD MEMBER PROFFITT: There is a reference to state statute in the comments.

ROBERTA HOY, LQD: 102 is very broad. It doesn't have anything specific, so unless there is something that I don't know of, I don't think that deleting that last sentence would bother any of us.

BOARD MEMBER GINGERY: The whole section?

ROBERTA HOY, LQD: No just this last.....

BOARD MEMBER GINGERY: Oh okay.

PAUL OSBORNE, EPA: In 144.51, basically if a well lacks mechanical integrity then it has to be retested or plugged and it says at the bottom here *the owner or operator may resume injection upon written notification from the Director that the owner or operator has demonstrated mechanical integrity pursuant to 146.8* and that's in 144(q)(2) which is duty to establish and maintain mechanical integrity of Class I, II or III wells and that's where that came from.

ROBERTA HOY, LQD: 144.51(q)(2).

BOARD MEMBER PROFFITT: You've got a reference to it except that it's in (q)1.

PAUL OSBORNE, EPA: (q)2.

BOARD MEMBER PROFFITT: Well, in your comments you've got (q)2.

ROBERTA HOY, LQD: And actually that was included, that side-by-side made it into 7(a)(v) but it didn't make it into Section 8. Here's that sentence that he's talking about. So I guess I can't take that. I'll adjust the side-by-side to show it next to 8(c).

BOARD MEMBER GINGERY: Oh okay.

BOARD MEMBER PROFFITT: On page 72 you'll see it. She's got the side-by-side on page 72. That's what she'll pull and put it over here.

BOARD MEMBER GINGERY: Okay, I see. I went the wrong direction on that. Any comment on these changes? Yes?

BILL KEARNEY, POWER RESOURCES, INC.: This is a very fine example of an EPA regulation that was most likely intended for Class I or II waste disposal well where an operator might have one well or a hand full of wells, not Class III wells where an operation might be putting in a 3 month period, might be running a mechanical integrity tests on say 30 new wells, and may be another 50 on five year wells. There needs to be some flexibility here. The way we do it now is if a well fails, it's reported in the quarterly report to the Administrator. And that well is not run, injected into, until it's fixed or it's plugged for both new wells and for one's that are in operation. For us to have to get written approval to use wells that we fix is going to be a nightmare for Rick's people to keep track of this stuff. And it'll be a huge paper chase problem. The way it's historically been done is in the quarterly reports, and that's readily, you know you can audit that. If this has never been imposed on the industry and if it is it's not only going to be a heartache for the industry but it's going to be for the DEQ as well.

BOARD MEMBER GAMPETRO: Isn't this only for wells that failed the tests?

BILL KEARNEY, POWER RESOURCES, INC.: Right.

BOARD MEMBER GAMPETRO: Aren't there like maybe three to nine of those based on your previous numbers?

BOARD MEMBER PROFFITT: Three percent, I think.

BOARD MEMBER GAMPETRO: Three percent of a hundred is 3, if you have 300 that's 9.

BILL KEARNEY, POWER RESOURCES, INC.: On new wells it's quite low. On wells in our operation that were constructed as Ralph told you yesterday using, I guess you could say, inferior well construction techniques, our failure rate's quite high on the five year MIT's. I don't see any advantage on new wells having to get notification from Rick that we can go ahead and use these things. We don't use them until they're repaired and we retest them and we have the records that they've been retested. So this is one of the spots where I think we need to look for some flexibility from the EPA because it's just another burden for the state as well.

BOARD MEMBER PROFFITT: Can I ask a question?

BOARD MEMBER GINGERY: Yes, go ahead.

BOARD MEMBER PROFFITT: Do you make any written response to a quarterly report that would satisfy that provision on the written notification?

RICK CHANCELLOR, LQD: I think the issue is the timing of the response because when you repair a well and send in a quarterly report, I'm not sure how fast you would want to reuse that well after you repair it.

BILL KEARNEY, POWER RESOURCES, INC.: Well, if it's a new well, when you get the quarterly report it may show that this well failed and then it may also show that on such and such a date it was repaired and retested.

DONNA WICHERS, COGEMA: And by the time you get the quarterly we've already started reinjecting into that well.

ROBERTA HOY, LQD: Usually because of the relatively low number of new wells and usually when a new well field comes online between all the baseline information and this, there's quite a bit of correspondence going back and forth. Yes, it's another bit but if it....I mean they could do it in a table. I don't know if we were anticipating it being that onerous. I do agree that when these older wells get up to a 30% failure rate and if you're trying to repair all those in a very short time frame and then turn around and start injecting, that could....to me it isn't that different from other situations in which we have coal miners or the sand and gravel guy. There's some issues that have to be dealt with in a hurry and it's just one more thing. We can do things on a quick turn around time.

BOARD MEMBER GINGERY: With the new wells, I'm getting a feeling that the new well situation is not the critical issue and usually that can be corrected fairly fast in the new field?

DONNA WICHERS, COGEMA: We can correct it fairly fast but the problem is timing - getting the approval to start injection whether it's a new well or an old well.

BOARD MEMBER GINGERY: And at the present time you don't have to ask for that?

DONNA WICHERS, COGEMA: No, we have to do the proper mechanical integrity testing. And show that it is capable of being used and then we go forward. There's no notification requirement that the Administrator does not have to come back to us and say, "Yes you can go ahead and use this well."

BOARD MEMBER GINGERY: I may not be going down the right path but my feeling, Rick, is that the new field seem to be somewhat different and your having a 30, if that's the correct term, a 30% failure in the older wells or some of these because the of the technology that was used. I can see that it could be quite a concern out there, but in the new it seems to me what industry is doing now would seem to be the right course of action. Unless there's some specific reason that limits us..... your reporting it in the quarterly, correct? So they're really notified, but the injection can start without coming back in. Has that been a problem? Or are we dealing more with a paper trail?

RICK CHANCELLOR, LQD: I think the question here is how much flexibility can we use from the EPA? Do they allow us to go that route?

PAUL OSBORNE, EPA: You know in reading that section (q), I don't see much flexibility there because the regulation states and so does the preamble that we were interested in making sure that mechanical integrity was restored to I, II and III wells. So to say that we weren't concerned about Class III wells isn't worn out by the regulations or the preamble. But normally the way our Class III permits are structured, if there was a corrective action that was necessary do to failure of existing wells, then those wells would be retested and the operator would notify us separately of the quarterly report and then we would give it a rapid turn-around to basically approve all of those that are sent in. Let say that if the operator retested over a weeks period 10 or 15 wells and sent that in to us and said they retested those wells. Then we would respond with a letter saying, "These wells have been tested and you are approved to proceed" because one of the reasons that we like notification of a test is it's important in the state as well as the EPA program so that if we have an opportunity and we're out in the field we can go by and actually witness those tests that are being run. And that's an important part of basically the inspection presence, obviously that's done quite a bit in oil and gas activities, but it's also done as part of Class III activities also.

BILL KEARNEY, POWER RESOURCES, INC.: We have two or three people full-time doing mechanical integrity tests so if anybody want to come out, again, it's not like we just have one or two wells, you know Class I or II wells, we have three mechanical integrity testing trucks and two or three people that are doing this full-time or almost full-time. I think the State can vouch for that when they've been out they typically look at some of that and see the people out there doing it. This is just the type of thing where it's more work for the state, more work for the companies and there's no benefit to it. You send it in and he's going to write a letter and say, "Oh, okay thanks." Some of this stuff, we need to make it less burdensome for both parties and if the EPA's not flexible then that's the way it goes I guess.

BOARD MEMBER GINGERY: Yes?

GLENN MOONEY, LQD: Bill I have to ask you, how many wells do return to service? Most all of the MIT's that I've seen as well as the abandoned ?wells?, at least with COGEMA it seems like there are very few wells that return to service. Almost all of them are abandoned after they're found to be faulty just because of difficulty of repairing them.

BILL KEARNEY, POWER RESOURCES, INC.: On new wells it's probably 50-50. I know like right now one's been, they repaired one the other day if it's something shallow they can dig it up and then we're right now experimenting with some liner techniques because with the amount of failures in the old wells we're going to have to come up with some way to repair them.

GLENN MOONEY, LQD: But that wouldn't really apply here to new wells because it talks about returning to service. If this well was never put into service, you wouldn't really need to report that because it never was in service. You can only put wells that were tested and returned to service. I should say tested, repaired then returned to service.

BILL KEARNEY, POWER RESOURCES, INC.: I guess I didn't see that if that's what it says. Is that what it says Paul? Just wells that are....

PAUL OSBORNE, EPA: That section that I was quoting was, yes, was after wells have been determined to lack mechanical integrity and it doesn't really specifically say but in my mind it's existing wells. I mean that's my understanding of how we usually look at it. You know, presumably, I guess you could have a new well but this section is duty to establish and maintain mechanical integrity. It doesn't really address what you were talking about if there was a failure of a new well. I think it's primarily intended to be existing. That's where we use it most often, that's certainly the case.

ROBERTA HOY, LQD: I believe the circumstance where it's a new well is taken care of in Section 7(a)(ii). I remember a provision somewhere that talks about that the Administrator must get permission before they can start injection. So, if a new well fails and they have to repair it, then they would have to re-submit that information to the Administrator. So I think that provision for new wells is taken care of elsewhere and that this is talking about those older wells that you test and that they used to inject and it failed the MIT and just repair it and then resume injection. So I think both instances are covered, both initial and later.

BOARD MEMBER GINGERY: How does that effect your comment then?

BILL KEARNEY, POWER RESOURCES, INC.: It's just more paper work on both parties part.

BOARD MEMBER GINGERY: So, if I understand this, in establishing a field, until that injection takes place you could do quite a bit in trying to either repair that damage or cap the well or go through that process. It's the older ones as I understand now we're discussing?

BILL KEARNEY, POWER RESOURCES, INC.: Yes.

BOARD MEMBER GINGERY: The ones in operation, I should probably say, not the older.

BILL KEARNEY, POWER RESOURCES, INC.: Ones that have been operated in.

RICK CHANCELLOR, LQD: Do we need to add some language that clarifies that this rule applies to existing wells?

ROBERTA HOY, LQD: Unless they try to find that other provision.

BOARD MEMBER GAMPETRO: It seems to me that we're spending an awful lot of time beating a dead horse. Either we have a choice here to be consistent with the EPA or not. I don't think they are going to change it right away. I don't argue with your comment or your logic. We could probably talk about this a lot longer to no good end.

BOARD MEMBER GINGERY: Well, what we presently have, are we meeting EPA requirements?

ROBERTA HOY, LQD: If we leave this sentence in there, yes.

BOARD MEMBER GINGERY: Okay, do we have that penned down so we can move on?

ROBERTA HOY, LQD: Right.

BOARD MEMBER GINGERY: All right let's move on.

ROBERTA HOY, LQD: The next section is 8(e) which is on page 74 of the draft proposed rules. The concern there is how long a well can basically stay idled before it is considered abandoned in the regulatory sense. The EPA has a two year period in their rules, Water Quality rules has one year in theirs. We adopted the one year Water Quality rules rather than the EPA two year. In terms of exactly where the Water Quality one year came from, I don't know the background of their rules that well to say why they picked one year instead of the two.

BOARD MEMBER GINGERY: For administering, wouldn't it be better for us to stick to two years? If we're following the EPA and there's not any flexibility then we follow the two years to keep some consistency unless there's a compelling reason to do it in one year. So, keep it at two? Any comments?

DONNA WICHERS, COGEMA: That was our request.

BOARD MEMBER GINGERY: Oh, okay, let's follow the two year requirement.

ROBERTA HOY, LQD: The next section which there were comments was in Section 8(h) which is on page 78 of the draft proposed rules. This particular section deals with marking an abandoned well location. Again, we borrowed from the Water Quality rules. The State Engineer may also have something on this as well. The concern is that because of the number of wells that the industry is abandoning, that marking every abandoned drill hole location is onerous. There are advantages and disadvantages both ways. The concern, I believe is 100 years from now, knowing where something is, even if you have to run over it with a plow or whatever, if you go into an area that there's not just a map somewhere saying there's a bunch of wells here that there's something actually in the field. It's true this is a large number of wells to be marking every one of them, I mean, you could go back to the 70,000 drill hole locations.

BOARD MEMBER GINGERY: The extent of these wells and most of them are in geographically fairly close proximity, just to pick a number, if you would identify every 10th well, there's a certain number that should be.....

ROBERTA HOY, LQD: A percentage, you identify a percentage of them.

BOARD MEMBER GINGERY: Yes? Maybe you could help us on this.

DONNA WICHERS, COGEMA: Well, these markings are buried two feet deep. No one is going to be able to see them on the surface anyway. If you dug one up then maybe you would dig up the steel plate that has the permit number and everything identified on it. I think what we were thinking is that because not only is it an exempted aquifer, it is a well field. You don't want people drilling water wells in this area because the water is a uranium ore body. When we met with the Environmental Quality Council, I think one of the recommendations that came out of that is perhaps we record the boundaries of these well fields, the exempted aquifer in the county court house. I mean there is a permanent record. So when people go in to see what's happened to the land at least they know that it's there. Otherwise, you're not going to see these markings.

PAUL OSBORNE, EPA: Donna, did you put up markers of the boundaries of the field?

BILL KEARNEY, POWER RESOURCES, INC.: On the surface?

PAUL OSBORNE, EPA: On the surface.

BILL KEARNEY, POWER RESOURCES, INC.: No.

DONNA WICHERS, COGEMA: No, because our land owner is going to be using that surface. He doesn't want anything sticking up.

GLENN MOONEY, LQD: I think the most important thing here is the steel plate so it could be found with a metal detector. I've had occasion to try to inspect abandoned wells and even sometimes a couple of weeks after the abandonment it was impossible to find the exact site even by the fellow that abandoned the well. I mean, there is nothing left if it's done properly. It's not seen on the surface. You have to be able to find it in the subsurface. Having the metal down there certainly helps. I think there is always the possibility of having to relocate one of those wells for various reasons.

BOARD MEMBER GINGERY: With those wells capped you could still find it with a metal detector, correct?

GLENN MOONEY, LQD: There's no metal.

BILL KEARNEY, POWER RESOURCES, INC.: No, it's cement. The whole idea of the well plugging is so that people don't know it was there. These wells are in a uranium mining area and there's no regulations now and there never have been that required this to be done.

BOARD MEMBER PROFFITT: Wouldn't it be easier to bring this into the 21st century technology and GPS these in?

BILL KEARNEY, POWER RESOURCES, INC.: They're all GPS'd right now.

DONNA WICHERS, COGEMA: We have coordinates.

BOARD MEMBER PROFFITT: Yeah, and then just take them to the courthouse.

ROBERTA HOY, LQD: There's two concerns. One is when Donna was talking about the EQC saying record this in the courthouse, the State Engineer does have a process for establishing a.....I don't know what the correct terminology is but basically an area where there is some kind of restriction. To date, the State Engineer has chosen only to use that authority to restrict it for water quantity. So for a particular basin they have restrictions on the quantity of with draws. They've only used that authority in one other instance and that's the Amoco Refinery. What they did there was draw a line and said if you want to drill a well in this area, the first thing you have to do is go talk to Water Quality because they know what's happening with Amoco Refinery clean up and they can say whether or not this well should be allowed. We've tried to have discussions with the State Engineers Office (SEO) about using some kind of approach about drawing out an area. The problem is that you can't draw these a priori. Until someone goes in and does the exploration and actually establishes what the well field is, no one knows where these areas are. There are plenty of ore zones

out there but nobody knows where they are. You could do the business of drawing an area but instead of going through the courthouse or in addition to going through the courthouse, I would also recommend it go through the SEO's. We could do it via GPS. The thing is, I'm not sure, but has that information been submitted to us on a regular basis?

BILL KEARNEY, POWER RESOURCES, INC.: When we're done mining, that information can be submitted to anybody who wants it although you gotta remember the land owner might not want.....

BOARD MEMBER PROFFITT: Under existing parameters, would a title insurance company pick up on the SEO's.....I don't think so. So the public isn't going to get alerted and I think that's what she's.....

BOARD MEMBER GAMPETRO: You gotta look at the possibility of someone buying the land 50 years from now and goes out there and drills a well. The only thing that I've seen that holds up long-term is like the corner pins on sections and stuff like that. It would seem to me that rather than marking each well which no one is going to find maybe ever, that if you corner pinned it or something like that and used this GPS because maybe somebody would stumble across the corner pin that had a special marking on it and realize that they shouldn't drill a well there. You know, some kind of physical object and that's the only thing that I've seen that cows don't rub on and knock over.

BILL KEARNEY, POWER RESOURCES, INC.: Let's remember one interesting fact here is if we never went out there and put a well field in, we have found locations where no one should ever put a water well.

BOARD MEMBER GAMPETRO: That's true.

BILL KEARNEY, POWER RESOURCES, INC.: We've done a service by identifying that and if someone wants monuments out there or whatever, we're all ears on how best to alert the public but I think tying it somehow with the land record in the courthouse, but, again, there might be somebody that doesn't like that for some particular reason.

BOARD MEMBER GINGERY: On the land recording, that doesn't get put onto a deed does it?

BILL KEARNEY, POWER RESOURCES, INC.: I don't know.

BOARD MEMBER GINGERY: That'd be interesting to know.

BOARD MEMBER GAMPETRO: It would be.

BOARD MEMBER PROFFITT: Well, it should be.

BOARD MEMBER GINGERY: What is the County Clerk doing with that information would be my question.

DONNA WICHERS, COGEMA: There could be mining claims recorded or mining leases recorded that would state the area.

BOARD MEMBER GAMPETRO: If somebody did a title search they would definitely find out that there was a uranium mine there. That should give them a clue anyway.

BILL KEARNEY, POWER RESOURCES, INC.: I think even in 50 years people are going to know that there was a uranium mine here.

BOARD MEMBER GINGERY: I'm wondering about individual capping or some percentage of capping. Is that really solving the issue. Rodney brings up the issue, the integrity of that land 50-100 years from now. Early in my career with Costal Genetics and USGS and in regards to these markers we replaced them all up and down the coast all the time and on top of the mountains and those are the official markers. I'm not too sure that's really solving the problem. The problem is will the future land owners and the public know an event has taken place here? Yes?

GLENN MOONEY, LQD: As I understand it, some industry representatives are using the type of marking that is a large washer that's apparently sucked into the fresh cement with a bolt or a spike and they can stamp the information in that. So, we're not talking about physically a large amount of material just an inexpensive washer which is stamped and that's what's being used by some people when they abandon their wells.

RICK CHANCELLOR, LQD: I'd like to add a comment about bringing it into the 21st century. If they already GPS'd the well locations, then somehow we just need to decide where to put that information. I think that would be easily done, it's just a matter of documenting that information in the right place.

BOARD MEMBER GINGERY: Not trying to create work for the SEO or the USGS or the County Clerk, but I think it really brings it upward now in the 21st century and when you provide that information that people have some way to maintain that data so it can be properly used so if you're providing it to the counties, in your case it's Converse County. It'd be interesting to know what the County Clerk is doing with that information or if it's just sitting on a shelf there. If you're required to do that, I think we're just trying to leave a better track record of where we've been and what we've done.

BILL KEARNEY, POWER RESOURCES, INC.: I have one more comment on this whole thing. Don't forget that these areas are within some boundary that are identified as an exempted aquifer and that's probably what we ought to be talking about here is how an exempted aquifer boundary may be recorded because that's really the issue here is that the State and EPA has exempted this area and that's really what goes out to public notice and all that. There's a relationship there between the well field and when we're gone and this boundary that's been set so that's another aspect of it. We haven't gotten into talking about the aquifer exemption boundary yet but I'm sure we will because we kind of skipped Section 5.

BOARD MEMBER GINGERY: Is DEQ required to maintain some type of record of that exemption?

RICK CHANCELLOR, LQD: I don't think LQD has required that in the past.

PAUL OSBORNE, EPA: You have to remember that it still comes back down to, and I don't know how the Water Quality maintains their records but, basically they don't really do an aquifer exemption as we discussed. They do a classification and then it's supposed to be returned to use. That's what Texas does is my understanding although I don't have any personal experience with that but that's what I've been told by the regional office.

DONNA WICHERS, COGEMA: We have aquifer exemption from Texas.

PAUL OSBORNE, EPA: But it's my understanding they're requiring restoration with the idea that it wouldn't be exempt forever. That's what I've been told by the state people.

DONNA WICHERS, COGEMA: Well, headquarters has told us, once exempted, always exempted.

PAUL OSBORNE, EPA: That's always been my view point too.

BILL KEARNEY, POWER RESOURCES, INC.: You don't want anybody to use the water.

DONNA WICHERS, COGEMA: That's right.

PAUL OSBORNE, EPA: At any rate, that's not really the issue here. We certainly maintain a record in our files but Access is like anything else these days because the files go to archives and stuff like that and so even though we are in the 21st century, supposedly maintaining a database with that information on it is not always consistent from state to state or region to region.

BOARD MEMBER GAMPETRO: I think it goes beyond just the water too because I could see somebody going out to build a barn or something and digging a footer and cracking into one of these and doesn't know what it is and maybe tries to chip the top of it off so he can get his footer in.

BILL KEARNEY, POWER RESOURCES, INC.: It's going to be all full of cement. It's virtually going to be no hazard. It's not a big deal.

BOARD MEMBER GAMPETRO: I understand that but you wouldn't want anybody beating on it with a back hoe or something.

BILL KEARNEY, POWER RESOURCES, INC.: They can beat on it all they want. All they'll do is get a piece of pipe that's full of cement.

BOARD MEMBER GINGERY: Yeah, it isn't going any place.

BILL KEARNEY, POWER RESOURCES, INC.: Now there are specific requirements where a uranium mill has been and stuff with the NRC and we don't need to get into that but there are certain things that they want done identifying those areas. Don't forget we're also regulated heavily by the Nuclear Regulatory Commission.

BOARD MEMBER GINGERY: Well, I was going to get to it. Even some of this may be under the new rules as not public information.

BOARD MEMBER GAMPETRO: In terms of the language, are we again up against, basically we match the EPA language?

RICK CHANCELLOR, LQD: I'm not sure EPA has language.

BILL KEARNEY, POWER RESOURCES, INC.: There is none.

PAUL OSBORNE, EPA: We don't have any specific language. I would just say that normally and in my experience, I've never dealt with and I don't believe any of the EPA directive indication programs have dealt with uranium. Although, Region 9 has some of that going on but I don't think they've reached the point where they're in abandonment under say an oil and gas injection well we would put in the permit that there has to be a plate below ground mark so that you could then recover it using a GPS metal detector but normally what we do is we reference the SEO's in the state that we're running the DI program and say, "You have to put markings on this well consistent with the state requirements. That's what we've been doing.

BOARD MEMBER GAMPETRO: My question then, is would we be allowed to not mark every single hole but mark the field as far as EPA is concerned?

PAUL OSBORNE, EPA: As far as we're concerned, yes.

ROBERTA HOY, LQD: My recommendation would be that we talk to the State Engineer because this requirement comes both out of Water Quality and there's a similar provision in the SEO's regs. which we didn't include here but basically they're the agency responsible for recording well locations, well abandonments and all that type of thing and that we meet with them and finally work out a process for both recording the well field areas and for something whether we do this just by GPS or we mark a certain percentage of the holes or we put pins at the corner of the boundary because the other entities would be the Courthouse but also at some point this information will need to be provided to the land owner whether they're both the surface and mineral owner or just the surface owner and probably to the mineral owners if they're different than the surface owners. This is not the first time this topic has been discussed in one form or another. This just triggered it again.

BOARD MEMBER GINGERY: I think it's interesting from a legal stand point as to who should have the information and when should they have the information.

BOARD MEMBER GAMPETRO: Irrespective of what you might think, not everyone has arrived in the 21st century yet!

PAUL OSBORNE, EPA: It is interesting that the SEO obviously has a web site that the public can access the location of the wells but it seems to me that however you decide to do it that it would be good to try to persuade the SEO to put some kind of information that delineates, if nothing else, the outer boundaries of the area on their database so that people know that it's there and if they want more information they can certainly go get the individual GPS information on that. Since the SEO is recording wells on that data base it seems like they could easily, I would think, put that kind of information on there. Whether they would be willing to do it obviously, only they can tell us. It seems like that at least puts it in the form of a public database that's going to be maintained more than a box of records that has been sent off to archives.

STEVE INGLE, LQD: Just a note on the SEO database. The State Engineers Office only requires wells to be located within a 40 acre area. In the case of ISL, 40 acres could be a lot of wells. As Paul was saying the outlines of the field, marking those and having those pretty well located then saying, “Hey, there’s a lot of wells inside this area..”

BOARD MEMBER GAMPETRO: It would seem to me that where ever it’s put, if it will come up on a title search that protects a purchaser of that property. Other than that there has to be some physical evidence left behind in case it’s not a purchase and it’s a descendent that’s dealing with that property. If you have those two things covered, physical evidence at the site that can be found in some manner and a title search, I don’t think you can get any better than that. I’m not sure how you’d make sure that it gets into the title search.

BOARD MEMBER GINGERY: I don’t know. I like the idea of checking with the SEO’s office. Possibly someone should be checking with the County Clerk and I’d be curious what they’re doing with the data. I think in this particular case, we could go ahead and put whatever we want to put in here but I think we have to put there that this may be modified substantially after visiting with the SEO’s office and a few others to make sure we’re on the right track and that we can do it. Does anyone else want to comment on this so we can move on? I believe we can move on based on that you’re going to check with the State Engineers Office.

TAPE 3 - continued

ROBERTA HOY, LQD: The next section on which we received comments is Section 10 which begins on page 84 of the draft proposed rules. The section of concern is Section 10(b)(i) provisions (A) and (B) and they are on page 85 of the draft proposed rules. This section deals with the aquifer classification exemption process and this particular subsection in 10 deals with the criteria under which an aquifer can be exempted. Industry’s concern is that we exclude Class IVA in the list in 10(b)(I)(A). Again, IVA is anything less than 10,000 ppm TDS. They listed (B) although I don’t see specifically what the concern is that’s related to that. It goes back to the discussions that we had yesterday about that it’s Water Quality’s classification scheme and it’s very difficult for us if we just flat don’t have the authority to reach in and start changing what they consider exemptable or not.

BOARD MEMBER GINGERY: Based on what we accomplished yesterday, haven’t we pretty well drew some conclusion on this one already or is this a whole new avenue we need to discuss?

ROBERTA HOY, LQD: No, this is just another place where it occurs in the rule.

BOARD MEMBER GINGERY: Okay. Yes?

DONNA WICHERS, COGEMA: I think our concern was that Classes I, II, and III are sort of the drinking water areas and if it’s classified as industrial then why couldn’t ISL mining occur in an industrial classified water? Not thinking of the connection between the 10,000 TDS and the classification system.....

BOARD MEMBER GINGERY: So, what’s been prepared, just leave it alone then?

DONNA WICHERS, COGEMA: I think let’s just leave it.

BOARD MEMBER GINGERY: Okay. I think we can move on then. Thank you.

ROBERTA HOY, LQD: The next section is Section 11 which lists prohibitions and much of this comes out of the EPA rules. They list specific prohibitions, it's scattered in their rules and there are things that are prohibited. The first subsection of concern is Section 11(a) which begins on page 87 of the draft proposed rules.

This has been of concern before. It has to do with when you can install wells for what purpose. You must be able to install some wells so that you can get the baseline information that you need in order to design your well field. Those wells potentially, if they were constructed correctly, they could either remain as monitor wells or potentially they could become injection wells. However, the EPA requirements reads such that until you get your permit you can't have a Class III well. We're trying to cover both ends of the spectrum if you will. We're trying to be able to allow installation of wells so they can get the information they need and still meet the EPA provisions. I think the industry concern is the way that it's written. It sounds like they can't go in and do the necessary exploration and that wasn't what we we're trying to do. We were trying to say that you can't do the Class III wells until you get the permit.

BOARD MEMBER GINGERY: Comments?

DONNA WICHERS, COGEMA: Yes. As far as the monitor wells and the baseline wells that Roberta is talking about, we get individual State Engineer permits for those wells and they're called a monitor well. They're not a Class III well at that point but W.S. §35-11-427 which is the in situ mining permit authority of Land Quality Division exclusive in the statutes, the last sentence states construction and completion of wells may be authorized prior to issuance of a mining permit or a research and development license pursuant to W.S. §35-11-404(g). In the case of my company, we did this. Land Quality Division issued permission for us to install the first well field at Christensen Ranch. If I remember correctly, it was done with a permit to construct actually through the Water Quality Division and we supplied all of our well construction techniques information ahead of time. They approved it and said to go ahead and install it. We did. We did not have permission to inject until the permit was issued but we were allowed to construct wells and under this provision in the statute which was put into the statute so that an operator could at least have the mine ready before the injection approval was given so that when you got that approval you could start mining.

BOARD MEMBER GINGERY: But what's been prepared here, that doesn't take that away does it?

DONNA WICHERS, COGEMA: Yes, it certainly does. It says that it's prohibited.

ROBERTA HOY, LQD: What they did was not only install baseline wells before they had a permit, they installed.....

DONNA WICHERS, COGEMA: The well field.

BILL KEARNEY, POWER RESOURCES, INC.: Class III.

ROBERTA HOY, LQD: Many wells. Injection, production, and monitoring. Since then we have the most recent one that was done. There are some wells that they might want to use as injection wells but what's out there now is mostly monitoring wells. The more recent example, they didn't do the entire well field. If this provision was put in there, again, this discussion has taken place historically in part because of that, that there be some way to install wells but in terms of being able to install an entire well field, I don't know if that was the intent of this provision in W.S. §35-11-427.

DONNA WICHERS, COGEMA: Well, that's what was done under 427 was the entire well field.

RICK CHANCELLOR, LQD: I think it's probably a case where the statutes could be interpreted to be in conflict with the EPA requirements. It was done that way, as Donna said, back in the '70's.

DONNA WICHERS, COGEMA: 1987.

RICK CHANCELLOR, LQD: 1987? Not so long ago then. So we've had discussions over the years, the statute reads like it reads and EPA says you can't do that. So, what do we do? We could do the rule that still allows some wells, the statute says *may*, it didn't say *shall*. The question is how do we resolve that unless we change the statute?

ROBERTA HOY, LQD: And the Gas Hills which was permitted in, what, 2001?

BILL KEARNEY, POWER RESOURCES, INC.: What's that?

ROBERTA HOY, LQD: Gas Hills doesn't have a well field. It just has monitoring wells.

BILL KEARNEY, POWER RESOURCES, INC.: Monitor wells were not discussed and it's the Class III injection wells.

GLENN MOONEY, LQD: Under industry's proposed language, it seems like an operator could go in and install an entire well field, and then only then, come to us and say we want a permit for this area and we would say we've got to get baseline data before but of course there's some problems with collecting base line data when you have a well field there. Also, what if they hadn't come to us to get approval of their well construction, they may have used inferior materials to figure techniques. We would say, "We can't accept these wells. They're not constructed according to the regulations." In some ways this can protect the operator because they wouldn't be wasting a lot of money on computer techniques or material.

RICK CHANCELLOR, LQD: They cannot construct wells without authorization so I would imagine we would not authorize any well construction without having some assurance of the techniques or completion.

DONNA WICHERS, COGEMA: Which you had all of that information.

RICK CHANCELLOR, LQD: The issue is that the EPA rule says we can't do that for Class III wells.

STEVE INGLE, LQD: One of the things that hasn't been brought up with this is that by installing a well field prior to permit approval is almost a prior approval of the well field. I believe we ran into this with coal gasification west of Rawlins where they installed some of their wells prior to their R&D approval.

BOARD MEMBER GINGERY: Well, we have up here on the screen.....

RICK CHANCELLOR, LQD: The important point to remember too though is right or wrong, the statute reads how it reads.

BOARD MEMBER GAMPETRO: What is our position in terms of making rules if we make rules that agree with our statute but is in violation of the EPA? It would seem to me that if we make our rules in concordance with the EPA that even if the statutes off, we're probably in better shape than.....

RICK CHANCELLOR, LQD: Well, what we've tried to do with these rules is allow construction of some wells so we're still in compliance with the statute because the statute does not state all wells or only some wells. It's unclear if it means all wells, although in Donna's case, we did that. So, we're trying to reinterpret the statute to be in compliance with EPA's requirements to avoid them coming back and saying, "Change your statute." Trying to finesse that a little bit but the statute says with approval (unintelligible)(voice faded).

DONNA WICHERS, COGEMA: It says construction of wells needed to obtain information. I guess these are the baseline monitor wells, maybe allowed but they cannot be used for injection. That's another question we have is why not? Why not when you get your permit, why couldn't you use those wells for injection?

RICK CHANCELLOR, LQD: Convert the wells? If I remember right this goes back to a discussion with EPA that if we allow monitor wells and baseline wells to put in before a permit and later convert those to injection wells, they thought that was in conflict.....

DONNA WICHERS, COGEMA: Because a lot of our baseline wells are obviously within the well field and they're scheduled to be either used for injection or recovery during the operation. That's how we know that they've cleaned up at the end of restoration.

RICK CHANCELLOR, LQD: I have a question for Paul. If those wells after the permitting process were placed in the well field to gather baseline information, does that process also applies to convert those to injection wells, is that kosher?

PAUL OSBORNE, EPA: I think that would be allowable as long as it was clear that the wells initially were allowed as.....you know, often times people go and permit say a strat hole in some cases permit a strat hole and even though constructed in a manner that is to be utilized later and then basically after they have the permit desert that well from being a strat well to being whatever class of injection well it is. That has been done. I think that just going out and putting in a bunch of wells and calling them bore holes and stuff like that and leaving an open bore hole and then converting them later, I don't think that was the intent but wells that were constructed as monitoring wells for some legitimate purpose could be converted.

BOARD MEMBER GINGERY: So it would be part of the permit then? You have these x number of wells out there but when they come forward with their permit, then you would reclassify those wells?

PAUL OSBORNE, EPA: Well, you would have criteria in the permit that basically stipulates how a well would be converted and what the construction standards would be....you know.....adequate cementing casing material. I'm not saying down to the hole size and stuff like that but certainly whatever is deemed necessary by the Director so that he can review that and say, "Well, this doesn't meet our standard or it does."

BILL KEARNEY, POWER RESOURCES, INC.: As a matter of practice, all these wells, monitor wells and our production and injection wells, are put in the same. The above ground stuff might be different but a well is a well out there. They're all put in the same with the same material.

BOARD MEMBER GINGERY: I guess the other thing we should always remember is that we're looking at a lot of different possibilities these regulations would cover and not just one particular industry.

DONNA WICHERS, COGEMA: This is in situ mining.

BOARD MEMBER GINGERY: Yeah, but I think.....

RICK CHANCELLOR, LQD: It could be copper that they may not do as Bill was saying that their baseline wells may not be completed and such but, yeah, I think.....

BOARD MEMBER GINGERY: Yeah, but what I was really saying is maybe our comfort level wouldn't be the same as we have with you.

BILL KEARNEY, POWER RESOURCES, INC.: Yeah.

RICK CHANCELLOR, LQD: So, we could take care of that issue by additional language that allows the wells to be converted from baseline to injection wells.

DONNA WICHERS, COGEMA: So you would strike part of the last sentence that says *however such wells may not be used for injection?*

RICK CHANCELLOR, LQD: I think Roberta's adding some language here to try to capture that (on the laptop which was being projected).

ROBERTA HOY, LQD: Okay, what I did was take that last sentence and split it apart and say construction of wells needed to obtain the information required in Section 3 of this chapter may be allowed with the approval of the Administrator but may not be used for injection until after permit issuance and only if those wells were constructed in accordance with the requirements of Section 6 and there's a specific subsection in 6 that....well....we could just say with Section 6 because 6 includes the requirements for all wells and then those that are specific for monitoring wells and some that are specific for injection wells. If we just said 6 that would.....

PAUL OSBORNE, EPA: I would suggest that you may want to discuss this in your Statement of Reasons as to the intent of this and also just so that it's clear that it isn't intended that somebody could use this to basically construct every single well in a well field.

ROBERTA HOY, LQD: Okay.

PAUL OSBORNE, EPA: Because that's what we were concerned about is that putting in monitoring wells and collecting baseline information to us is less intensive than actually just putting in a new pair of wells.

ROBERTA HOY, LQD: In other words, you could be able to.....

PAUL OSBORNE, EPA: You could be able to utilize these wells but not necessarily. If somebody did a bore hole for instance and they were just leaving that and putting a well in later, I think we would say that well and bore should be plugged until such time you have your permit and you are ready but if you put in a well that's legitimately used for the purposes of collecting baseline and doing your monitoring then certainly you ought to be able to use that after you start constructing your well field if it's converted under the permit.

BOARD MEMBER GINGERY: Comment?

BILL KEARNEY, POWER RESOURCES, INC.: I think a bigger concern to us is, you know I don't know where we left Section 6 yesterday but it says up there constructed in accordance with the requirements of Section 6. I don't know where we left that yesterday but if we have to use those well construction procedures/standards that we talked about yesterday, it's probably better needing money that no more in situ mining will also be put in it in the State of Wyoming. I just wanted to leave you with that. That's how serious those well construction standards are. It kind of fits in here.

PAUL OSBORNE, EPA: Wasn't it left that more information was gonna be collected on that? One of the things that I hadn't mentioned yesterday that occurred to me was that although I'm not disputing the table but the table was a little bereft in the assumption that went into basically developing those costs. I think that the Land Quality Division should at least be provided with some more information as to where those costs came from. I'm not saying that the costs are not legitimate it's just that it's hard to go back and reconstruct where the costs came from when there's no information as to what the assumption was on the well and that kind of stuff. It might be useful.

BILL KEARNEY, POWER RESOURCES, INC.: I thought Ralph covered that pretty good but we do have the backup information for that sheet. The bottom line is we're kind of fixing something that's not broke. We can sit here and argue about the costs all we want but it's significant and my management told me today to again reiterate our concern with that. So that's where we're at. So I guess if someone is going to impose those similar standards on us they might best have very good sound reasons for doing it. I'll leave it at that.

BOARD MEMBER GINGERY: EPA has drawn up some new rules so when you signed, the EPA rules were in effect. We're not changing the rules.

BILL KEARNEY, POWER RESOURCES, INC.: EPA has no rules on the well construction. We just have to supply the information on how we construct them and it's evaluated by the state.

RICK CHANCELLOR, LQD: The size of the bore hole issue is taken from state rules, not EPA.

BOARD MEMBER GINGERY: Okay.

BILL KEARNEY, POWER RESOURCES, INC.: We take exception with the state rules because they've never been applied to our industry.

BOARD MEMBER GINGERY: But we're still going to come back to that so we haven't crossed that bridge yet.

BILL KEARNEY, POWER RESOURCES, INC.: Okay.

BOARD MEMBER GINGERY: I will just say, I've handled too many of these and those kind of threats I don't take too well.

BILL KEARNEY, POWER RESOURCES, INC.: Okay.

BOARD MEMBER GINGERY: All of us have to live under some regulation but I think I have really worked to make this informal and to allow all of your input and I don't appreciate the fact that you're packing your bags and leaving Wyoming and you can take it back to them. I have tried to make this very informal and I have not threatened you in any manner and I don't appreciate a heavy handed deal that you're packing your bags and leaving the state.

BILL KEARNEY, POWER RESOURCES, INC.: I'm sorry if I acted heavy handed. I was just directed to make sure that the board and the DEQ know how significant this issue is. Ralph didn't come back today because he's out running the mine but he asked me to make sure that it was covered again. I hope I didn't insult anybody or hope I wasn't too heavy handed, it's just we are the last mining company in Wyoming and we do have 100 families that rely on that operation and you heard it yesterday, and I'm not going repeat it again, I did my job and brought it before you but it's really important to us. Thank you.

BOARD MEMBER GINGERY: I think it's important to every person in Wyoming but I do take a little offense when we work so hard to be so informal and trying to listen to everyone. ?Sponge? management went out in the last century. Okay. Let's move on because the time is getting away from us again.

ROBERTA HOY, LQD: The next subsection is Section 11(b) and it starts on page 88 of the draft proposed rules. The specific subsection of concern is 11(b)(ii)(B). This goes back to notice of intent for us to do something. *The operator may not commence injection in a new injection well until construction is complete, and (B) the operator has not received notice from the Administrator of the intent to inspect or otherwise review the new injection well within 13 days of the date of notice in paragraph (b)(i) of this subsection in which case prior inspection or review is waived and the operator may commence injection.* I believe the concern is that the 13 days is a fairly short time frame and that the idea of reasonable notice within 13 days.....in other words, we pretty much have to turn around and call them within the next 3 days and say we're coming out to look at your wells. The language again, it's pretty much side-by-side language out of the EPA rules so I'm not sure that we can.....

PAUL OSBORNE, EPA: You know, we're utilizing that rule in some of the Class III operations. It's put in there that when these new wells are drilled the company notifies us and sends in their MIT information on those new wells and if they don't hear back from us in 13 days it's principally designed that if we can't get to it or if we don't think it's a problem, then they can basically start injection but it's given us an opportunity to say, "You know, we're not sure from what we reviewed and so we're gonna come out and actually inspect the wells", but if that 13 days is short because it's supposed to basically mean that EPA or whoever is running the program has to act quickly to give the operator a chance to not just sit around and have a well that's not in operation.

DONNA WICHERS, COGEMA: I guess the question, it was just confusing, it says that there is no notice but then the last sentence said that in the notice you'll include a reasonable time period to inspect the well. I guess that just means that eventually you will send a notice or.....?

PAUL OSBORNE, EPA: No, it means that if we are going to inspect the well and we have to get the letter to you within 13 days.....the company sends the information in that says we have completed this well so it provides a period for EPA or the Director to say, "We want to inspect this facility and we will be out there next week on Monday or Tuesday." That's what the reasonableness is. The Director can say, "We want to inspect this well but our people aren't going to get to you for two months."

RICK CHANCELLOR, LQD: Would it make more sense to include, if the Administrator includes a notice or gives a notice of intent to inspect, he shall include a reasonable time?

PAUL OSBORNE, EPA: Yeah.

BOARD MEMBER GAMPETRO: It's an if/then thing. It's confusing because it's a double negative.

DONNA WICHERS, COGEMA: It just didn't make much sense.

PAUL OSBORNE, EPA: I didn't write the EPA regulations!

BOARD MEMBER GINGERY: So if I'm an operator and I have not heard something on the 14th day, I can go ahead?

PAUL OSBORNE, EPA: You bet.

BOARD MEMBER GAMPETRO: I would say, if notice is given then the Administrator.....

ROBERTA HOY, LQD: Okay, if the Administrator gives notice.....because there's two notices. *If notice is given the Administrator shall include in the notice a reasonable time period in which he or she shall inspect the well.* (Chapter 11, Section 11(b)(ii)(B)). Does that capture it?

DONNA WICHERS, COGEMA: Yes, that's fine. Thank you.

BOARD MEMBER GINGERY: Okay. Next.

ROBERTA HOY, LQD: Section 11(d) which is on page 90 of the draft proposed rules. The concern again relates to the use of terms like underground source of drinking water versus unauthorized zones. In the EPA rule the prohibition is against water going into an underground source of drinking water. Again, we've used the broader term that it can't go into any zone not authorized for it to go in. This again, goes to the fact that we have trona mining.....it's dry. There's several hundred feet of dry material. So, the concern is it would be an unauthorized zone for that fluid to go into another dry area. I mean, you could damage the resource by having it coming out where you want it and then coming out somewhere else. There is no underground source of drinking water anywhere in the vicinity except maybe several hundred feet at the very surface. So, again, we're trying to write for broad circumstances, not just for uranium mining.

BOARD MEMBER GINGERY: Comments?

DONNA WICHERS, COGEMA: Our comment is the same as yesterday, that this is more stringent than EPA because EPA deals with drinking water and affecting the health of persons is directly what the regulation says. We're talking about health issues and things.

RICK CHANCELLOR, LQD: So we should note in the Statement of Reasons that the state is being more stringent than the federal rule.

ROBERTA HOY, LQD: And then we can also clarify why we have a somewhat broader rule.....same thing with coal gasification. It may get somewhere it's not supposed to be. It doesn't necessarily have anything to do with an underground source of drinking water but you have gas going somewhere where you don't want it.

BOARD MEMBER GINGERY: Has this been a problem?

PAUL OSBORNE, EPA: You know, it is a potential problem and for instance the nacolite mining where mining is actually taking place in a bedded frame out of salt unit that has the saline zone, basically has no water in it. There are aquifers above that and the cavity is in there and we have used the Director's discretion to basically establish that you can't reach the confinement of that zone simply because we don't know where this fluid is going to go and if it's going to end up in an underground source of drinking water and that's simply to give us time to work with the company to come up with a scheme that will help figure out where this fluid is going if there a loss of fluid in the cavity. There are cases where the Director needs to have some discretion to deal with that issue. It's not always as crystalized that we know how it's going to get to the USGW. It might not go through the well bore. It might out into the fracture and then into underground source of drinking water.

BOARD MEMBER GINGERY: Okay. Can we pretty much move on then to the next one?

DONNA WICHERS, COGEMA: Yeah. Let's move on please.

BOARD MEMBER GINGERY: This doesn't have anything to do with this but what do you guys out at your area.....you're in the middle of the field.....what do you do about drinking water?

DONNA WICHERS, COGEMA: Well, we have a lower zone where our water well is completed. We're not completed in the production zone.

BOARD MEMBER GINGERY: Okay. Let's move on. I just thought it might be a little bit more complex than I thought it was. We can move on.

ROBERTA HOY, LQD: The next section of concern is Section 12(a) which begins on page 91 of the draft proposed rules. This entire section has to do with noncompliance and excursion. In particular, 12(a) has to do with reporting requirements and we've included the terminology, *noncompliance which may endanger public health or the environment, including potential excursions within 24 hours of the time the operator becomes aware of the occurrence*. The concern is that *potential excursions* is very broad and not well defined. However, when we first sent these rules down when we were discussing them with EPA, we received comment on that particular section and I thought I had brought those comments with me but I've seem to have picked up something else. Maybe I can figure it out from the Statement of Reasons. I apologize but I can't find those initial comments but there was something about the fact that if we didn't have some way of reporting potential or the noncompliance issues that we would not be as stringent as some aspect of the EPA rules.

PAUL OSBORNE, EPA: I honestly don't remember but we did make a comment but I can't tell you exactly what it was. I didn't bring my copy of that at all.

BOARD MEMBER GAMPETRO: I guess I would look at this almost as totally unenforceable. I mean, how do you say they should have known? Maybe if you said suspected excursions instead of potential but again, how would you ever know that they knew?

PAUL OSBORNE, EPA: Well they detect something and then they confirm that. I think what we were saying is the Director be at least notified that something is going on and you have been following up on it so that if the state wishes to do something it has the opportunity.....

BOARD MEMBER GAMPETRO: Maybe we need Paul to use that word if anything is detected than as opposed to, suspected or.....

BOARD MEMBER GINGERY: No.

BOARD MEMBER GAMPETRO: No?

PAUL OSBORNE, EPA: The contention in our comment was that if the noncompliance may cause a result or endangerment. We believe that the language that was originally in there did not meet the intent of the may cause requirement in 144.51.....I guess that's (B)(i) and (ii) so it was basically that there is a detection or there was some sampling that lead to believe that there might be an excursion and the way our regulations is written is that you have to notify us if there is something that may cause contamination going on. Now, we don't know until we confirm that but this was just intended to give the Director an opportunity to get involved in whatever way the Director deems necessary if there was a notice that something is going on that may cause a problem.

BOARD MEMBER PROFFITT: How about *foreseeable* as a term rather than *potential*?

RICK CHANCELLOR, LQD: If I understand industries concern correctly, you don't have a problem with notifying us of excursions that may impact public health and environment, it's the issues on potential excursions?

BOARD MEMBER PROFFITT: Right.

RICK CHANCELLOR, LQD: Right now don't you notify us verbally that you took some sampling and you may have an excursion then you do additional sampling to confirm that and once the excursion is confirmed then you do a written report to us concerning that? So right now you verbally inform us of that you may have an excursion, correct?

BILL KEARNEY, POWER RESOURCES, INC.: If you want, I'll summarize how it's done.

RICK CHANCELLOR, LQD: Please do.

BILL KEARNEY, POWER RESOURCES, INC.: We have, at the Smith Ranch Highland Uranium project, on the order of 450 monitor wells that are monitored every two weeks for the excursion parameters. When the samples come back every day, Monday through Friday, they're reviewed and if an excursion is detected, if the parameters show they're above the limits then that day or the next day a confirmation sample is taken and run that day. So, basically, we have the sample and the confirmation sample within a period of one to two days. If it truly meets the criteria for an excursion, we're required to call and notify them on the phone and write a written report within five days. Our concern is that there's really no such thing as a potential excursion in our type of operation because we confirm it very quickly. It might be bad lab data. It might have been a bad sample. We have very specific requirements in our permit on what we have to go through to confirm the excursion and notify not only the DEQ but the NRC as well. This is another thing that probably through EPA, was potentially written for a different class of well. It's something that's trying to be applied to our situation.

BOARD MEMBER GINGERY: So it's more of a black and white situation. Either it is or it isn't and up to that point you're still investigating?

BILL KEARNEY, POWER RESOURCES, INC.: It is at our operation, yeah.

DONNA WICHERS, COGEMA: The timing is so tight that we have to issue a notice one day and issue a notice the next and it is just sort of ridiculous.

BILL KEARNEY, POWER RESOURCES, INC.: It's not like we would take a sample and say it might be a potential excursion. We've gotta put another well in that's going to take three weeks and get more samples, it's nothing like that. It's very discrete on what we have to do and it's worked fine for 25 years.

BOARD MEMBER GINGERY: If *potential* was out of it, how does that affect our.....oh, you've put up something new since I.....

ROBERTA HOY, LQD: Well, just the process that Bill was describing is outlined on page 94 of the draft proposed rules. I'm wondering if we could say something like *including noncompliance which could foreseeably result in an excursion*. In other words, there's some level of experience that you get as you're operating over time that if something happens then the result in the past has been that you'll have an excursion. The idea is that you have a red flag and one instance that I'm thinking of is, and this doesn't happen for all excursions, but in some particular settings you'll have most excursions required at two parameters exceed their upper control limit or whatever indicator they're supposed to. In some instances though you'll have one parameter that starts going up and it will gradually, this doesn't happen in all cases. On some excursions, everything just goes like this but in some, one parameter gradually goes up and only that second one goes up in a very short time so you have a warning that something's happening, it may result, but doesn't necessarily always go up and plateau but it's just a reminder that this happened before, and as a result, it went on excursion. So if you said something like which could reasonably foreseeably result based on your.....in other words, you're taking prior experience with the well field into account.

PAUL OSBORNE, EPA: The issue in our regulations is that you need 24-hour verbal reporting with a follow-up if you have something going on that may cause that monitoring that may indicate that there may be an excursion or in the case of the regulations it says there may be something going on that would cause migration of fluid into the USGW and so the *may* is basically in our minds if they have an initial hit that they're going to investigate further is simply that the operator report that by phone and then follow-up once they know the follow-up isn't required to be followed-up until five days later but presumably the company would be in contact with the Director as soon as they got the follow-up and said that it was a bogus sample.

BOARD MEMBER GINGERY: What if we, instead of this *potential* were to use.....what was your word with *may*?

PAUL OSBORNE, EPA: It was reporting of an activity that *may* cause an endangerment to a USGS or a noncompliance to the permit condition which may cause fluid migration.

BOARD MEMBER GINGERY: Why don't we use that language because that's what we want to get to isn't it? The other seems to be a little offensive.....the strength of it. Why don't we use the *may* and we would be in compliance with your regs.?

ROBERTA HOY, LQD: In other words, if we just took out everything that's hi-lighted, verbal reports, any noncompliance which may endanger public health or the environment within 24 hours of the time which mirrors this language over here, then you get the term potential excursion out of there.

BOARD MEMBER GAMPETRO: Every well out there is potential.

BOARD MEMBER GINGERY: So the lab operates, just out of curiosity, five days out of the week?

DONNA WICHERS, COGEMA: 24 hours a day in some cases.

BILL KEARNEY, POWER RESOURCES, INC.: Well, not 24 hours, but it operates five or six days a week and there's three people and we have two automated analyzing devices that monitor just those sample.

BOARD MEMBER GAMPETRO: This is on site?

BILL KEARNEY, POWER RESOURCES, INC.: Yeah, on site.

DONNA WICHERS, COGEMA: Okay, I guess we're taking out *potential* in (a)?

BOARD MEMBER GINGERY: Yes. As Roberta has it up on the screen. Does everyone feel comfortable with that now?

ROBERTA HOY, LQD: Here's what was struck.

DONNA WICHERS, COGEMA: Well I'm just wondering what happens for the section below that deals with potential excursions? Will that be corrected as well?

RICK CHANCELLOR, LQD: Under (ii)(A)?

DONNA WICHERS, COGEMA: Yes, (ii)(A).

BOARD MEMBER GINGERY: I think just use similar wording that we had above.

ROBERTA HOY, LQD: Well, what we could do is leave out (B).....if you reworded it so that (ii)(B) is gone, there were different reporting requirements depending on whether it was or wasn't a potential excursion so if you leave out this latter part and then reword this top part.....

BOARD MEMBER GAMPETRO: I don't understand why the word *potential* is now a problem down below. Now we're talking about the written report and you know now that you have data.

DONNA WICHERS, COGEMA: That's a confirmed excursion.

RICK CHANCELLOR, LQD: I guess the issue I have with EPA's, why do they want us to put potential excursions in our regulations? From what I understood what Paul said they were concerned that our original language didn't quite meet their *may*.

ROBERTA HOY, LQD: They're terminology wasn't *potential* excursions. That's how we were trying to address.....

BOARD MEMBER GINGERY: What I'm saying is use EPA language and then we have a common language. I'm getting the feeling that we're concerned about the word *potential* but I think it's taking it to another level is what people are concerned about.

ROBERTA HOY, LQD: So if we change 12(a)(ii), again going back to the noncompliance, that we just say the written report for this noncompliance occurrence shall describe and then it follows the EPA stuff and then subsection (B) goes away.

BOARD MEMBER PROFFITT: Wouldn't (i) and (ii) translate to (A) and (B) then?

ROBERTA HOY, LQD: Right.

BILL KEARNEY, POWER RESOURCES, INC.: If I could really confuse things now but it's probably an appropriate time to do it if you look at the EPA rules, EPA to my understanding has no term or definition for an excursion. What the DEQ is trying to do here.....

PAUL OSBORNE, EPA: We have noncompliance cases.

BILL KEARNEY, POWER RESOURCES, INC.: Right, the term noncompliance and the state is trying to make the connection that an excursion is a noncompliance. The industry has for many years not agreed with that. An excursion that we have in our permit application and the regulations realize that you can have excursions and that you have to correct them and that they're not a noncompliance issue. This really muddies the water here because to us a noncompliance issue is other things like broken equipment or something but it's not an excursion.

PAUL OSBORNE, EPA: We would say that an excursion is a noncompliance of the permit because you're having the potential for fluid movement but there would be stipulated corrective actions which you would be doing to basically pull that excursion back in.

BILL KEARNEY, POWER RESOURCES, INC.: Right.

PAUL OSBORNE, EPA: It's like a failure of MIT's is in a certain sense an excursion or a potential excursion and that is considered to be noncompliance with that you have to maintain your mechanical integrity. So the excursion could be caused in your case by several other factors.

BILL KEARNEY, POWER RESOURCES, INC.: I'm thinking more of the conventional horizontal excursion to the monitor well ring.

BOARD MEMBER GINGERY: Yes Steve?

STEVE INGLE, LQD: The Environmental Quality Act (ACT) defines excursions in W.S. §35-11-103(f)(ii) which says excursion means any unwanted and unauthorized movement of recovery fluid out of the production zone as a result of in situ mining activities.

BOARD MEMBER PROFFITT: Unauthorized is noncompliance.

BOARD MEMBER GINGERY: So do we make reference to that then some place here so people know?

PAUL OSBORNE, EPA: Well you could do that in your Statement of Reasons.

ROBERTA HOY, LQD: It's in the definitions too. We crossed referenced that.

BOARD MEMBER GINGERY: Does that help your question? I don't know if it does.

BILL KEARNEY, POWER RESOURCES, INC.: Well, it's a lot bigger issue that we're going to get into.

RICK CHANCELLOR, LQD: I think maybe it's a question of semantics is that we do not issue a Notice of Violation for excursions. EPA may feel they're in noncompliance with the permit. The statute clearly anticipates there's going to be excursions so it's built into the permits so we don't issue a violation every time there's an excursion. We just require them to take corrective action. So when you talk about noncompliance generally DEQ talks about violations so it's a point of semantics that when we talk about excursions, we're not talking about a violation. EPA talks about being a noncompliance issue and maybe we can put the word from our definition of unauthorized movement therefore we use the word in our statute. It basically has the same meaning that EPA is looking at but does not use that red flag as being.....

BOARD MEMBER GINGERY: So (A) isn't correct to use then in this case?

RICK CHANCELLOR, LQD: We have not treated it as a violation. Usually when we look at noncompliance, we look at violations if they're not in compliance with the rules and regulations in the permit. We talk about excursions but we do not look at that as a "violation." If it's unauthorized then they have to take corrective action but it's built into the whole system.

BOARD MEMBER GAMPETRO: The violation would be if it wasn't corrected.

RICK CHANCELLOR, LQD: Right.

BOARD MEMBER GINGERY: So when it says a written report shall describe.....they wouldn't write a written report based on that.

RICK CHANCELLOR, LQD: Well, they're required to write a written report based on the unauthorized movement of that fluid.

BOARD MEMBER GINGERY: Well, shouldn't we say that?

RICK CHANCELLOR, LQD: Unauthorized as opposed to noncompliance?

BOARD MEMBER GINGERY: Yeah.

RICK CHANCELLOR, LQD: I think maybe the issue we have to address here then is that this section covers both excursions and noncompliance issues. We tried to build that into the title so we have noncompliance issues and we have excursions. They're not necessarily the same but the reporting requirements are basically the same. So, we're trying not to call excursions noncompliance so maybe we need to do some word smithing in this section here to show if you have an excursion you're talking about unauthorized as opposed to noncompliance.

ROBERTA HOY, LQD: I think we already deal with that because 12(a) is specific to noncompliance which is not the normal thing. If we're going to run into something, it's usually excursions. So, 12(a) is to address the issue with EPA with this noncompliance so there's 12(a) and it sits sort of by itself. That's the first piece of this whole section and then the rest of Section 12 deals with excursions....so 12(b), 12(c), 12(d), and on deals with excursions and how we handle those. We're keeping them separate.

BOARD MEMBER PROFFITT: In our Statement of Reasons if we put an unauthorized excursion is a potential noncompliance action, wouldn't we reach the same.....I mean, that would differentiate the two?

RICK CHANCELLOR, LQD: Or in 12(a), are those excursions that move into the realm of the excursion into a noncompliant activity where they weren't controlled or whatever. Is that how you envision 12(a) versus 12(c)?

ROBERTA HOY, LQD: Well, of course, 12(a) could be something too that isn't related potentially to excursion like a casing break.

RICK CHANCELLOR, LQD: Right. It could be a lot more than an excursions.

ROBERTA HOY, LQD: Right. So it's a broader term.

BOARD MEMBER GINGERY: 12(c) is kind of the investigatory aspect of it and then (a) is that it's been determined.....all I'm saying is it seems like (c) should come before you get to a noncompliance issue.

ROBERTA HOY, LQD: In fact, if anything, we should split the sections.

BOARD MEMBER GINGERY: You're getting to the real point that one moment we want to mix apples and oranges and then in the next moment you tell me there are two separate issues. Let's make them two separate issues.

RICK CHANCELLOR, LQD: Could we structure 12(a) to be noncompliance issues and not necessarily talk about excursions explicitly? Although excursions could be a noncompliance issue.

ROBERTA HOY, LQD: Right and see that's what it says now. Just verbally report any noncompliance which may.....

RICK CHANCELLOR, LQD: But if you go down to 12(a)(ii) we start getting back into talking about excursions again.

ROBERTA HOY, LQD: Okay, but then we took that out. So, (ii) becomes provide a written report and then the written report of the noncompliance occurrence and the written report shall describe. So, we took all reference to the word excursion out of (a).

RICK CHANCELLOR, LQD: So, 12(a) is just noncompliance issues.

ROBERTA HOY, LQD: Yes and then once you get past that then everything.....

BOARD MEMBER GINGERY: How does that work for you then?

DONNA WICHERS, COGEMA: That's okay and then 12(b) is just excursions or.....because that talks about confirmation.

ROBERTA HOY, LQD: Right. 12(b) - we're now in the realm of excursions.

DONNA WICHERS, COGEMA: So that would remain as is?

ROBERTA HOY, LQD: Right.

RICK CHANCELLOR, LQD: And 12(c) is reporting requirements for confirmed excursions?

ROBERTA HOY, LQD: Right. 12(c) is confirmed excursions.

BOARD MEMBER GINGERY: I think Rodney explained it better than I did. It seems to me that in regulations we have the serious aspect up front and the investigatory aspect coming afterwards just seems to me that they need to be reversed.

BOARD MEMBER PROFFITT: When I first read this, I kind of put it in criminal law terms and it looked to me like these unauthorized excursions were a lesser included offense and that's not the case, they aren't a lesser included offense. They are backwards and they don't follow a logical progression.

BOARD MEMBER GAMPETRO: But that's if you only consider excursions as noncompliant issues. What they're saying is that there are a lot of other potential noncompliant issues like broken this and broken that.

RICK CHANCELLOR, LQD: But I think it does make some sense to have 12(b) become 12(a) and talk about confirmation of excursions and then 12(c) become 12(b) which is reporting of those excursions and then at the end the big whammy is noncompliance.

BOARD MEMBER PROFFITT: Exactly. Then it follows a logical progression.

ROBERTA HOY, LQD: So, we'll just make 12(a), my suggestion would be put it after everything that talks about excursions just to keep the excursion discussion together.

RICK CHANCELLOR, LQD: Okay.

BOARD MEMBER GINGERY: Do you need to work on this a little more or do you have it down?

ROBERTA HOY, LQD: No, I have it.

BOARD MEMBER GINGERY: Okay, let's move on.

ROBERTA HOY, LQD: The next one is 12(d) which begins on page 96 of the draft proposed rules. This goes back to another point of discussion from yesterday which has to do with what is the boundary of the aquifer exemption?

There are two issues: the first one is if your aquifer exemption boundary is the monitor well ring then as soon as it goes on excursion you've not only violated the state concerns about the water issues, you've also violated the federal concerns because you're now out of the aquifer exemption area.

The second issue is that we haven't been consistent in the way in which the aquifer boundary has been delineated and what I'm afraid of if you look in the past there is some discrepancy between what the state intended and what EPA actually approved.

Probably the thing to do is to deal with the first issue which talks about whether or not you draw at the monitor well ring plus the buffer. My understanding is that EPA is concerned about doing that because the monitoring well ring was designed as the buffer. I tried to draw a diagram that would clarify some of this terminology.

RICK CHANCELLOR, LQD: I think Land Quality sees advantages to having the exemption boundary being outside the monitor well boundary because the differences between EPA's MCL's and Water Quality's water standards.

ROBERTA HOY, LQD: I don't know if you can see this or not but if you have the production zone, then according to what EPA's approach to exempting is, they only exempt what is commercially produce able. The requirement is that it be limited to a very specific area. In other words, it's not very broad.....it's not the permit area in it's entirety, it's those portions of the permit area where there's actually a production zone that can be commercially produced. Beyond that you have the monitor well ring which is established a certain distance. The intent is to be able to detect an excursion soon enough that is doesn't get completely out of hand but not every little twitch that you anticipate. Then in one instance the aquifer exemption boundary was drawn as the monitor well ring plus another quarter mile buffer. It's all delineated by quarter, quarter section. Attached to the exemption is a table with all this in there. There's other aquifer exemptions that are somewhat more.....according to the EPA letter.....it's just this. According to the public notice from WQ, it's the entire permit boundary. So it's not clear who is intending to do what.

PAUL OSBORNE, EPA: The original idea that we talked about when the program was delegated is the one here where the exemption boundary is basically the outer monitoring well and that was simply because that was considered to be a buffer because that material wasn't going to be mined so when we added it and kept it as much as a minimum as possible but the idea being that the monitoring of the parameters such as sodium and chloride which are much more mobile than the metals that we're really concerned about for which there are MCL's would be such that it would allow the operator to detect and correct an excursion that even though there was perhaps some movement of sodium and chloride into the adjacent non-exempted area it still is not because our prohibition of movement is such that it says that the operator is not allowed to maintain or conduct any other injection activity in a manner that allows movement of fluid containing any contaminant into underground sources of drinking water if the presence of that contaminant may cause a violation of any primary drinking water or may otherwise adversely affect the health of humans, i.e., endanger that source of drinking water. I think there is a lot of flexibility in that if the operator, for instance, had information that showed that outside of that there was already some, for instance, where there was high nitrate already outside of the boundary in some localized areas and movement in that case wasn't considered to be endangerment because it already exceeded what was coming off site. So, there's some flexibility for the state in looking at that but that's essentially the background of why we try to keep the monitor well ring at a minimum. There was a larger exemption that I know that Region VII and Region VI have included a bigger buffer zone. Now why they did that I'm not really privy to and nobody confesses to remember exactly why they added that buffer on.

ROBERTA HOY, LQD: One way in which we attempted to deal with this and this is in 12(d)(i) where it talks about if an excursion is not controlled within 30 days then you have to start sampling for those parameters for which EPA has MCL's. So there's a certain time period that they can have an excursion for using their parameters which are things like bicarbonate and PH which do not have EPA MCL's. I think PH does but it's a pretty broad.....

PAUL OSBORNE, EPA: That's a whole different issue.

ROBERTA HOY, LQD: Okay. You have 30 days that you're just sampling for those indicator parameters but starting at some point in time you start looking at those parameters which are of concern to EPA to make sure that it hasn't entered into the realm where it's outside not only the monitor well ring but you're into the outside aquifer exemption area.

BILL KEARNEY, POWER RESOURCES, INC.: Mr. Chairman, if I could borrow the easel over there.

BOARD MEMBER GINGERY: While he's setting up there, the aquifer exemption boundary, the white line, now who set that boundary?

ROBERTA HOY, LQD: Well, what we have to do is apply to EPA for a program amendment. Originally that was done by the Water Quality Division. So the older well fields like COGEMA and Highland, those were done by Water Quality. The most recent one, because of the Memorandum of Agreement between LQD and WQD, we did the most recent one.

BOARD MEMBER GINGERY: Okay. We're setting that boundary.

ROBERTA HOY, LQD: Right and then we sent it to EPA and they either grant us the program amendment or not.

DONNA WICHERS, COGEMA: And they did agree?

ROBERTA HOY, LQD: Yeah. Gas Hills, they got it.....

PAUL OSBORNE, EPA: In some cases this was the EPA boundary that was set by us to be exempt but there have been some cases where it was some established boundary that is outside of that. Both of those cases have occurred. I can't really speak to why that came through, it's just that originally when we first started doing this, this was what we had opted to do because there was data to show that within this zone there was still some elevated material but that this was the commercial mine zone so we opted for the buffer to allow for the excursion monitor.

BOARD MEMBER GINGERY: Roberta, one of our challenges is to be consistent or is that part of this exercise?

ROBERTA HOY, LQD: No, it's just some background information in terms of when we get into the discussion of what the concerns about the water quality parameters and that sort of thing because in the rule it doesn't say how we're drawing the aquifer exemption boundary.

BOARD MEMBER GINGERY: I want to go onto his example here but it seems like to me is that one thing you're doing a boundary as I was told was formalized on quarter sections and then the next moment I'm hearing that we've set them up more on a geographic boundary. If I was in the industry I'd like to know one way or the other with being consistent instead of inconsistent.

ROBERTA HOY, LQD: Correct.

RICK CHANCELLOR, LQD: The last permit we issued was Gas Hills and it was outside the monitor well ring?

ROBERTA HOY, LQD: It was the one with the quarter mile.

RICK CHANCELLOR, LQD: So the last one we did, we did create an additional buffer.

BOARD MEMBER GINGERY: What I'm saying is in the future, are we going to do it the same as the Gas Hills for the 20 applications that will be coming in to help the state out? That's what I would like to know.

PAUL OSBORNE, EPA: One of the issues as I understand it and I may be wrong about that but the issue of restoration especially and our feeling that we don't want migration outside of the zone is that there's some zones that are like this and there are some zones with a quarter mile and the industry as I understand it would like to at least have some buffer on here. Now, Gary told me that people would be satisfied if we added another 500 feet onto this buffer or whatever that is but the problem is that we would still have to go through....that was the purpose of the letter that we wrote that said maybe we could do this essentially is that you have to go through the process of saying, "Okay, if we want to go from here to here, we have to basically go through the exemption process." The state has to basically issue a public notice and say we're going to change this from here to here from what EPA said to here and then it's going to have to be submitted back down to the regional office and we're going to have to determine whether or not the reason, the criteria, used for viewing that exemption which are that it's commercially mine able which this probably is not commercially mine able and then it has to be too contaminated to be a potential source of drinking water in the future. That's where the rub is that we just can't say we're approving this exemption because we're adding a buffer onto here. We have to use one of the existing criteria in our exemptions and that is that it's commercially produce able which if it was they would be putting in a well field and then there would still be the issue of having some kind of buffer beyond that. I'm just saying that the operator would have to provide to the state information that would show that this zone can be exempted under one of the criteria. That's what our issue is. Obviously we raised an issue relating to when whatever restoration they do has to be such that migration out of the mine zone won't migrate into the off site USGW such as MCI survival. In talking to the COGEMA folks and what they're concerned about having this boundary here is that their restoration in some cases might have some migration off site and that's one of the reasons why they feel a buffer that no matter what they do in here they need an additional buffer to ensure migration doesn't happen. Correct?

DONNA WICHERS, COGEMA: That's correct.

PAUL OSBORNE, EPA: So, that is the reason and I understand their concern but we have to basically have some kind of information that shows us what criteria we're going to use to make that exemption because the Safe Drinking Water Act basically is set up to say we have to protect future sources of drinking water so the agency policy that evolved from that was to establish these criteria and that's what we're supposed to be using. I can't speak to what was going on in the minds of people in Region VI or Region VII as to why they chose the overall permit boundary as the thing. Personally I don't think that they would have data to show that it wasn't likely to be used because it was too contaminated but I may be wrong about that because I never looked at the data.

DONNA WICHERS, COGEMA: Well, in the state of Texas, again, we have three operations and 22 well fields. Down there it is the least boundary which is essentially the permit boundary.

BOARD MEMBER GINGERY: The least boundary is the permit boundary.

DONNA WICHERS, COGEMA: Yes, in Texas. We have three operations and there were numerous uranium ISL operations in Texas and it was done with essentially the permit boundary as the aquifer exemption.

ROBERTA HOY, LQD: The decision that's before you in the rules isn't how to draw the boundary. We have to work this out with EPA but is background information for the monitoring requirements, those are the issues because we're saying in the proposed rules we included not only the parameters of concern from the state but we also included the parameters of concern to the EPA. That is the basis for the comment is why all these parameters and we're saying, "Because of the way in which the aquifer exemption has been drawn, that monitor well ring is the place where you detect not only the things of concern to us but also the things of concern to EPA therefore we have to include both our parameters and their parameters because that's the first line of defense if you will.

BOARD MEMBER GINGERY: I respectfully disagree. If you use the word exemption and you've taken 400 acres out there based on a survey, people take the word exemption, and I think what we're getting to here is more the monitoring of how we control that but as far as I see it it's very confusing in what we're trying to do. Why don't you go ahead and see what you have here and we'll add that in.

PAUL OSBORNE, EPA: I just want to add one other comment that it may have been a poor choice of words in our comments but we've always singled out in our correspondence the MCL's of concern as far as this particular situation is concerned is principally radium, uranium, arsenic and metals that would be mobilized by the operation. I would conceive that we wouldn't probably have any antimony and some other things. In some cases we might have nitrate depending on what they were using as a lixiviant but I don't believe people are using that any more so I don't see that as an issue but there are some times when you could have migration outside of an exempted area that would have something like nitrogen or some of those MCL's but it seems like what we're dealing with here is the uranium in situ is not to preclude that the state might not have a situation that sometime in the future where it was some other operation and there would be different metals. If you wanted to limit the parameters than there would have to be some language that would allow the Director to limit the parameters based on the expected metals of concern for which there are established MCL's or even non metals. Eventually they might have an MCL, for instance, for sulfate so you could put in some language that will allow you to put that constraint on at the time that you do the permits. That way the industry wouldn't have to basically begin monitoring for a lot of things that they'll never have.

BILL KEARNEY, POWER RESOURCES, INC.: Paul, I know Donna and I and Marion all applaud what you're saying that that's a common sense approach but if we're not ever going to see vanadium or beryllium or something that the state shouldn't have to have that in their regulations. I guess our feelings is how a lot of these regulations should be done is the state should have the flexibility. We talked about a lot of things yesterday and today that doesn't make sense for Wyoming and now you're telling me you can make an exception here and you don't have to put all these things in and that's great.

PAUL OSBORNE, EPA: I'm only saying that we're concerned about the MCL's but it doesn't mean the Director.....you know in my mind if we wanted to solve that we could say, "Well, maybe we don't have the flexibility to do that" but I think that there ought to be some way that you could window that out.

BILL KEARNEY, POWER RESOURCES, INC.: I sure hope so. It's crazy.

PAUL OSBORNE, EPA: But all I'm saying is that there might be case where the Director would want to be monitoring for cadmium or something like that.

ROBERTA HOY, LQD: What if we put a phrase at the end to try to capture that which said unless the Administrator determines that the occurrence of a specific parameter is not related to the excursion.....is not likely attributable.....I mean that sounds terrible. What did you say Don, I'm sorry.

DON MCKENZIE, LQD: It's not present.

DONNA WICHERS, COGEMA: It's not likely to occur as a result of the operation or something.

ROBERTA HOY, LQD: Okay, so the last phrase would be unless the Administrator determines a specific parameter is not likely to occur as the result of the in situ operation.

BILL KEARNEY, POWER RESOURCES, INC.: That's the type of flexibility we would like to see on other EPA requirements that don't directly apply in Wyoming.

PAUL OSBORNE, EPA: You know, we specifically have flexibility built into our rules in cases like this. Some places the flexibility is just not simply there.

ROBERTA HOY, LQD: Do I need to include a cross reference to a specific EPA rule in the Statement of Reasons?

PAUL OSBORNE, EPA: I don't think so.

ROBERTA HOY, LQD: Okay.

BOARD MEMBER GINGERY: Let's get back to our drawing here.

BILL KEARNEY, POWER RESOURCES, INC.: Our non artist rendition. I don't want to insult anybody but I just want to say that this issue here is the top two that we're going to talk about for yesterday and today. One is the well drilling and construction standards and the other one is the aquifer exemption boundary. Roberta did a good job showing it there but I wanted to simplify a little more.

These are areas of uranium mineralization within a permit area and a mining company comes in and drills thousands of holes to figure out what is economically mine able. Can we mine this area here or can we mine this area here? We put a monitor well ring around that and since day one at the DEQ, the monitor well ring was the extent of the production zone. Anything outside of that corresponded with the aquifer exemption area. This is really important because this is all that the state's ever exempted. As a matter of fact, they don't even exempt the wells. The wells are a point of compliance and they are not considered part of the aquifer exemption. The industry has disagreed with this since day one, since the late 70's. In my opinion, the state wanted to be as restrictive as possible to protect the groundwater. That's what everyone in this room that has an operating facility has. This is what was approved as the aquifer exemption. So in effect when we do have an excursion, although we haven't gotten a violation for it, probably technically it sort of is because we're going out into what EPA calls the underground source of drinking water. Anything outside of this is the underground source of drinking water. The important thing I put on here is that this area is a uranium mining district. There's ore spread out through this zone. We're not talking when you exempt an aquifer, you don't exempt it from the ground surface at 10,000 feet, it's just one or two specific vertical zones which are typically much deeper than anybody does use.

PAUL OSBORNE, EPA: Not necessarily.

BILL KEARNEY, POWER RESOURCES, INC.: In more cases than not. So, you have these uranium, additional areas out here, so I think what the other states have done including Nebraska where our sister company is and Donna's operation is in Texas, it made a whole lot of common sense to say, "This whole area here is subject to bad water quality here or there, some of it's going to be mined, some of it's not. Let's come up with an area here that makes sense that should be the exempted area and the exempted aquifer." It goes to public notice and the land owners and everybody knows what it is and no body protests it and that's it. That's what it is. That's a very logical thing. I think that's why the other states did it because it makes sense and it's workable. This aquifer exemption issue really affects a lot of things. It affects the excursions. It affects our restoration. Our restoration, when we're done restoring this ground water, it is going to move some. This water naturally moves in our area only two to four feet per year. That's how far it's moving. It's here right now and next year at this time it's going to be right here. So, it's going to take some time to get out to the monitor well ring. It's going to take longer if you extended the aquifer exemption boundary some. The water, like in our instance, is all moving in a north east direction. So when we're done this water is not going to go like this, everything is going to be moving in that direction. We have extremely good data that shows that. The aquifer exemption area, what that does for you, it gives you an added buffer area where the natural geologic materials act as a filter and return that water more of what it was naturally even after we've done restoration thereby affording more protection out here. In summary, that's what we're looking at but we are very concerned with our operations and COGEMA's where the monitor well ring is the exempted aquifer. It was wrong to do it in the late 70's and early 80's and even in the 90's but that's what it took to do business in Wyoming. With that, I'd open it to any questions or if Donna or Marion or anybody else would like to comment on it.

BOARD MEMBER GINGERY: From the dash lines out to the exemption line, if that's the right terminology, what is that area called presently?

BILL KEARNEY, POWER RESOURCES, INC.: This is the point of compliance. Anything out here is just drinking water. Right now, we are forced to protect anything outside the monitor well.....

BOARD MEMBER GINGERY: But we don't use an official title for that?

DONNA WICHERS, COGEMA: No, but that's all included within our mine permit.

BILL KEARNEY, POWER RESOURCES, INC.: Yeah, but it has no designation. Basically, EPA would refer to it as an underground source of drinking water because it's outside the aquifer exemption. Even though it might have uranium, radium, and radon in it.

BOARD MEMBER GINGERY: Okay.

BOARD MEMBER PROFFITT: Is this a case where be careful what you ask for because you might get it or you would have to extend your monitor wells to the out lying area?

BILL KEARNEY, POWER RESOURCES, INC.: No, you could show you're controlling stuff here and obviously you're controlling it in other places.

BOARD MEMBER GAMPETRO: If you have excursions outside of your monitor ring, under that scenario, it'd be okay?

BILL KEARNEY, POWER RESOURCES, INC.: It would be okay. We'd still have to do the same things that we do now. We'd have to recover it and pull it back in but it wouldn't be a violation of something.

BOARD MEMBER GAMPETRO: How would you know though unless you put monitor wells again along the border of your new exempted area if you're.....

BILL KEARNEY, POWER RESOURCES, INC.: That's no different than it is now. You over produce and you monitor the water quality in those wells and as those parameters go down you're assuming that you're bringing this material back. For the most part, when we have an excursion, what shows up here is the things we talked about, the chloride and the bicarbonate that move ahead of the uranium. So typically, you don't get uranium here or if you do it's at relatively low concentrations.

ROBERTA HOY, LQD: The thing is though, it's EPA's decision about where the boundary is. There isn't anything in our rule that says you do it this way. We were successful at Gas Hills, we asked for this plus the quarter mile. We could write something but again we must submit the request to EPA to amend our program to get whatever area so that's why we're not discussing that particular.....

BILL KEARNEY, POWER RESOURCES, INC.: I don't understand why you'd have to amend the program when they already approved the Gas Hills. It's my understanding that the state determines what the extent of the exempted aquifer is.....

PAUL OSBORNE, EPA: The state has no definition for exemption. They have no process for exemption. They have a process for groundwater classification and I will confess that I don't exactly know how different ones were approved that are larger and I can't really speak to that directly but I know that when the program was delegated, the state said that the area that's classified for mining will be an area that they can show that it's either too contaminated to be used or that it is mine able, commercially produce able. Those happen to be the equivalent of our criteria of doing exemptions and so what we were doing in our letter was trying to approve that as a program modification was to have an equivalency of the two systems so as to not require Wyoming to basically make a change that would damage the states groundwater classification system by basically making them equivalent. You know, today, if we went to headquarters and tried to get that approved as a brand new program

if Wyoming was coming in today, they probably would not approve that but in the days it was, headquarters gave us more flexibility in the Office of General Council to say, "Okay, we'll accept that as being the equivalent" but the problem is that in the Gas Hills, but elsewhere you don't have it, you're going to go back through the process and basically apply to the state and say, "We want to extend this boundary and here's all our wells and here's all our information," and it has to go through the process.

BILL KEARNEY, POWER RESOURCES, INC.: We understand that.

PAUL OSBORNE, EPA: And it may or may not be approved because it may or may not meet the criteria that we talked about and that's the critical issue.

BILL KEARNEY, POWER RESOURCES, INC.: Two comments on that. One is unfortunately, or fortunately, the people that came up with this disjointed classification system and everything are here and most of them don't even work for DEQ anymore but this has been a bad situation since day one with this classification system, it really has.

PAUL OSBORNE, EPA: Those people did not think so.

BILL KEARNEY, POWER RESOURCES, INC.: Well obviously they didn't. I happened to be involved in that in the early 80's but with the issue of extending the boundary, it's my understanding the way it's always been done and it's still being done is the state puts together a letter to EPA that says, "We want to exempt this area, will you please confirm that it's okay?" Somebody looks at it and says it's okay and that goes to public notice and that's how it's done and that's how it's logically probably done in other places so Nebraska, Texas.....this has been done forever.

RICK CHANCELLOR, LQD: I think my letter actually requests EPA to exempt that area not that they confirm our exemption.....

BILL KEARNEY, POWER RESOURCES, INC.: No, I'm not sure that the letter asks for them to exempt it or just to confirm it or something but if this is the major break down that the State of Wyoming is going to regulate in situ mining and they don't have the mechanism to do an exempted aquifer, I recommend you do it.

ROBERTA HOY, LQD: My recommendation is because, again, we're talking about things that are beyond the scope that was envisioned by this rule package. We are talking about things that involve another division and we can talk to them about changing their things but the authority rests with them. The classification system is an issue that will continue but in the effort of getting through this rule package, recognize that the issue exists but there's nothing that specifically.....I mean we fixed the concern about the monitoring parameters at the monitor well ring that will hopefully address EPA both EPA's concerns and industries but to try to go beyond that to address this broader one in this package is.....

BOARD MEMBER GINGERY: My question, really, when I said about the boundaries is I was dealing with the future and if I come in tomorrow, will you do it on a quarter section as you did in the Gas Hills or do we go to more of a geographic boundary? That was my question but I agree with you, we need to get back to this, it's noon. We have to get back to Chapter 5 and 7 also today and after Chapter 12 we have about two or three more items. Do we want to take an hour break and get back here at 1:00 and see if we can wrap it up in two hours or would you like to work on through?

DONNA WICHERS, COGEMA: I think we can finish these real quick.

BOARD MEMBER PROFFITT: I'd like to work on through them.

BOARD MEMBER GINGERY: Okay, so let's get back to 12(d) and try to wrap that up.

ROBERTA HOY, LQD: I believe we dealt with the issue in 12(d) by adding this language.

BOARD MEMBER GINGERY: Okay. Everybody seems to be in agreement so let's move on then to Section 15, the annual report.

ROBERTA HOY, LQD: This is 15(c) which begins on page 115 of the draft proposed rules. The concern is that we're changing terminology from annual report to annual monitoring report. What I suggest is that we just leave out the word monitoring and just say annual report. I think we had used that because in trying to think through the EPA stuff they talk about quarterly monitoring and annual monitoring and that thought got down but we're not trying to change the existing annual report concept so we'll just take monitoring out.

BOARD MEMBER GINGERY: Okay, everyone happy? Okay, we'll leave it at the annual report. Let's now go on to number Section 18.

ROBERTA HOY, LQD: This is on page 121 of the draft proposed rules. This has to do with duration of permits and in 18(a)(ii) and we might as well get into this now because this has to do with revisions and Section 19 has to do with revisions. When we skipped Chapter 7 yesterday, we're getting to that now so this will all tie in together. To give some background, the current rules include a reference to revising the permit through the annual report. This is for non coal only. It was a hold over from when the rules were completely combined to coal and non coal. The concern is that we have certain criteria for significant and non-significant revisions. Significant revisions require public notice and by including the provision to have revisions in the annual report, it gets somewhat confusing. Almost very few people do it because you're not sure if people understand that you're actually revising a permit. However, in the comments, industry points out that the statutory provisions allow for that. I haven't double checked those statutory provisions to see if that's in there. What they're asking in Section 18 is that that reference to the statute that allows for revisions through the annual report be included in the referencing section. Probably the thing to do is to find that particular provision which is in our statutes it's 411.....

DONNA WICHERS, COGEMA: 411(a)(iii).

ROBERTA HOY, LQD: Okay, so this is just the revised schedule. This is just for revising the schedule for a period coinciding with estimated schedules at the option.....I don't see a problem with it because they do change the schedule in the annual report so the proposed change of adding the reference to 411 in this instance we don't see a problem with it.

BOARD MEMBER GINGERY: Comments?

DONNA WICHERS, COGEMA: That's what we asked for so that would be great.

ROBERTA HOY, LQD: I think that takes care of 18.

BOARD MEMBER GINGERY: That doesn't affect 19?

ROBERTA HOY, LQD: Well, now we need to go to 19 but we need to go back to Chapter 7 comments which were their very first ones. This also has to do with revisions.

DONNA WICHERS, COGEMA: Roberta, maybe we could do 21 really quickly.

ROBERTA HOY, LQD: Okay. Do you have an objection to doing 21?

BOARD MEMBER GINGERY: That's alright. Let's do that.

ROBERTA HOY, LQD: This section has to do with public notice and the specific subsection of concern is 21(a)(i)(D) which is on page 137 of the draft proposed rules. The concern is a logistical concern. The public notice will tell people who they can call to get a copy of various permitting related materials including what's called the State Decision Document (SDD). The SDD is what LQD prepares that says yes they've met this provision which goes through and details the basis for our decision. What industry is concerned about is that we're saying the SDD is available even though it may not yet be available because we're saying all public notices. There's a public notice for completeness and that comes first so you get the permit and you look at it and say, "Well, yes most of the stuff that we need is here." We don't do a technical review and then you send out a public notice. Then you go through the technical review and that's the second technical review, at that point in time, that SDD, should be done or very, very close one would hope. So, I think industry's concern is that by saying all public notices that we're being too inclusive because there will be no SDD ready at the completeness public notice. To address that we could say something like including.....

BOARD MEMBER GAMPETRO: When it becomes available?

ROBERTA HOY, LQD: Because the burden for when we have to have it done is elsewhere.

BILL KEARNEY, POWER RESOURCES, INC.: This requirement, we've been through this. The EPA requires the availability of a fax sheet type thing so that when the public notice goes out and John Smith wants to know what are they proposing, there's like a summary of this is what's going to go on. Is that correct Paul?

PAUL OSBORNE, EPA: That's correct.

BILL KEARNEY, POWER RESOURCES, INC.: In the past WQD has put together a little fact sheet or something. That's why we just recommended just using the EPA type language or something.

ROBERTA HOY, LQD: This goes back to keeping our permitting process in tack. We said we don't want to do fact sheets. We've always done SDD's and that's why it's probably a little bit more than a fact sheet but it's to meet EPA requirements to have a fact sheet. They do require a fact sheet be done. We request it to them that we just substitute the SDD and they said that was fine.

DONNA WICHERS, COGEMA: Could we just put a period after *further information*?

ROBERTA HOY, LQD: What Donna's suggestion is just put a period after *further information*. What the concern was to be sure that we incorporated, again, because we don't have draft permits and draft general permits and fact sheets and all that. We just have the SDD. Does further information cover enough to meet the EPA requirements?

BILL KEARNEY, POWER RESOURCES, INC.: Mr. Chairman, you know the industry is not opposed to leaving it like. We just don't think.....

DONNA WICHERS, COGEMA: It says all public notices will have this.

BOARD MEMBER GINGERY: It leaves it kind of open there.

PAUL OSBORNE, EPA: I don't know whether to call it a decision document but that's not what we call it but we usually issue obviously something in the paper and we have a public notice which is somewhat of a fact sheet that's a summary document and then it says that if people want to look at the detailed statement of basis that describes the whole details of the operation it describes what we get for each of the major permit requirements. That could be any where from a five page to a 25 page document. That's our statement of basis. Now, we have always assumed that the decision document was probably the equivalent of that. The statement of basis is what we use to meet the requirement that we have a fact sheet.

BOARD MEMBER GINGERY: Does that satisfy things now?

RICK CHANCELLOR, LQD: Or could we say including copies of the State Decision Document if applicable? I like to have flexibility. We may decide that the SDD every time is too much work and go back to a fact sheet.

ROBERTA HOY, LQD: Okay.

RICK CHANCELLOR, LQD: We can talk in the SOR's that this additional information could include the SDD and it may include a fact sheet and give us that flexibility.

BOARD MEMBER GINGERY: Let me ask a question to the state. I deal a lot with the Department of Energy (DOE). Where it says name, address, and telephone number, I notice that the DOE in the state of Idaho in dealing with environmental quality you can pick it up off of your computer all of this information. Are we to that stage in the State of Wyoming? Or do we have authorization to do that?

RICK CHANCELLOR, LQD: I get e-mails from Hawaii on a gravel pit here in Casper. That's the fear of doing that. I don't think we have included our e-mail address in our current public notices. I don't think we have.

BOARD MEMBER GINGERY: I'd certainly think about it. That's how people are attaining information these days.

PAUL OSBORNE, EPA: We don't have an e-mail address in our public notice per say but we do have an e-mail address in the statement of basis that basically identifies the person who did the permit and so if somebody got the statement of basis then they could either call by phone or they could send us an e-mail but the problem in the public notice is we try to be reasonably generic because the person that wrote the permit may not be there because they may be out in the field or on vacation and so we have a phone number that somebody will always answer so that they can send out more information. We don't want it to get lost in somebody's in box.

BOARD MEMBER GINGERY: Yeah, I think the DOE over in Idaho Falls, it's not an individual, it's they're information office or something like that. I'm going along with my younger colleague here that we've moved to a new century. At least most states have. I just think that's something we should think about. That's how people attain information these days.

RICK CHANCELLOR, LQD: Robbie, just put a period after further information and then delete the rest. In the SOR's, we could put in that additional information would be the SDD.

BOARD MEMBER GINGERY: Let's move one. We took care of 21?

ROBERTA HOY, LQD: Right. Do we bounce back to 5 or do we bounce back to restoration or revisions?

DONNA WICHERS, COGEMA: We could finish Section 5.

BOARD MEMBER GINGERY: Okay, let's try 5. We'll take a five or ten minute break.

Does everyone have a copy of what they worked on for Chapter 5?

ROBERTA HOY, LQD: It's just a single page for 5 for (ii).

BOARD MEMBER GINGERY: Two things we were trying to accomplish that we couldn't get through some of this yesterday without going ahead. So most of it is not new, correct?

ROBERTA HOY, LQD: Correct. This is going back to Section 5(a)(ii) which is on pages 48 and 49 of the draft proposed rules. The concern expressed yesterday was that the proposed language goes beyond the statute and that it includes the goal of returning to background. What we did last night was try to capture those concerns. We revamped 5(a)(ii) which is what's in front of you to try to address both our concerns and the concerns of industry. Then we gave it to Rick and other LQD staff here to look at and in terms of changes to what's in front of you. The only changes would be to add at the beginning of Section 5(a)(ii)(A) the sentence about the use of BPT just to kind of flush out why BPT may get you to different end places. The rest of 5(a) talks about the criteria that go into the discussion of what is best practicable technology and that's where we put the background. We didn't leave it as a goal. We said it's just one of the factors that goes into deciding whether an operator has used BPT. The only other change to what you have in front of you is that we reworded, Rick thought we should reword under 5...under (E) that first one that talks about the statutory provision for relief on restoration criteria. Now we did not bring up the statutory provision yesterday. Had we gotten farther into the discussion we probably would have but knowing that we were potentially rewriting it and that provision.....

TAPE 4

ROBERTA HOY, LQD:that provision allows for the Director to recommend that the Environmental Quality Council modify the restoration standards and what we would envision is that first the operator would be coming to us and saying, "Look, we have one parameter that's out and it's 5% over what the number is. Could you please talk to the Director?" and then the process is outlined in the statute.

BOARD MEMBER GINGERY: Comments on that?

DONNA WICHERS, COGEMA: Yes. I guess where we ended up yesterday, we had three comments on Section 5. The first comment was dealing with the background which now that is part of the BPT evaluation and I think that is very reasonable.

Our next comment was dealing with applying BPT on a parameter basis and I guess now what we're doing is saying that the evaluation of the over all restoration is conducted on a parameter by parameter basis and that's okay.

RICK CHANCELLOR, LQD: Sometimes you could reduce one parameter but impact another parameter so we're trying to recognize that you have to take that into account.

DONNA WICHERS, COGEMA: Our concern was that we were going to have to take each constituent and try to do something with it.

Then our last concern was dealing with paragraph (D) which is regardless of what we restore to within the production zone. The adjacent aquifers and other aquifers within the same boundaries must be fully protected to their class of use and, outside the aquifer exemption boundary, applicable MCL's I guess, I don't know, will apply? Must be fully protected to their class of use and MCL's?

ROBERTA HOY, LQD: And outside the aquifer exemption boundary to applicable MCL's.

RICK CHANCELLOR, LQD: The concept there is that since the state supports having a separate, if we can justify it, a separate exemption boundary from the monitor well boundary that the Water Quality standards for an adjacent aquifer could be protected at the monitor well ring boundary for the MCL's for EPA would be the exemption boundary. Now if they happen to be the same thing then which ever standard is more strict would apply. We're trying to build in some flexibility if we get the EPA to give us some more room.

DONNA WICHERS, COGEMA: Right. Well, then, the next sentence after that - if the restored groundwater in the production zone poses a threat to groundwater outside the *aquifer exemption boundary* instead of *production zone*?

RICK CHANCELLOR, LQD: Well, it would depend on if a proposed threat to a water quality standard outside the production zone then that's what we'd look at. If it proposed a threat to the MCL's outside the production zone, we'd do that at the exemption boundary. So we use this statement to try to be inclusive of both those depending on the situation.

DONNA WICHERS, COGEMA: That's not clear to me because the production zone is the mined area.....is the well field.

RICK CHANCELLOR, LQD: Right and it goes back to when you do fate and transport models and there's a potential that the restored groundwater inside the buffer zone would adversely impact, possibly impact, groundwater outside that could either be immediately adjacent or we'd look at water quality standards or if exemption boundaries we'd look for MCL's.

DONNA WICHERS, COGEMA: Should we also say something about the aquifer exemption boundary as well in here?

RICK CHANCELLOR, LQD: To split that up?

PAUL OSBORNE, EPA: As I see it, obviously you're restoring the well fields which are in here, right? In this zone here that Roberta has as a well field zone.....

DONNA WICHERS, COGEMA: Yes.

PAUL OSBORNE, EPA: So the idea being that what our rule 146.10 says is what they're trying to mold in here is that where ever this boundary is, the use of classification or whatever you want to call it exemption or whatever, the modeling would be done or modeling and a combination of groundwater monitoring would be done to show that migration outside where ever that boundary is would not endanger the water outside of here. I actually think that language says that very well.

DONNA WICHERS, COGEMA: I understand that but my question is we just say production zone and we don't also include aquifer exemption boundary.

ROBERTA HOY, LQD: We're just trying to be more generic to say instead of reiterating this. If it's going outside the production zone then it could be either one but that's the first thing you have to look at and it may never get to the monitor well ring and it may never get to the aquifer exemption boundary but that would be the purpose of the fate and transport but the line of concern once it crosses that production zone line, then you start worrying about how far will it go? If you can demonstrate that it never goes to the monitor well ring even though it goes outside the production zone.....in other words it attenuates between the production zone boundary and the monitor well ring then you don't have to worry about it.

BILL KEARNEY, POWER RESOURCES, INC.: There's two things to remember here: one is that groundwater typically moves very slow, 2-4 feet a year at our operation so it's going to take 50 to 100 years or whatever to get potentially to the monitor well ring. That's one reason this stuff about a monitoring program sufficient to verify the model continues to give us heartburn because typically that's why you do a model is because it's something that you're looking for a prediction beings you don't have the information for that. So, realistically I question the viability of requiring somebody to monitor this stuff out there when probably no body would be around then. We need to remember how slow it moves.

Secondly, I'd like to come back to the diagram I drew and what they do in other states and come back to the aquifer exemption boundary as really being the critical point in protection of an underground source of drinking water consistent with EPA requirements.

RICK CHANCELLOR, LQD: One comment on the monitoring program, that language was taken out of the joint policy statement. It's true that we have not resolved with industry what that would entail. There are some issues with just what that would be. So, there issues there.

DONNA WICHERS, COGEMA: What we were thinking is with regards to that last sentence, *A monitoring program sufficient to verify the model will be required.* The previous sentence to that says, *If the restored groundwater in the production zone poses a threat to groundwater outside the production zone, then flow and/or fate and transport models shall be used to assist in determining what action needs to be taken.* You have enough authority right there to require a monitoring program. If you look at our model and say, "Well, we want you to do this or want to do more restoration or whatever" but just to flat require that always you need a monitoring program.

RICK CHANCELLOR, LQD: So you're saying that some cases it may be so obvious that things are not migrating off site that a monitoring program may not be required?

DONNA WICHERS, COGEMA: That's right. We could do the fate and transport model and things look wonderful but why require a monitoring program?

BILL KEARNEY, POWER RESOURCES, INC.: Well, we've already gotten feedback that people don't trust the modeling that they want. We've already been there. Our company has been there where the DEQ has come back and said, "Well, it's great, you did the model that we asked you to do but it's only a model, it's only a prediction, we want to be able to confirm it." So you get into this never ending thing. The reason you do a model is for a predictive tool.

PAUL OSBORNE, EPA: Presumably though you might want to have some modeling just as a means of fine tuning, I mean, monitoring in connection with that model. I presume that you have some monitoring that you use to basically fine tune the accuracy of your model.

BILL KEARNEY, POWER RESOURCES, INC.: I wouldn't call it monitoring. We go out and collect field data whether it's the rock or the EHPH of the groundwater. That's different. Our company has had discussions with DEQ on this. They envision some wells down gradient to see if the water meets the predictions of the model when it moves. You know, it's only moving at 2-4' a year. By the time it gets to the monitor well ring.....you know.....I know I probably won't be around.

ROBERTA HOY, LQD: More and more industries are relying on natural attenuation to address a variety of concerns. Amoco is the perfect example. They're relying on part on active clean up and in part on natural attenuation. Not so much natural attenuation through dilution but things like absorption, precipitation and that type of thing. Every instance in which it's applied and there is some regulatory program involvement and there's guidance, there's reams of guidance on natural attenuation because in working with other divisions within DEQ, particularly Solid and Hazardous Waste and Water Quality, working with them on the voluntary remediation program which is to some extent what Amoco falls under, we've gone through all these different approaches to natural attenuation and a basis for that consistently is that there must be some type of monitoring not just accepting the model is not the be all, end all. There has to be some confirmation that the process' on which you were relying are truly happening. It doesn't say you have to model until it goes away completely. It doesn't say you have to model for 2,000 years or whatever. Generally, the first requirement is that the attenuation occur within a reasonable time period and that's usually like 20 years. So, that's a parameter and trying to get more than that it's not to say that something like 100 years has never been approved for a contaminant reduction but it's usually limited to something like 20 years. The monitoring may not necessarily take place over that entire time frame, however, to say that you can stop, well we've got a model, we like it and we're done is contrary to the approach that is being widely applied in these scenarios.

BOARD MEMBER GINGERY: Let me see if I understand this. We require a model but in the model, you're saying, the monitoring program is a continuation of the model?

ROBERTA HOY, LQD: Right. There are predictions that are made in the model and you may be quite comfortable with those or they may be based on some things in which there's potential change over time or there's some uncertainty so what the monitoring program is designed for is to reduce that uncertainty level in the prediction process so in the first five years or so that everything goes according exactly to what you said it would and you were quite comfortable with what you were predicting initially then you can say that that's enough.

BOARD MEMBER GINGERY: So the monitoring aspect could vary quite extensively at each individual site that's developed the model, we don't have a set monitoring program?

ROBERTA HOY, LQD: Right. It doesn't say you will monitor x number of wells for these parameters for 100 years. It says the program is based on what you're predicting and the level of uncertainty in that prediction and then you go from there.

BOARD MEMBER GINGERY: Let me ask you this then. If I develop the modeling, in the modeling do I set the monitoring or does DEQ set it?

ROBERTA HOY, LQD: They would propose it to us and then we look at it and let them know whether we're comfortable with it or we're not. We also have to justify if we don't like it.

BILL KEARNEY, POWER RESOURCES, INC.: Two comments on that. One is about verifying models with actual monitoring data. I don't doubt that that's typically done like at the Amoco Refinery where you have shallow groundwater that's moving at a fast velocity that may be discharging into the river or that people may actually be using that water somewhere and this water typically is not used and it's very deep. It's 500 to 1,000 feet deep with shallower zones of good quality water above it.

Secondly, with this scenario that you've got to monitor this for some long period of time, does that mean we're not going to get our bond back until 50 or 100 years from now? If that's a criteria, I can tell you probably what our company would do.

BOARD MEMBER GINGERY: Well, that's what I'm trying to establish is once the modeling is over with, who's setting the parameters there? Have we had some good experience on this? Jim?

BOARD MEMBER GAMPETRO: You have stumbled into area, you're in big trouble now. I used to do this. The problem with modeling is there are no classical statistical confidence intervals that you can put on this. Like in classical statistics you can actually say plus or minus 5% confidence interval or 90% confidence interval or whatever. You can't do that in modeling. Modeling depends on how each of the parameters are set. Parameters can change over time. Precipitation probably doesn't change. Things precipitate out of certain types of other things at a certain rate. Flow as a water can change. It might be moving 4' now and it might be moving 2' later or 9' later. Those things change so you're left with a dilemma that.....well, first of all let me ask this. Does the department, DEQ, have statisticians that take a look at these models before hand and approve or disapprove the setting of the parameters of the model?

ROBERTA HOY, LQD: We don't use statisticians, we use.....well, Steve has had plenty experience.....

STEVE INGLE, LQD: I'm not a statistician but I did look at some models that have come in and what we looked at are maximum on the reasonable range of inputs recognizing that the model is the simplification of what is going on in the field. I looked at it from that stand point.

BOARD MEMBER GAMPETRO: Do you do this up front before the model is implemented and have the ability to make any adjustments to the parameters?

STEVE INGLE, LQD: The model is submitted and then reviewed and then comments generated and then a comment response.....

BOARD MEMBER GAMPETRO: Is the modeling done in such a way that you have a best case, worst case type scenario?

BILL KEARNEY, POWER RESOURCES, INC.: Typically yeah. The models we're talking about, these groundwater models, are very accepted in the academic world and stuff. They're by the USGS. I think what Jim is talking about is any model you have to put data into it. That's where you estimate the parameters whether it's the rock or the flow velocity or the quality of the water. A model does not give you an exact answer. Everyone needs to understand that a model is a predictive tool. You put the best information you can into that and you get this information out which is qualified by it's estimate. Superfund does that. EPA.....it's done and there's people doing this all the time that are very intelligent Ph.D people that do these modeling things. It's nothing new except in our situation we're doing something that's quite deep under ground where no ones using the water. It's not quite as critical as where you have a Superfund site sitting next to town and the kids are playing ball or something. We've been directed by DEQ so that they have a better feeling about the restoration, go ahead and do the model. We spent thousands of dollars doing it then they say, "Well, you still have to do the monitoring because it's just an estimate." Well, yeah, it is but that's the reality of it. It's kind of like saying when we had the discussion about the pipe and how much cement to go around it, well you don't really know what goes on under ground. We can't go down there so you gotta look at it through a model or something like that.

BOARD MEMBER GAMPETRO: But you just said that the reality of it is that when you get done, you can never take into account all the variables. You can never take into account what the actual values of those variables are going to be over time and so between the exogenous variables and the changing variables, it is an estimate. The only way that you can determine whether or not your estimate is accurate is some kind of monitoring. The problem that I see in all this is the time. The rationale of using monitoring is very solid but the problem of having to wait 100 years and find out the answer, that's a problem too. Is there some place in between there that we could be realistic here is all I'm saying? You cannot just use a model without any checking on it or any data coming in after the fact because it can go so far off your model.....and the fact that it's deep under ground and out in the toolies, well then if you use that kind of logic, we don't need to do any of this stuff because it's just unimportant and that's not the case.

BILL KEARNEY, POWER RESOURCES, INC.: The models that are used are very accepted so that type of uncertainty that's associated with the type of model is really not important. It's the parameters that go into it. This is widely done. Groundwater, especially deep groundwater, it's a very static thing. Things don't change. Flow doesn't change. The chemistry of the rock doesn't change. The geochemical conditions down there.....what the models doing is showing why the groundwater is the way it is and why the uranium was there in the first place. So, there's lot's of stuff backing us up. It isn't like there's a range that this model might be off by 1,000% or something. It's nothing like that.

BOARD MEMBER GAMPETRO: Well, you said it yourself, it depends on the parameters you put in.

BILL KEARNEY, POWER RESOURCES, INC.: Right but.....

BOARD MEMBER GAMPETRO: And how closely those match reality.

BILL KEARNEY, POWER RESOURCES, INC.: Right and that's always an estimate when you do a model but when you look at the output of this thing if we did a model of the groundwater at our project, you wouldn't say, "Well, this thing could be off 1,000%." If that was the case, no body would do it. The government wouldn't pay billion of dollars to have models done on all these different things. Well, they probably would! That's how models work and have been used and they're used as a tool all the time.

BOARD MEMBER GINGERY: I think there's some practical sense there. Is your question more.....I didn't see any disagreement about monitoring but it's more of the time and funding and what practicality is, is that the question?

DONNA WICHERS, COGEMA: That truly is the question because in our case our company plans to be through with all groundwater restoration by the end of year 2004. So, if we elect to do fate and transport models to show that we're not going to have an impact outside the production zone then we're going to have to come up with a monitoring program sufficient to verify this model and we intend to be through and reclaimed and get bond release but how long do we have to do this monitoring?

BOARD MEMBER GINGERY: I think what I was trying to go back to was the model, whoever accepts it, that would be a factor in there that you could go down the road and maybe one or two more years of testing and another one could be 20 years but it would be within the model that maybe there's certain aspects. I'm trying to think not just about your operation but totally that maybe when the model is devised that also devises the monitoring program that will go with it.

DONNA WICHERS, COGEMA: Let me give you an example of what you're talking about. Uranium, we've done some modeling of one of our fields and we left uranium at say 1½ ppm or something like that inside the well field and then our monitor well is 400' away. It's going to take 200 years before we see anything, uranium in elevated levels in that monitor well. So what.....

BOARD MEMBER GINGERY: That's the point I was getting to. Let's use your 200 years. I would say to the authorities you've justified it. That is so far out, that's great statistically they would know 200 years if it made it there or not but it is not practical but maybe on another incident you know that there's a possibility in the monitoring program it would hit a certain monitoring well within two or three years, maybe we should know that. What I'm trying to say, is the modeling driving what is the approved monitoring program too and it could be there is no monitoring after a certain.....you know.....the model is pretty well accepted. There could be another model showing that we need to keep checking on this for 20 years. What I'm trying to say is the monitoring is driven by whatever model is developed.

ROBERTA HOY, LQD: We do have experience with sort of thing. If you go to coal mining, they develop what's called a Probably Hydrologic Consequence (PHC). This is their prediction that once they backfill the pit and that backfill recharges then it will take x number of years for that to recharge and the water quality changes will be x. They have numbers like 200, 500 years but there's nothing

that says.....making them keep the bond for the next 1,000 years isn't part of it. It's when they get to the point of bond release that they provide information that demonstrates that their predictions are being met whether they have a water level curve that's going up nicely or whether their water quality has stayed like this and it meets livestock standards, that's the basis on which the decision has been made in relation to a coal mine. This isn't a unique scenario in terms of having to deal with long-term impacts but being able to say that we're comfortable but this is truly how it's going to transpire.

DONNA WICHERS, COGEMA: But you said when they get ready for bond release, then you look at that but when we finish our groundwater restoration and you say that it's okay then we would like to have our bond released.

RICK CHANCELLOR, LQD: You would still have a bond for the surface reclamation for a number of years.

DONNA WICHERS, COGEMA: So, you would tie our groundwater restoration model verification to the surface bond release?

RICK CHANCELLOR, LQD: Well, it wouldn't necessarily tie it too tightly, it'd be shorter or longer. I think what Roberta is trying to say is that we have dealt with long-term objections and we never envision keeping a monitor well to verify the end result. We try to find some place we can verify a very quick result that shows the trend is in line with the predictions. I think Marshall is sort of implying that some model results would not require monitoring. Is that what you were saying?

BOARD MEMBER GINGERY: Yes.

BILL KEARNEY, POWER RESOURCES, INC.: I think we're kind of mixing apples and oranges up here because.....

DONNA WICHERS, COGEMA: But that is a good point.

BILL KEARNEY, POWER RESOURCES, INC.: That's a great point. There's no bond held on coal mines for groundwater.

RICK CHANCELLOR, LQD: But they don't get their bond back until they show it.

BILL KEARNEY, POWER RESOURCES, INC.: What do you mean, they don't get.....

RICK CHANCELLOR, LQD: The rest of the bond. We do not release full bond release until we have some demonstration the groundwater is okay even though there is no dollar amount for that just like say on in situ if you do restoration there may not be any dollar amount tied to groundwater for the groundwater restoration but it's still bonded for the property. On a coal mine if something happens that we now find the groundwater is a mess, we can increase the bond to take care of that just like in situ you restore and all of a sudden something horrible pops up and you may say the bond will fix that.

BOARD MEMBER GINGERY: The modeling I've done is more with wildlife and you get a shorter term than what you guys are dealing with. What I'm saying is that I would think that with the scientific knowledge that we have and the statisticians and all of that, that both the state and the mining company would want to develop the best model and how much monitoring is needed?

Maybe none. Maybe 400 years. I don't care where it is, there would be agreement that this model seems to be within the realms of acceptability and the model would dictate the monitoring zero to 400 years or whatever is agreed upon. Everyone would be working on the same score card and if the state doesn't like the model, you're back to square one to develop it but if they do, both of you can say that this particular model for this particular extraction, will not require any more monitoring after release of the bond or whatever it is. Or it may say that you'll be held for five, ten, twenty, or four hundred years whatever the state and the mining company agrees upon.

DONNA WICHERS, COGEMA: I think we agree completely with what you're saying. All we were asking that this last statement says that a monitoring program will always be required. *Will be* required.

ROBERTA HOY, LQD: Well, it says sufficient to verify the model.

DONNA WICHERS, COGEMA: Well, but a monitoring program, whatever, will be required for the model, yes, to verify the model. We're saying that you already have the authority to determine what action needs to be taken in the previous. You can tell us to monitor or tell us that we don't have to monitor. Another way of fixing it would say a monitoring program sufficient to verify the model *may be* required instead of just flat saying you're going to have to have a.....

BOARD MEMBER GINGERY: Would it help any that a monitoring program is inclusive in the model?

DONNA WICHERS, COGEMA: No, not necessarily.

BILL KEARNEY, POWER RESOURCES, INC.: These models that we use have been verified in the field. The model itself has been verified in other places and that's why these things are done.

BOARD MEMBER GINGERY: It could be determined in the model that there isn't a need for the monitoring.

DONNA WICHERS, COGEMA: It could be.

BOARD MEMBER GINGERY: That's what I'm trying to say is in delving into the model you have look at the verification if it's necessary to have monitoring or not. The model would dictate if there was a necessity for monitoring.

DONNA WICHERS, COGEMA: Yes, and that's exactly what the language says that we will do. First of all it says *if* we think it poses a threat then flow and transport models shall be used to assist in determining what action needs to be taken. So maybe the action could include maybe monitoring.

BOARD MEMBER PROFFITT: Yeah, I was going to say you could almost make that into one sentence including what action needs to be taken.

RICK CHANCELLOR, LQD: I think they want *may* instead of *will*.

DONNA WICHERS, COGEMA: What?

RICK CHANCELLOR, LQD: I thought you wanted *may* there instead of *will*? On the monitoring.

BOARD MEMBER GINGERY: I kind of like what you said there. It isn't *may* or *will*. Say it again Rod.

BOARD MEMBER PROFFITT: To stop at *model* and *what action needs to be taken including.....* just make that all one sentence and take out *will be required*. There's an assumption by putting it in that one sentence that a monitoring program *will* be included. There's an inference that it *will* be included so you'd really have to over come.....

BOARD MEMBER GAMPETRO: But I think that's the way they've been operating under the assumption that models do need to be verified through monitoring.

BOARD MEMBER PROFFITT: Yeah, I agree.

BOARD MEMBER GAMPETRO: So if you want to change that.....

RICK CHANCELLOR, LQD: How does this language address your concern.....*determining what action including monitoring needs to be taken?* That's more of a judgement call based on.....

BOARD MEMBER PROFFITT: Well, leave in *sufficient to verify the model* because I like that. It sets a standard.

RICK CHANCELLOR, LQD: So in you're interpretation of what that means is there could be a case where the modeling is so good and the parameters are so good and we're so comfortable that monitoring may not be required.

BOARD MEMBER PROFFITT: It could be one case in 100 but it leaves the door open.

BOARD MEMBER GAMPETRO: Well, if your worst case scenario is so good that you feel really comfortable.....the problem is, again, these models are verified but what if they start sucking water out down hill some place in a coal bed methane operation and that water is affected? It's movement is affected. Now, that's a bad example because you guys shouldn't be held responsible for that and that's a whole other.....

BOARD MEMBER GINGERY: No, I think they should!

BILL KEARNEY, POWER RESOURCES, INC.: What happens if coal bed methane drills through an area naturally contaminated and sucks it out? You know, we gotta put some practicality into some of this stuff here.

BOARD MEMBER GINGERY: I think this will give you that practicality, hopefully it would. How do you feel about that?

DONNA WICHERS, COGEMA: I think that solves my concern. Bill?

BILL KEARNEY, POWER RESOURCES, INC.: I guess I have a little trouble with the English. It can still be interpreted different ways but maybe determining what actions including the potential for monitoring or something. It just makes it to me a little cleaner. Actually, I kind of like two sentences myself.

MARION LOOMIS, WMA: Mr. Chairman, could you say *what action which may include monitoring sufficient to verify the model?*

BILL KEARNEY, POWER RESOURCES, INC.: That would be great.

BOARD MEMBER GAMPETRO: Or including potential monitoring? They're saying it still sounds like you're going to do monitoring.

RICK CHANCELLOR, LQD: Why don't we just go back to the original language and put *may* instead of *will* and I think you get to the point of what the board is talking about. It'll be cleaner and clearer.

BOARD MEMBER GINGERY: It'll still be determined that your model dictates the monitoring.

DONNA WICHERS, COGEMA: That's right and DEQ is still going to tell us what we have to do. Very clear.

BOARD MEMBER PROFFITT: Okay, do we got it?

RICK CHANCELLOR, LQD: One question for Bill and Donna, on the revised sheet we gave you, I asked Robbie to put an introductory sentence into (A) that's not on your sheet but it is on the screen. I don't know if you saw that when we were going through that. I just wanted to bring that to your attention. I talked about putting it here or maybe in the SOR's to try to capture what you feel BPT usually results in based on your experience and what we've seen it result in.

DONNA WICHERS, COGEMA: Some within the well field maybe outside.....well I guess it wouldn't be outside class of use but, yeah, is that appropriate for regulation to put a statement like that?

BOARD MEMBER GINGERY: What was the question?

RICK CHANCELLOR, LQD: The statement is sort of editorial in nature and Donna's question was is that appropriate in regulation.....or in the Statement of Reasons?

BOARD MEMBER GINGERY: I would think that's in the SOR's.

BOARD MEMBER PROFFITT: Yeah, I would too.

BOARD MEMBER GINGERY: It's an influence statement but you're not going to regulate it so I'd move it. The other thing is I would, unless the state has approved their acronyms, I would spell it out. Okay, can we move on?

RICK CHANCELLOR, LQD: Industry likes this!

DONNA WICHERS, COGEMA: We have to read it closely later Rick! What else did you do to this that you haven't brought up!? No, I think that took care of our concerns.

RICK CHANCELLOR, LQD: I think what's good about this is no matter what ends up in WQ, if they do the regs. or don't do the regs., I think it still resolves a lot of issues as far as restoration issues. There's a lot of variables throughout WQ of what they may or may not do.

BOARD MEMBER GINGERY: What's next, Chapter 7?

ROBERTA HOY, LQD: We had originally left the discussion about Chapter 7 to when we talked about Chapter 11, Section 19 because they both talk about revisions, however, there were comments received on Chapter 7 but nothing on Chapter 11, Section 19. So, we'll just go to Chapter 7 now and if anything we change there winds up changing something in Section 19 we can deal with that too but right now we'll just be working on Chapter 7 which starts on page 1 of the draft proposed rules.

The concern is that we have proposed something that is contrary to statute. This goes back to whether or not you can change something through the annual report. In Chapter 7, Section 1(b) which is on page 1 of the proposed rules, we took that out basically.

RICK CHANCELLOR, LQD: If I may jump in, I think what we did here was in Chapter 7 there is a list specific criteria for what's significant change and the criteria for in situ mining has a different list of specific changes.

ROBERTA HOY, LQD: I think that is an issue. The issue is the fact that we're precluded by this phrase, which I'm trying to highlight here, that we precluded in situ from being able to go through changes through an annual report. In other words, that a significant change you probably couldn't deal with in the annual report because you have to have public notice and all that but the ancillary stuff that you could potentially change in an annual report. What they're pointing out is that the statutory provisions that allow that and that if we leave that in there we're conflicting with our statutes.

DONNA WICHERS, COGEMA: Actually, including the annual report and then 35-11-402(a)(x), 35-11-406(a)(xii). There's several places where it conflicts.

PAUL OSBORNE, EPA: I was just going to say that some of this was related to comments from EPA about the EPA regulations and I don't know anything about us every buying into something that was proposed in 1998 because the regulations are very specific about what's a major revision and what's a minor revision and both of those require some kind of action by the regulatory agency. We were concerned about this 20% and things like that. The way ours is laid out, there are some very specific things that can be changed like typos and things like in the permit as a minor modification but almost everything in our mind is a major modification that has to go to public notice that's related to the UIC part of your activity.

DONNA WICHERS, COGEMA: I'm not questioning the UIC portion. This is totally different. This particular area says that we're not allowed make alterations to our mining or reclamation plan in the annual report.

ROBERTA HOY, LQD: I think to address what your concern is Paul, that some how that would circumvent the idea of the significant revisions. If you go to Section 2 of Chapter 7 which is on page 4 of the draft proposed rules in Section 2(b)(ii) there are certain things that rise to the level of requiring public notice. So even if they stuck it in the annual report it couldn't just stay there because by virtue of the cross reference to Section 2, it gets elevated. That's the way it's been implemented, for I think like, limestone and that sort of thing. Even if they put it in the annual report but it rises to a certain level we'd say, "No, you can't do it that way. You have to go through the public notice."

BOARD MEMBER GAMPETRO: That is what I was going to ask because the way this reads it doesn't even require your approval. Any permit may be revised by identifying alterations to the mining or reclamation plan in the annual report, blah, blah, blah, at the non coal operator's discretion but that still means that you still have to approve it, right?

ROBERTA HOY, LQD: Because the first sentence, significant revision, says you have to go look at Section 2 and then when you get to Section 2 there's a long list of stuff. So, conceivably there could be some ancillary thing that made it through in the annual report and by virtue of us, let's say we didn't comment on the annual report it would get approved but if it rose to a level of a significant revision it kicks it into Section 2.

RICK CHANCELLOR, LQD: So we're proposing to take out the language that will restrict in situ licenses from doing that.

ROBERTA HOY, LQD: Right, if we take that out, then it's in the world of the other.....

RICK CHANCELLOR, LQD: So we're deleting the offensive language.

MARION LOOMIS, WMA: Mr. Chairman, you need to delete the other language above it too, don't you, except *significant revisions to an in situ mine permit*?

ROBERTA HOY, LQD: For everything else you go to Section 2. For in situ it goes to Chapter 11, Section 19(b). So, any type of non coal operation, if it hits significant revision, it kicks them into another section and that section happens to be Section 2 for non coal and Chapter 11, Section 19 for in situ because they're slightly different requirements for significant revisions that are in situ related in order to meet EPA requirements.

MARION LOOMIS, WMA: So, they would still be able to avail themselves of it it's just that they would do it under Section 19. You're not precluding them from applying for a revision?

ROBERTA HOY, LQD: Right.

BOARD MEMBER PROFFITT: This is tied to an EPA requirement through 19.....is that what.....okay.

ROBERTA HOY, LQD: As Steve described it the other day, which is probably a pretty good description, they define what's a significant revision a little differently than we do. I think we're inclusive and they're exclusive, if you will. We've managed to meld it and we've done that in Section 19.

I think the same issue is in Chapter 7, Section 1(c) which is on page 2.

BOARD MEMBER GAMPETRO: Just take out that first sentence then wouldn't you because that says it has to be submitted in a format approved by the Administrator and you've already said that it can be submitted in the annual report.

ROBERTA HOY, LQD: This is existing language.....that part of it. I think the concern is down here.

DONNA WICHERS, COGEMA: You're taking away our right that is given in this section to initiate a proposed change and that right is allowed by statute.

MARION LOOMIS, WMA: Mr. Chairman, I think to be consistent, you'd need to take that language out *unless the change* through the rest of the sentence, that underlined part.

BOARD MEMBER GINGERY: From *unless*. Comment on that? If we'd end that clear up where it says Chapter 11, Section 19(c) and that whole sentence there.....is that a regulatory requirement?

ROBERTA HOY, LQD: This is existing language.

BOARD MEMBER GINGERY: So, we go clear back to what I said to unless. What's the comfort level on that then?

MARION LOOMIS, WMA: That'll be great.

DONNA WICHERS, COGEMA: Yeah, that's what we're asking for.

BOARD MEMBER GINGERY: Staff, what are you giving up?

RICK CHANCELLOR, LQD: It's more a question for EPA, if they're willing to accept that, they may come back and say, "This portion is not in compliance with their program so it'd be their call as to.....because you're right, the statute does give that opportunity to do this and so it'd be up to EPA to accept it.

BOARD MEMBER GINGERY: Couldn't you put that down as additional information that there is this possibility?

RICK CHANCELLOR, LQD: They may reject the rule. I don't think we need to put that any place, it's just in their review they may come back.

BOARD MEMBER GINGERY: Okay, but if they reject it, that's part of what you stated above so that becomes part of the process instead of a rule.

RICK CHANCELLOR, LQD: Well, if they reject the rule, then we'll have to come back and change the rule and then go back to staff and decide if we need to change the statute in order to keep the UIC program in compliance with EPA.

BOARD MEMBER GINGERY: That's what I was trying to say.

MARION LOOMIS, WMA: Mr. Chairman, that's an important point. I think Bill brought it up and Rick just brought it up too. The only portion that they could deny would be that portion that applies to the UIC program. This applies to the whole permit, all of the surface and everything that does not come under the UIC program. There's a lot of regulatory requirements beyond what the UIC has.

RICK CHANCELLOR, LQD: Could we word this to clarify that the UIC portion of the in situ permit needs to be approved and that the other parts okay?

DONNA WICHERS, COGEMA: But that's in 19(c).

ROBERTA HOY, LQD: Yeah and we have that crossed referenced. I think we'll be okay.

BOARD MEMBER GAMPETRO: EPA is not going to come back and argue with this language. They're going to argue with your definitions in 19(c), right?

PAUL OSBORNE, EPA: Probably but it's hard to speak on that because our attorneys going to have to look at it.

BOARD MEMBER GINGERY: I would leave it alone. There is a chance that somebody may not like it, but I'd leave it alone.

PAUL OSBORNE, EPA: Certainly we would know before you get to the Environmental Quality Council so we could have a chance to look at it and we would respond back before that point.

MARION LOOMIS, WMA: Mr. Chairman, I just want to remind you that this is Wyoming's program and you can design it the way you want and when you're done and the Council is done then it goes to EPA and if they disapprove it, they disapprove it but they have to have some reasons to disapprove it. It's still our program and I think you ought to do what you think is right and you've got to recognize what EPA is saying but it still is our program.

BOARD MEMBER GINGERY: I think at this moment, I may be proved wrong, but I think we're on pretty solid ground and just let it go forward.

BOARD MEMBER PROFFITT: Well, the language makes no sense because you have notification to the Administrator in the line above which you're taking out unless you just take out everything from *if promptly filed* down. It doesn't make any sense.

RICK CHANCELLOR, LQD: It's current. What they're saying is unless we notify.....

BOARD MEMBER PROFFITT: What's the notification?

RICK CHANCELLOR, LQD: Unless we notify the operator saying that they can't initiate that change because we feel it's significant enough to review it then you can go ahead and initiate that change unless we notify them.

BOARD MEMBER GINGERY: So we need to make that.....

RICK CHANCELLOR, LQD: It's existing language that's worked for decades. It's probably filed by the operator.

BOARD MEMBER GINGERY: It might help to add *by the operator* after *if promptly filed* in Section 1(c).

DONNA WICHERS, COGEMA: But this is existing.....this applies to bentonite. This applies to a lot of other non coal.....

BOARD MEMBER PROFFITT: He's just making it more readable.

RICK CHANCELLOR, LQD: It wouldn't impact that. It just clarifies the language a little bit but it doesn't change the way we do things.

BOARD MEMBER GINGERY: Okay, can we move on?

ROBERTA HOY, LQD: This is the last one in Chapter 7. It has to do with Section 1(e)(iv)(B)(I) which is sort of in the middle of page 3 of the draft proposed rules.

The concern is we've deleted a statutory provision W.S. §35-11-428 and that has to do with the information required for in situ mining permits. I think the problem is the cross reference.....if you look in the SOR's underneath that, the cross reference was to Chapter 11, Section 22(d)(ii) and it doesn't exist so we have an improper cross reference in the SOR's.

DONNA WICHERS, COGEMA: But we're also asking that the reference to the statute remain.

ROBERTA HOY, LQD: What we're saying is that reference to the statute is in Chapter 11, Section 2 instead of 22. Let me look that up. The cross reference to the statute 35-11-428 is in Sections 3, 4, and 5 of Chapter 11. Those are the three sections that talk about what needs to be in the baseline, the mine plan, and the reclamation plan. So that's where we included the cross reference to 428 instead of putting it here. You're right in the SOR's that needs to be changed.

DONNA WICHERS, COGEMA: But you're taking out existing language and I'm just wondering why? I know it must be somewhere else but this is in Chapter 7.

ROBERTA HOY, LQD: Well, we can leave it in there. It doesn't hurt it to have it in both places.

BOARD MEMBER GINGERY: So we're going to leave it in? Jim?

BOARD MEMBER GAMPETRO: I have no problem with that.

RICK CHANCELLOR, LQD: Leave it in.

BOARD MEMBER GINGERY: Do you have any others in concern?

DONNA WICHERS, COGEMA: What we have done here in 7 will probably affect Section 19(b) and (c).

ROBERTA HOY, LQD: Section 19(b) and (c) are on pages 125 through 127 of the draft proposed rules. So, by changing 7, we change 19?

DONNA WICHERS, COGEMA: That's what I'm looking at. 19(b) is significant revisions?

ROBERTA HOY, LQD: Right.

DONNA WICHERS, COGEMA: Okay, (a) is alright. *Any increase in the amount of land related to installation or operation of additional Class III wells* so the 20% does not apply to that so I think that's okay. I think (b) and (c) are alright.

BOARD MEMBER GINGERY: Okay. No conflict there.

DONNA WICHERS, COGEMA: No. I just wanted to check and make sure.

BOARD MEMBER GINGERY: Anything else? Does staff have any comments?

ROBERTA HOY, LQD: What are we doing about Section 6?

RICK CHANCELLOR, LQD: That's the well construction?

ROBERTA HOY, LQD: Correct.

RICK CHANCELLOR, LQD: We left it yesterday that we would try to gather additional information on the well construction issue of the down load of the bore hole compared to the well casing and bring that back to a future meeting.

BOARD MEMBER GINGERY: Do you think we could have that information in two weeks?

ROBERTA HOY, LQD: I think in the interest of proceeding with the rule package, we'd certainly be willing to make it a higher priority and do something about it.

RICK CHANCELLOR, LQD: One issue - I talked to the AG previously about continuing the meeting on the rule package whether or not we had to republish and that would take time to do that and he didn't give a real straight answer but he felt we would be safe that we probably should republish and follow the rule requirements for publishing a meeting for rules.

BOARD MEMBER GINGERY: Is that a 30 day notice?

RICK CHANCELLOR, LQD: 30 day.

BOARD MEMBER GINGERY: Thank you for the information. If that's true and maybe whatever date we'd get it, is there time this week to get out the information or would that information have to go out next week?

RICK CHANCELLOR, LQD: Probably next week. It usually takes a couple of days to get it in the paper, Sandra, for our public notice?

SANDRA GARCIA, LQD: Yes.

LOCATION/DATE OF NEXT BOARD MEETING

RICK CHANCELLOR, LQD: We could publish something next week to do something for the first part of September.

BOARD MEMBER GINGERY: What is the Thursday the second week of September?

RICK CHANCELLOR, LQD: That'd be the 11th.

BOARD MEMBER GINGERY: Would that give us time to get it published?

RICK CHANCELLOR, LQD: Yes.

BOARD MEMBER GINGERY: How is that for industry?

BILL KEARNEY, POWER RESOURCES, INC.: The 11th is what day?

RICK CHANCELLOR, LQD: Thursday.

BILL KEARNEY, POWER RESOURCES, INC.: It's either that week or the week after because I have to go to Canada.

MARION LOOMIS, WMA: The 12th is the 50 year reunion of the Lucky Mac uranium mine in Riverton.

DONNA WICHERS, COGEMA: That's one of our operations.

BILL KEARNEY, POWER RESOURCES, INC.: Is the main discussion just on the well stuff or is it going to be on aquifer exemptions too?

RICK CHANCELLOR, LQD: I imagine just the well stuff, aquifer exemption probably goes beyond the current scope of these rules.

BOARD MEMBER GINGERY: If we can resolve that and try to have all four of us here so we can participate in a vote to send it forward.

DON MCKENZIE, LQD: Just a reminder for the Administrator. The 10th and 11th is our scheduled staff meeting in Sheridan.

RICK CHANCELLOR, LQD: Oh, okay.

BOARD MEMBER GINGERY: I took it was probably more convenient to do this in Casper but if you want to do it in Sheridan, that's fine.

RICK CHANCELLOR, LQD: Unless we change the date of the staff meeting, those dates wouldn't work for me.....the 10th and 11th.

MARION LOOMIS, WMA: How about the morning of the 12th and on your way back?

RICK CHANCELLOR, LQD: That would work.

BOARD MEMBER GINGERY: So Casper is fine with everyone?

DONNA WICHERS, COGEMA: Yes.

PAUL OSBORNE, EPA: Not that it matters but I'm not going to be able to come but somebody else may be able to come to that meeting if it's essential.

RICK CHANCELLOR, LQD: I don't think we'd necessarily need EPA at that next meeting because we already heard from them but they do not have a specific standard on the well field, they just need to approve it.

BOARD MEMBER GINGERY: I think we got enough consensus on the 12th. My suggestion is to make it on the 12th like at 9AM here and it would probably be a two or three hour meeting and no more than that.

BOARD MEMBER PROFFITT: I make a motion that we continue the meeting to September 12th at 9AM. Do you want to do it here at the Oil and Gas Commission?

RICK CHANCELLOR, LQD: We'll check either here or.....

BOARD MEMBER PROFFITT: To be announced. Why don't I just leave it at Casper and we'll wait to hear from DEQ.

BOARD MEMBER GINGERY: Do I have a second?

BOARD MEMBER GAMPETRO: Second.

BOARD MEMBER GINGERY: The motion has been made and seconded. All in favor of the meeting of September 12th in Casper say aye.

BOARD MEMBERS: Aye.

BOARD MEMBER GINGERY: Those opposed same sign. Motion carries. I certainly want to thank the staff and the comments that came from the Mining Association and industry made a difference in getting through this. If there is nothing else, I would entertain a motion to adjourn.

BOARD MEMBER PROFFITT: So moved.

BOARD MEMBER GINGERY: This meeting is now adjourned. Thank you.