

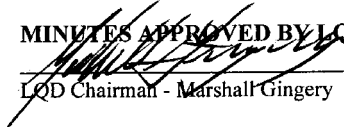
**LAND QUALITY ADVISORY BOARD MEETING
3rd Quarter Meeting Minutes**

**September 12, 2003
Continuation of Rule Package 1L from the July 30-31, 2003 meeting
Oil & Gas Commission
Casper, Wyoming**

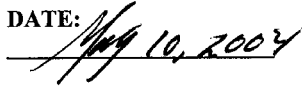
**BOARD MEMBERS PRESENT: Marshall Gingery - Chairman
Jim Gampetro
Chet Skilbred**

**DEQ STAFF PRESENT: Rick Chancellor Mark Moxley
Roberta Hoy Mark Taylor
Dan Keefe Steve Ingle
Don McKenzie**

MINUTES APPROVED BY LQD BOARD:


LQD Chairman - Marshall Gingery

DATE:


Sep 10, 2004

NONCOAL RULE: PACKAGE 1L - INSITU

BOARD MEMBER GINGERY: I'll call order to the Land Quality Board Meeting of today. I'm glad you all made it here. We have two main things today. The continuation of the non coal rules that we spent quite a bit of time on Chapter 7 and 11 last time. Now looking in the audience I think all of you or most of you were here for that. And the second item for today is coal rule Package 1S, the vegetation, and we'll get started. The meeting was set up from 10am to 3pm. I think as chair I'll keep it fairly informal so everyone can have their input. I think we've had some success to that is the the opportunity to speak up and ask questions as we move along if that's fine with my two other colleagues. Looking out in the audience I think I know most of you, but I'm Marshall Gingery and I'll start with you and let you introduce yourself and then go around the room.

BOARD MEMBER SKILBRED: Chet Skilbred with Glenrock Coal and I represent the industry concerns.

BOARD MEMBER GAMPETRO: Jim Gampetro and I'm a public representative.

RICHARD CHANCELLOR, LQD: Rick Chancellor of Land Quality.

VERN STELTER, G&F: Vern Stelter with Game and Fish.

BILL KEARNEY, POWER RESOURCES, INC.: Bill Kearney, Power Resources.

DONNA WICHERS, COGEMA: Donna Wichers, COGEMA Mining.

MARION LOOMIS, WYOMING MINING ASSOCIATION: Marion Loomis, Wyoming mining Association.

RALPH KNODE, POWER RESOURCES, INC.: Ralph Knode with Power Resources.

ROBERTA HOY, LQD: Roberta Hoy, Land Quality, Cheyenne.

DAN KEEFE, LQD: Dan Keefe, Land Quality, Cheyenne.

MARK MOXLEY, LQD: Mark Moxley, Land Quality, Lander.

MARK TAYLOR, LQD: Mark Taylor, Land Quality, Sheridan.

SCOTT BENSON, TRITON COAL COMPANY: Scott Benson, Triton Coal Company.

ROY LIEDTKE, JACOBS RANCH COAL COMPANY: Roy Liedtke, Jacobs Ranch Coal Company.

MARK HUMPHREY, OSM: Mark Humphrey, OSM, Casper.

DON LAMBORN, P&M COAL COMPANY: Don Lamborn, P&M Coal.

STEVE INGLE, LQD: Steve Ingle, Land Quality, Cheyenne.

DON MCKENZIE, LQD: Don McKenzie, Land Quality, Sheridan.

JASON MARSDEN, WYOMING CONSERVATION VOTERS: Jason Marsden, Wyoming Conservation Voters.

BOARD MEMBER GINGERY: Thank you. Can all of you hear today? Just remember to speak up and we'll try to keep it fairly informal. At this time I believe we had wrapped up making most of those non coal rule changes. Where do we want to start out then on this?

RICHARD CHANCELLOR, LQD: Well the one issue that was still outstanding from the in situ rule package was the well construction technique, specifically the diameter of the bore hole compared to the well casing and we wanted to have the opportunity to go back and give that some more thought and bring that forward to you today. At that I give it over to Roberta Hoy on the proposed language that we came up with and we can have that discussion.

ROBERTA HOY, LQD: The board received a handout and there's a few extra copies here. It has the proposed language with the Statement of Reasons. It has some graphics and it has what we call a clean copy without the strike and underline. We thought we would do a brief presentation to sort of go over what's in the graphics in the package and then go on and talk about the actual rule language and any remaining concerns.

Basically what we wanted to talk about, was schematic of potential casing and cementing failures. Just to help illustrate some of the points that we were discussing last time and then we wanted to talk about some

of the primary regulatory concerns that we had. There's four graphics in the package and basically it's four different scenarios.

BOARD MEMBER GAMPETRO: It would help me a lot if you could just refresh my memory. There was some conversation about bore hole diameters last time, and what were the various diameters we had discussed?

ROBERTA HOY, LQD: In the package that you originally received the difference between the bore hole and the casing was four inches in the diameter. So you'd wind up with two inches all the way around.

BOARD MEMBER GAMPETRO: What is the existing?

ROBERTA HOY, LQD: It varies considerably. It goes from 3/4 inches to 3 inches.

BOARD MEMBER GAMPETRO: The difference?

ROBERTA HOY, LQD: The difference, right.

BOARD MEMBER GAMPETRO: And the guideline we had proposed at the last meeting that we were looking into was what?

ROBERTA HOY, LQD: We hadn't really come up with a number if I remember correctly. That was part of what we were going back to look at was what additional information do we get from guidance documents like technical manuals from different places and what do other states do?

RALPH KNODE, POWER RESOURCES, INC.: You suggested four inches in the last writing of these regulations. You suggested four inch diameter larger drill hole than the outside of the casing.

ROBERTA HOY, LQD: Right.

RALPH KNODE, POWER RESOURCES, INC.: The diameter of the casing would be four inches smaller than the diameter of the drill hole.

BOARD MEMBER GAMPETRO: And it presently varies between three quarters of an inch and three inches. That's where I was trying to get to remember where we were last time. Thank you.

ROBERTA HOY, LQD: In the package that you have in front of you, we have kept a requirement for diameter difference but we've dropped it back to three inches which based on the research would address our concerns about being sufficiently protective and then address industry concerns about practical issues like drill bit diameters and casing that sort of thing. To go into the protective issues a bit, there's two factors in a well completion that effect how good the well is if you will. One of those is the casing integrity and the other is the quality, the cement job around the integrity that's between the casing and the drill hole. Mark Taylor did up four schematics that illustrate this. The first one is this one up here where you have both good casing and a good cement seal. So you're going through several different layers. You'll have claystone, shales and sandstones. Some parts of the state you'll even go through coal before you get down to the sand that actually has the ore zone in it. And here you have a good casing and good cement, it may not be absolutely perfect but it does protect it. This is another potential scenario, you'll have good casing but your cement seal is not that good. This is one of the most difficult one's to address that's why we're emphasizing the protection that if you start out with a minimum diameter that you can avoid this at all costs. That's what you really want to get around because it's very hard to address. But you can see depending on the cementing may be bad, you could have introduction of surface water, you could have leakage in between aquifers or water bearing zones, that type of thing.

Another scenario is you'll have a problem with the casing but as long as you have an adequate cement seal then you'll still pass your mechanical integrity test. You have a two-fold protection, one is casing and one is cement. Then, of course, the one everybody wants to avoid at all costs is if when you have both bad casing, a bad cement seal, and you fail the MIT. It really is difficult to track down. These bring up some regulatory concerns, some practical concerns. Of course we're worried about resource protection, the mineral resource, effective recovery of the mineral resource and protection of the ground water resource. We're also worried about difficulties with corrective actions. It can be very difficult and time consuming to have to identify, isolate, and correct the well failures and then accessing the extent of the impacts. Do you do some more geophysical logging, do you have to install monitoring wells? It's like preventive at all costs. Then well construction and maintenance. When you first put in the cement when you're completing a well generally what you do is run it down the casing then push it up the outside of the casing. Once you do that you leave some pressure on till it has a chance to cure or dry. And then it may still settle a little bit, you want to be able to run a tremie pipe in there to top it off if you need to. So that's a practical reason to be sure to you have a minimum diameter. What we're really hoping to avoid, we're really concerned about the increasing.....the older the well gets we're having increasing failure rates. They've been able to identify what's happening and address it, but we really want to be sure that we don't have to deal with this again if at all possible.

In a nut shell that's sort of the background in terms of where we're coming from for that diameter difference. Again, in the package that you have the primary change from this is that we feel that three inches is, we can deal with that as a minimum. There are a couple other changes primarily editorial on the cementing. We left out the little table and just changed it to text and that sort of thing, and we'll go through those step by step, but the big change was the diameter difference. We also changed Section 6(a) to allow some more flexibility. I think there was some concern that if somebody wanted to try a new technique or whatever there wouldn't be any room for the Administrator to look at the information presented by industry.

BOARD MEMBER GAMPETRO: What did you find when you looked at your historic information relative to bore hole size, the margin for poring the concrete, and the failure?

ROBERTA HOY, LQD: We didn't try to do a correlation. Well, some of these records are really old. So we didn't try go all the way back and say, "Ok, this well size has this many more failures than another well size." It was in terms of, trying to go there, that was too much information to try to collate it all in that short of time. But what we did do was go through what other industries, what consulting firms, like the Army Corps of Engineers, what they have developed into their guidance. Which is relatively new guidance let's say in the last five years. If they're feeling comfortable that they can get by with a minimum of this then we know that it's more than some of what we've had historically. We're relying on their development of a comfort level, if you will, with that casing diameter.

MARK TAYLOR, LQD: To give you a range, the range is from absolutely no annular space in regulations or recommendations up to about four inches of annular thickness. The most common I've found was two inches.

BOARD MEMBER GAMPETRO: And that's in other folk's regulations?

MARK TAYLOR, LQD: That's State, Federal, Canada..... like I say it ranges between nothing to four.

ROBERTA HOY, LQD: Starting with Section 6 which is the package you have in front of you, we did make a change to Section 6(a), this is an editorial change. It was primarily to add the last provision which is 6(a)(iv) and that's allowing a change from the requirements provided they submit information that Rick can make a determination that it's still protective of the ground water resource. In your package this phrase right here which says *except those in section 6(g)*, that was added after we printed out your package. In the clean copy it's this way, but in the one with the Statement of Reasons it isn't. The reason that we felt we had

to add that, these are the EPA requirements and we're afraid that we don't have the authority to grant a deviation from the UIC requirements this way. They have other provisions for granting deviations. So 6(g) doesn't talk about well diameters, it talks about things like geologic logs and that type of thing.

RICHARD CHANCELLOR, LQD: The new language is in the clean copy and not the strike and cap.

MARION LOOMIS, WYOMING MINING ASSOCIATION: It's not in there.

BOARD MEMBER GINGERY: It's not in there.

ROBERTA HOY, LQD: That's the strike and underline, but at the back of that package there's the clean copy at the back of the package.

BOARD MEMBER GINGERY: Oh okay.

ROBERTA HOY, LQD: We didn't have it ready when you all saw that.

RICHARD CHANCELLOR, LQD: What's in 6(g)?

ROBERTA HOY, LQD: The first one I think is geologic logs. Here's this if you want to look through 6(g) and what it requires. Section 6(g) starts on page 59 of the draft proposed rules. Section 6(g)(i) is that you have to do appropriate logs. Section 6(g)(ii) is that they're constructed to prevent migration of fluid into unauthorized zones. Those are really the only two in 6(g) but they're EPA mandated requirements and they're fairly broad.

RALPH KNODE, POWER RESOURCES, INC.: Underground injection program?

ROBERTA HOY, LQD: Correct

RALPH KNODE, POWER RESOURCES, INC.: So it requires a report too. It doesn't just require procedures, it requires an additional report.

ROBERTA HOY, LQD: Well the report is actually part of the permit. It's what you submit with the permit.

RALPH KNODE, POWER RESOURCES, INC.: So you don't have to turn in all the logs.

ROBERTA HOY, LQD: Well, which addendum is it? What we've done in the past, is they've turned in select geophysical logs or sometimes.....

RALPH KNODE, POWER RESOURCES, INC.: I don't think so.

ROBERTA HOY, LQD: Well, we have them for Gas Hills.

RALPH KNODE, POWER RESOURCES, INC.: Maybe as a permitting requirement, not as an operation requirement.

BILL KEARNEY, POWER RESOURCES, INC.: We didn't drill any Class III wells in Gas Hills, those are just monitor wells. We talked about this at the last meeting. This is very onerous for the operator as well as DEQ, all this information.

ROBERTA HOY, LQD: We have geophysical logs. The thing is what we've done is we've been selective about what we've, if you look at the number of wells drilled, we'll get a geologic cross section and it will include lets say 20 wells and they'll submit the logs on five or six of them. He's right, we don't necessarily want every log on thousands of holes but we have received a select number to illustrate what the sub-surface conditions are and that's what this is saying. This is not changing it from the way we've been doing it. This is again, where we have to have the paperwork that matches the EPA requirements. We're not trying to change what's done on the ground.

BILL KEARNEY, POWER RESOURCES, INC.: Roberta, you're right we do submit that type of stuff during the start of a proposal for a well field to describe the geology and stuff but this EPA requirement is for new Class III wells which are injection wells and we do not submit that information and we never have.

ROBERTA HOY, LQD: If you look at the cross sections over time they've used a variety.....it isn't necessarily just a monitoring well that may have a geologic log for it. On some of these there's a well convenient so you use that log for it. I understand what Bill's saying. It says the Class III ones but again what we're driving at is sufficient information just like they've been doing to illustrate the sub-surface conditions.

RICHARD CHANCELLOR, LQD: So basically what we're saying is that when they submit the cross sections are representative of the logs that would be in the production wells?

ROBERTA HOY, LQD: Correct.

RICHARD CHANCELLOR, LQD: So it's not each production well, it's representative of that area where the production wells go in.

BILL KEARNEY, POWER RESOURCES, INC.: If that's how it's interpreted that's okay.

RICHARD CHANCELLOR, LQD: We put that in the State of Reasons, I think and it will satisfy EPA.

ROBERTA HOY, LQD: Right. I think there's no intention of changing what we're.....

RICHARD CHANCELLOR, LQD: We don't want all those well logs.

BILL KEARNEY, POWER RESOURCES, INC.: You don't?

RICHARD CHANCELLOR, LQD: We don't. That was not our intention.

BOARD MEMBER GINGERY: I had a question. There's no requirement, a certain percentage or certain number?

ROBERTA HOY, LQD: No, we've never said 20% of your wells. Generally what we've done on the last one, we sat down and looked at it and said, "Okay how about the logs for these, these, and these?" And that was fine so before they ever submitted it we'd already said we think these would be the most represented.

STEVE INGLE, LQD: On the other hand, the company maintains all that information on site. I know that if I went to Bill and asked to see the log for such and such a well, they could pop it out just that fast and the information we're getting I can look at a plan map and see that this well is probably screening from this interval and it's x feet deep without even having to go to Bill for information, it's sufficient.

BOARD MEMBER GINGERY: So you're saying for a particular well and the question came up, the data is really there you just need to go to the site to get it then?

STEVE INGLE, LQD: Yes.

BOARD MEMBER GINGERY: This is a requirement and the other we know where that data is if a question would come up on a particular well. Kind of two different questions but, it leads to the same place. The information is really still there.

ROBERTA HOY, LQD: And we could add that to the Statement of Reasons too.

BOARD MEMBER GINGERY: It isn't like someone isn't sharing the information, we really don't need all that information unless there is a particular question. Is that right? Okay. So can you put some wording or is that necessary?

BOARD MEMBER GINGERY: Well we'll add something to the Statement of Reasons but we're not changing the current submittal requirements.

BOARD MEMBER GINGERY: All right.

ROBERTA HOY, LQD: And that they're maintained on site.

RICHARD CHANCELLOR, LQD: And talk about the well logs are due and get our representative of the area before the wells go in. If I understand right the well logs that we do get just sort of justify a backup of the cross sections it provides, the new well fields?

ROBERTA HOY, LQD: Right. The next changes were in Section 6(c) and this is where we get to the number, zero to four inches. We did two things to Section 6(c)(i). The first is changing the four inches to three inches. The second thing is we deleted everything after the first sentence. Most of that was in the Water Quality requirements and after we read through it and looked at it, it's like it doesn't really apply in this situation so we just left it out to make it shorter and easier. So those are the two changes in 6(c)(i).

RICHARD CHANCELLOR, LQD: There was some discussion that the drill bit may actually be 2 7/8 inches larger than the well casing. You may want to put some lines in the Statement of Reasons that that size drill bit with the drilling action will result in at least 3 inches because.....2 7/8 inches will result in at least 3 or more.

BILL KEARNEY, POWER RESOURCES, INC.: Say nominal 3 inches.

RICHARD CHANCELLOR, LQD: Put nominal in the actual rule, is that what you're saying?

BILL KEARNEY, POWER RESOURCES, INC.: Yeah.

RICHARD CHANCELLOR, LQD: We're okay with that?

BOARD MEMBER GINGERY: So just simply not what the bit really is we just want to make sure it comes out to at least 3 inches. The other is more of a technical aspect correct? To accomplish this.

BOARD MEMBER GAMPETRO: If I recall it had to do with the size of bits that actually exist.

BOARD MEMBER SKILBRED: Bill, is that adequate to address your concerns?

BILL KEARNEY, POWER RESOURCES, INC.: Well there's actually a bigger issue that we're going to get to in a second that deals with the joint.

BOARD MEMBER SKILBRED: Oh, okay.

ROBERTA HOY, LQD: So you're talking about the latter part of the sentence. The diameter of the outer casing joint?

BILL KEARNEY, POWER RESOURCES, INC.: That's the issue is with the joint. That's why we brought this piece of casing along and this is what we use and when we're talking about the casing this is 5 inches in diameter here.

RALPH KNODE, POWER RESOURCES, INC.: Twenty foot lengths.

BILL KEARNEY, POWER RESOURCES, INC.: Twenty feet of this is 5 inches and where they stick together in the joint or the bell, this is 5 1/2 inches.

BOARD MEMBER GAMPETRO: Outside diameter?

BILL KEARNEY, POWER RESOURCES, INC.: Yeah, outside diameter 5^{1/2}. We resolved the issue to the standard practice that we have 3 inches greater diameter on the hole on the pipe but we're a 1/2 inch shy on the joint. I think that's the issue we need to talk about today because like Roberta said when we cement the wells or the cement is put in the casing, it's pushed down and displaced up and it comes up to the surface and typically you see the cement it comes out of the ground and yes it falls back to some degree. Then we go in with a hose and from the surface with a cement slurry we top that off. Some of pictures you showed are a little, I think, are misconstrued because certainly at the top of the casing if you come out and see these wells there's tons of cement around them and there's no way surface water's going to get in there. But I think that's the issue that we need to talk about is the casing. And Ralph's been doing this for 25 years and I'll let him take it from here.

RALPH KNODE, POWER RESOURCES, INC.: It get's to the point of what degree of safety do you buy yourself by forcing a company make a half inch bigger drill hole for the entire 500, 800, 900 feet, just so you'll get that full 3 inches at this, joint 3 inches out of every 20 feet? We prefer just to strike the word *joint* and we'd be completely tickled with the way it's written. I still think that's well within, you know Mr. Taylor said zero to four inches with two inches being the norm, the most common of these reg's that he looked at that still falls within that range I believe. If we could strike the word *joint* we'd be thrilled.

BOARD MEMBER GINGERY: What are we trying to accomplish here?

ROBERTA HOY, LQD: Again, it goes back to the preventive and particularly since a lot of the concerns have been, although they've changed practice in terms of the joint connection, but a lot of the issues have been with the joints. If you have a problem at a joint then if you have less cement opposite that joint then you're increasing the potential for having not only the casing issue, the joint failure or casing failure, but start having a concern about the cement failure too.

BOARD MEMBER GINGERY: So you're saying that the greatest hazard of a failure is at the joint?

ROBERTA HOY, LQD: That's been one of the major problems they've had in the past, primarily because of the way in which it was joined. And they have changed that.

BOARD MEMBER GINGERY: With the changes they've made, do we have any idea what the failure rate is then?

RALPH KNODE, POWER RESOURCES, INC.: Almost zero. It's like 1% on new construction.

MARK TAYLOR, LQD: If we could put that fourth diagram up and I could talk off that. I guess this one will work.

ROBERTA HOY, LQD: This one?

MARK TAYLOR, LQD: No, this one will work. Again, this might sound repetitive but it's a piston effect that drives the cement out of the pipe it creates (cough) on the outside of the seals. The water or mud standing in the hole weighs about 8 pounds per gallon. The cement will be about 15 so we double the hydrostatic bed and it isn't all that uncommon that we do not get cement back to surface. The cement will come to some point up here. Even those that come to surface a lot of time because it leaked off that added pressure, leaks into cracks and crevasses, it will subside before it sets up. We need to have the capability of going back in this annuls from the surface and a straw or a tremie pipe and then we will evacuate what's sitting on top, say the cement set right here, what's on top of that cement is really ratty cement, it's water, it's mud, it's all kinds of stuff sitting there it has to be evacuated in that hole. So we need to come back in, we tag the good cement, we remove all the debris, establish circulation, clean out the hole and then we put cement back through the tremie pipe. The practice of pouring from the surface, it is done but the only time I see it done sort of successfully is about a 3 inch. If you're sitting there at a inch and a half your not going to pour cement with a hose when the surface of it will not fall to the required depth nor will it remove the debris in the annular space that needs to be removed because it's trashing cement, rock bits, and water. If you pour cement in and you're going to have a sheath back there that is not cement. This is my main issue, it's a practical one. If you can't run a tremie pipe between the casing and the rock itself, how are you going to establish a cement sheath entirely?

BOARD MEMBER GAMPETRO: And does 2 ½ inches satisfy that or do you need the 3?

MARK TAYLOR, LQD: Most tremie pipes are about 3/4 and the OD's about an inch. Well, if we go to one of the other slides.

MARION LOOMIS, WYOMING MINING ASSOCIATION: You're talking about two different subjects here. Your talking about tremmieing it at the surface and I think Jim's talking about the joint. How much do need around the joint?

BOARD MEMBER GAMPETRO: I thought we were talking about the joint.

MARK TAYLOR, LQD: Again, around the joint, it's the same thing. If you only have one joint that you're trying to get around that's okay but say you had four stands of pipe you had to get by, you're going to try to shove that tremie pipe through that pipe space with that collar and it won't go. Those collars are also the place where you like to put your centralizers, okay. So, what you're trying to do then snake this tremie pipe through those collars through those centralizers and through all the undulations in the hole and it is very difficult to shove a tremie pipe very far in a very tight hole.

RALPH KNODE, POWER RESOURCES, INC.: I have a question in 6(c)(iii), there's no reference to having to place this annular material between the tremie pipe. Are you now saying that's the way this is interpreted? The last sentence refers to settling of the sealing material which says additional material must be placed in a annular space to bring the level of sealing material to ground surface. There's no reference to how you do that.

MARK TAYLOR, LQD: We can put tremie pipe in there.

RALPH KNODE, POWER RESOURCES, INC.: So now you're wanting to change what you proposed?

MARK TAYLOR, LQD: Not change, it would add specificity to it. What we want is a complete sheet of cement, okay. How we establish that would be my recommendation to use the tremie pipe. Pouring from the surface is not effective and again there's tons of experience that I have there and references to say that it will not give you an effective sheath. It will satisfy the inspector because he'll come out and see a concrete apron but it will not ensure a complete sheet.

RALPH KNODE, POWER RESOURCES, INC.: No, all I'm pointing out is now you're suggesting something that's not in the official changes. There's no reference to tremie pipes, that's all I'm.....

MARK TAYLOR, LQD: Again, this is almost a maintenance type thing. If this situation occurs, if you get to surface and you got returns and it doesn't fall down, you're done.

RALPH KNODE, POWER RESOURCES, INC.: As you know, it usually falls back 5, 10, 25 feet, whatever.

MARK TAYLOR, LQD: A small amount.

RALPH KNODE, POWER RESOURCES, INC.: My comment to that I guess would be that at the top of the hole where you're dealing with alluvial material, soil, whatever, that's typically where your hole's washed out anyway. I'm just trying to think that typically you're going to have more, substantially, more than 3 inches at the top of the hole.

MARK TAYLOR, LQD: I agree, at the surface, yes. It's these situations we're saying it falls four joints, and it will, you know that. How are you going to get the tremie pipe in if you have a tight spot?

RALPH KNODE, POWER RESOURCES, INC.: I don't know.

MARK MOXLEY, LQD: I would point out in 6(c)(iii) that we do say that the grout shall be placed from the bottom to the top. You do that initially by pumping down through the casing and up around the side. The situation we're talking about here is where it settles. And you have to go back again from the bottom to the top, so you have to put a tremie pipe down in there to get it to fill from bottom to top. We say that in the regulations. We're not saying.....

RALPH KNODE, POWER RESOURCES, INC.: Where is that?

MARK MOXLEY, LQD: 6(c)(iii) in the first sentence. We're not saying it's acceptable to simply pour it in from the top. It has to be placed from bottom to top.

RALPH KNODE, POWER RESOURCES, INC.: So, you're not just talking about the first cement job you're talking about any time cement's placed in the well.

MARK MOXLEY, LQD: Yeah, any cement should be placed from the bottom.

BOARD MEMBER GAMPETRO: Let me ask that question one more time. You're gonna have a tight spot it's a matter of how tight it's gonna be because there is a joint. Are you saying that the 2 1/2 inch annular space is inadequate and that you would prefer to see the 3 inch even around the joint, the annular space?

BOARD MEMBER GINGERY: Let me ask a further question more elementary. I had heard a few moments ago that a lot of times to correct this, we're dealing with less than 20 feet, but I heard you say that we may have to go 3 or 4 joints. We could be up to 80 feet.

MARK TAYLOR, LQD: We've seen ones where they break down.....one of those diagrams, they could break down in an interval. Like that coal interval we show here. This could be an example of exactly what they're saying, we pumped it in maybe the cement came in or leaked off and this is all we got everything else went into the formation. Then we try to pour from the surface or they didn't get the tremie pipe down all the way, this might be the best we can do in some situations. Then they'd have to go in and set a break plug and a packer and actually squeeze cement back in here and re-drill it out.

BOARD MEMBER GINGERY: Okay, so there are cases that it's more than just a few feet extensive.

MARK TAYLOR, LQD: Again, I dare say it's rarely established when it falls back and how far down it goes. I think it's just probably a matter if we mix up x amount of slurry, we pour it in until it comes back to surface and we say we're done.

BOARD MEMBER GINGERY: Okay.

BOARD MEMBER SKILBRED: What is typical?

MARK TAYLOR, LQD: Typical?

BOARD MEMBER SKILBRED: I mean is this a constant problem to that depth?

MARK TAYLOR, LQD: To not have cement stay at the surface is.....

BOARD MEMBER SKILBRED: I understand that's it's not going to stay at the surface.

MARK TAYLOR, LQD: That's common.

BOARD MEMBER SKILBRED: Yeah, but what would be a typical.....

MARK TAYLOR, LQD: I'd hate to say that because it would talk about the alluvium and colluvium, the type of material that's around and it's permeability would dictate that.

ROBERTA HOY, LQD: The other thing to is, again, we are dealing with regulations that apply primarily to in situ uranium mining, but this also applies to trona and to other things if they go beyond that depending on what happens in the future. Whatever we write we don't want to focus too much on one situation it has to be fairly comprehensive. Those trona wells can be deeper and in more difficult conditions, in terms of corrosivity. In fact they're construction methods are radically different.

BOARD MEMBER GINGERY: You know just for some clarification, some of you deal with this all the time, but I'm getting a little confused but I ask about the failure at the joints and I gather that somebody said that was the weak point, but it's less than 1%. Then we come back here it seems like what we're discussing that practically every hole we put down we have a hard time bringing it to the level. I don't know if that's in feet or what. Are we talking about, one is that we have a new drill hole and we're trying to bring it up to the standards or the requirements to get this up, but at the same time it sounds like we're also discussing failures of holes that we thought were correct? What's the time table here? What are we.....

ROBERTA HOY, LQD: The concern about the cement dropping is when the well is first installed. That will happen in the first days, hours, or whatever. Once you address that concern, I mean that's an initial construction issue. It's not completely unheard of to have a problem later on but there's usually any other

issues as well. The problem with the cement settling is an initial construction issue. The problem with the long-term aspect are the joint failures. When they used to use screws and that type of thing. You're not going to be running generally, let's say the well's been in for five years, at that point in time if you have to do some kind of well repair you won't necessarily be running in a tremie pipe around the outside, then you start having to go in through the well to correct whatever problem you have with the well.

BOARD MEMBER GINGERY: So we're talking about an immediate issue with the construction.

ROBERTA HOY, LQD: Correct.

BOARD MEMBER GINGERY: And shouldn't we be discussing that as the long-term maintenance issues. Is that really in a different category?

ROBERTA HOY, LQD: Well they're both of concern and by doing it this way we're trying to address both the immediate concerns and the long-term.

RALPH KNODE, POWER RESOURCES, INC.: I'm not sure I agree with that and I think they're two separate issues and I said this the time last we had a hearing and that is one issue is you're trying to fill the annular space between the outside of the casing and the ground. And you're trying to do that so water doesn't migrate from one formation to another formation under any scenario. That's why we're concerned about having ample material to fill this annular space from bottom to top.

A separate issue is, is the well constructed properly and will the construction of the well hold up over the 5, 10, or 15 years of the life of that well? And that's where we start talking about things like mechanical integrity tests and construction techniques and things. In my mind they're two different things.

BOARD MEMBER GINGERY: When does that test take place?

RALPH KNODE, POWER RESOURCES, INC.: After the completion is done, there's an initial test on the integrity of that well from bottom to top to make sure that's no leaks and that it will not lose any pressure. From there on it happens every 5 years after that or sooner if there's been some maintenance performed on that well. But I believe the Board gets confused by those two issues and what we're talking about is annular volume that would protect water moving from one area to another under any scenario.

BOARD MEMBER GINGERY: I was confused. In my mind it seemed like to me we would want to resolve the issue, I will call it construction issue, as you put that well in. The integrity of the well 5 years or from the maintenance seems to be a whole different issue because at that immediate time if we say that well is correct in instillation, it seems like to me that whenever it's determined that well has failed it seems to be a corrective item instead of the construction item.

ROBERTA HOY, LQD: I'm not sure I'd say it's two different issues. It's the short-term and the long-term. In the short-term you're trying to, and we're trying to have one fix for both the short-term and the long-term. If you had one fix for the short-term which would be if you have to put in a tremie pipe and that fixes, and if you have 3 inches that takes care of that. And it also helps with the long-term issues which are the joint failures. It's true there are two separate issues. There's the short-term and the long-term but we're trying to do one fix for both and be done with it.

BOARD MEMBER GAMPETRO: Are you saying that more adequate construction technique will fix the long-term problems as well as the short-term?

ROBERTA HOY, LQD: Correct. That it reduces the risk of, again, even if you do have problems with your casing, let's say you get bad casing, which has happened, there's a whole set of casing that unfortunately after how ever many years gave out. The better the cement you have around it, the less chance you have of having that last scenario where you have both a cement and a casing failure.

BOARD MEMBER GAMPETRO: What percent of these wells fail the test after the first five years, second five years, and so on?

ROBERTA HOY, LQD: This is 1999 through 2002 so in the first column is the first test right after it's constructed. So you can see it's generally less than 10 % of the wells, there's some variation here and those are fixed immediately when they figure out what's wrong. Then the second column is the sum of the 5 year, 10 year, 15 year, whatever tests were run that year. So you run anywhere from like 20% up to almost, I think it was 40 or some odd percent failure in those old well's with the MIT's. Again, we don't have necessarily enough track record because it's been, I don't know when they first started getting rid of all the screws and all that kind of thing, so we may not necessarily see reflected in here some of the improvements that they've made, but this is a really high rate so they have to go in and put in liners and all the maintenance headaches that you have. Then potentially whatever issues you have with impacts to ground water. And there have been a few instances in which they have to do some kind of remediation action to deal with the well failures.

BOARD MEMBER GAMPETRO: How does this relate to the 1% you quoted?

RALPH KNODE, POWER RESOURCES, INC.: I want to just make a final statement here. What she shows is exactly right and that's the result of practices that were approved by the DEQ and implemented by the company that was installing those wells prior to the current management taking over in 1999. At that date immediately we recognized the problem. We completely committed to an entirely different type of construction technique which we had used for many years in our Nebraska operations, the result of which is a different style casing, more centralizers, more annular volume between the casing and the well. All these things we agree are proper and necessary. That slide is representative of the problems we're inherent with the construction techniques prior to the current management taken over in 1999. Yes sir?

BOARD MEMBER GAMPETRO: Could we see what the results are of the testing on your Nebraska wells?

RALPH KNODE, POWER RESOURCES, INC.: Yeah, I can give you that anecdotally and I can provide that officially if that's what you like. I was involved in that operation for 20 years and still am associated with it closely and the number of wells that failed the 5 and then again the 10 year mechanical integrity test is on the order of one or two well's per year when you're putting in 300 well's a year so it's a fraction. It's very small. It's nothing like what we're seeing here with these other construction techniques that's obviously why we as the operator changed our techniques because we don't want to have to deal with this in the future. You know, we have a big enough problem with what we inherited. Maybe if I can make just one comment on this wording here and then I think we'll just make that our final comment and go on. I reread these reg's as written after the last hearing and I think the staff has done a very good job of addressing our concerns and looking at how to handle this. When I read this yesterday I thought this looked pretty darn good. I would clearly ask that the word *joint* be struck from the language. That would be our request. Again, to emphasize what we're talking about, if we're talking about a nominal 8 inch hole and a nominal 5 inch casing we have 3 inches of annular material from the top of the hole to bottom with the exception of 3 inches every 20 feet we go down to 2 ½ inches. You can request that we get a bigger bit size, drill a bigger hole, put more

material in the annular space to cover this 3 inches out of 20 feet and if that buys you some comfort than I guess that's the way we'll go but in our opinion there's no justification for doing that and that's why we request to strike the word *joint* and we'd be completely happy with that and I think that's really our last comment.

RICHARD CHANCELLOR, LQD: Question. When you drill the hole, how much wobbling....?

RALPH KNODE, POWER RESOURCES, INC.: Well like what's the gage of the hole you'd say. Is it really 8 inch 8 1/8 or 8 1/4, to tell you that in a sandstone it could be 8 inch it could be 9 inch. If you're going through some of these sandstones or coal or whatever it could get bigger.

?: It's always bigger.

RALPH KNODE, POWER RESOURCES, INC.: It's never smaller obviously. So you know that's why we're talking nominal pipe size. In reality, the majority of the time you're probably gonna have your 3 inches here but we can't guarantee that if we're using an 8 inch bit and a 5inch casing and it get's to 5 1/2 , you know, we can't guarantee that's it's 3 inches there but it's gonna be 2 1/2 inches at least. We feel that's sufficient. We don't feel that the extra expense to take care of that 3 inches in 20 feet is gonna make a difference. I guess I'll leave you at that comment and request you consider striking the word *joint* from that 6(c)(i).

BOARD MEMBER GINGERY: Let me ask you a question since we're dealing, in your case, with one industry and I appreciate you bringing up this applies to a lot but if you do have to go back down as it was being discussed to take some of the materials out so you can cap it properly, do you have the equipment that can vacuum that out of there and not get hung up on joints?

RALPH KNODE, POWER RESOURCES, INC.: Well, I guess I'd have a slightly different take on what Mr. Taylor said. Number one, you've brought that cement or you're required to and you should've brought that cement all the way to surface and overflowed and all that. The mix of mud and bentonite and rock cuttings should've been displaced so when it settles back down you typically in my experience have a pretty clean void between your open hole. Now what I've been told today is that we should be placing that material whether it be 5 feet or 50 feet with a tremie pipe, that's not been the practice here before, if that's what's required then we'll make that adjustment to our operation and in fact we can get that out of there. We're not gonna suck it out of there.

BOARD MEMBER GINGERY: Have you had to do that?

RALPH KNODE, POWER RESOURCES, INC.: We have not done that and I don't think it's made a bit of difference in my opinion but what are you trying to achieve and how safe are you trying to be? What your trying to do in the top few feet whether it's 5 or 25 is your trying to keep ground water surface runoff from going down the hole and getting in some shallow aquifer. I think we complete that weather there happens to be a little zone at 25 or 30 feet that's not good hard cement, does that cause you not to keep ground water out of that hole? No, I don't think it does personally I think you've achieved your objective. But if the requirement is to set it with a tremie than that's what we'll do. We won't do it because we want to but we'll do it because we're required to.

BOARD MEMBER GINGERY: Roberta or Mark, it sounds like the uranium industry has not done any of that vacuuming out of the materials. Did we expect them to do this or where did this idea come from since they haven't been doing this?

MARK TAYLOR, LQD: The expectation again is to have the entire sheath of cement. Their practice of pouring from the surface is not recommended anywhere.

RALPH KNODE, POWER RESOURCES, INC.: Remember we're talking about the top of a 10, 20, 30 feet of a 600, 700, 800 foot hole. We still have 700, 800, 900 feet of sheath.

MARK TAYLOR, LQD: Again to generalize this I think is wrong to say that it's gonna be 6 or 7 feet. It could be at any level. We have 4,000 foot holes or something like that.

RALPH KNODE, POWER RESOURCES, INC.: Well not in uranium mining industry. These are ISL regs. we're talking about.

MARK TAYLOR, LQD: We can have breakdowns. Having cement return to surface is common. You can have washouts. You calculate how much cement you're gonna use, most people use an excess, based on history they might say 10 or 25%. You do it, it won't come to surface. A percentage of those is that way. Those are the situations where you're having to go in with a tremie pipe. Now let me clarify something I said earlier, when I was saying my research showed zero to four, the zero means they didn't speak to it at all. It didn't mean that they were recommending zero. The smallest annular thickness I saw was an 1 1/4" and most of these are referencing the fact that they have to put a tremie pipe in to reestablish that entire sheath. Another thing about that top 7 feet, we don't want to down play that. That's really where we see a lot of our cracks in there because that's kinda where we get a lot of frost freeze actions, and that's where we really have to have a very, very good seal. That's what keeps our surface water from going into ground water, ground water coming up into our shallow alluvial aquifers. And again because of that mechanical stress, if we're going in to do any work on the hole setting packers reaming or anything we have to have that mechanically held in there very tightly or the rattling around in there has a tendency to snap this pipe. One thing you have to see is this is a cement pipe system, they work together, they both have to be as best from day one. If we have failure in our annulus we don't go back in and ream everything out and clean everything out or have to take everything out of the hole when we're abandoning. This pipe set in the hole and the cement on the back side of the pipe, the annular space, stay's out there forever, it's there forever.

BOARD MEMBER GINGERY: Thank you. Okay, what's the desire up here for what direction we should go on this?

BOARD MEMBER GAMPETRO: I guess I'd go with the recommendation of the staff.

BOARD MEMBER SKILBRED: Rick, if they drill the way they're doing it right now with an 8 inch drill and they're using this 5 1/2" collar and if I understand this right because it says that the ceiling material shall be placed from the bottom to the top of the well casing. I understand about it settling back down, I understand that you may have to place a tremie pipe and I'm assuming that goes down to the top of the cement that settled down and you clean it out and you put it in there. If they continue that practice right there with some uncertainty of whether they're getting 3 inches or 2 1/2" inches around the joints, can they continue with their practices as is right now and meet the requirements that you want here or need? Or do they have to get a different bit?

RICHARD CHANCELLOR, LQD: I think Mark has stressed the concern was that would you be able to get a tremie pipe down past the joints. I think that's the issue that we're looking at is there enough space there at the joint to get a tremie pipe down there to do that. That's the question. Since they have not been doing that we don't know if that's accessible or not.

BOARD MEMBER SKILBRED: But that's probably something that they need to address. I mean, they may be able to deal with this problem as the system is right now. I mean, using the bore hole diameters that they use now and the casing's they use now I mean until they actually go in and do that process I tend to kinda wonder why you're gonna drill a 500 foot hole for the 3 inches of the collar there to widen it out for that 3 inches that seems a lot overkill too but that's just my opinion on that. I don't know that's just a concern I just thought if indeed they have some success in other areas where this seems to be working and obviously we don't have the data to look at to tell us what it is and they have changed their procedures.

BOARD MEMBER GINGERY: Yeah, I think that's what bothered me a little bit too on that is we don't have the data saying it won't work, we know there could be some problems, but nobody's went out and really did it have they? Here in Wyoming?

BILL KEARNEY, POWER RESOURCES, INC.: Well yeah, in Wyoming we have them but like Ralph said at Crow Butte over in Nebraska there's tremendous record of success constructing the wells the same way we're constructing them now. That's why we increase the cost in Wyoming if we make more expansive and put a well in here than Nebraska, you know that's a consideration.

BOARD MEMBER GINGERY: Well my feeling is kinda staying with Chet on this issue as he explained it. I certainly understand if this whole industry was just starting out today maybe we'd jump to that, but I don't think we have enough data to say that it can't be done properly with the present description.

BOARD MEMBER SKILBRED: I agree I don't think we could say one way or the other.

BOARD MEMBER GAMPETRO: Would you rather, with the lack of information be safer or sorrier I guess?

RICHARD CHANCELLOR, LQD: So do we delete the word *joint* but in the other rule put in *using a tremie pipe to top off*?

BOARD MEMBER SKILBRED: Isn't that kind of inherent in what you say in 6(c)(iii)?

RICHARD CHANCELLOR, LQD: It could be clearer, I think.

BOARD MEMBER SKILBRED: Okay, because it says from the bottom up I think it just doesn't leave you any other choice.

BOARD MEMBER GINGERY: I think I agree. If that could be changed.....

BOARD MEMBER GAMPETRO: Well, you always fill something from the bottom up. Even if you're pouring it from the top, I could make a case for you it's going to the bottom and coming up! I would feel more comfortable with the tremie pipe comment in there.

BOARD MEMBER SKILBRED: Okay.

BOARD MEMBER GINGERY: Yeah.

BOARD MEMBER SKILBRED: I guess I agree.

BOARD MEMBER GINGERY: More discussion on that?

ROBERTA HOY, LQD: So, the last suggestion is take out *and joints* but put in *specify tremie pipe*?

RICHARD CHANCELLOR, LQD: Under 6(c)(iii).....that topping off will be done by tremie pipe.

BOARD MEMBER GAMPETRO: From the bottom up.

RICHARD CHANCELLOR, LQD: From the bottom up.

BILL KEARNEY, POWER RESOURCES, INC.: I guess there should be some minimum....you know you can tag the cement if it's only 5 or 10 feet down you don't need to put it in with a tremie pipe. You know sometimes you come back and do it twice. You know, you might have this much to finish it off. You know, you don't need a tremie pipe to do something like that. To me we're getting to specific here. There's other industries like trona or whatever where you would construct the well out of steel and it would be done totally different and not even anything like this. I guess I'd prefer we put in there that the construction be done in accordance with approval from the Administrator so that there is flexibility on these types of things so we can look at them on a site specific basis.

BOARD MEMBER GINGERY: I think we, without all the data there, there's been some good advice and information but I think with the changes you just made.....did you make.....

ROBERTA HOY, LQD: I just highlighted things. The one request that I would have is that we do have an opportunity to look at the Nebraska data. I'm not sure how you report it to them but that it be submitted to us somewhat in a format so we can compare our results with their's.

BOARD MEMBER GINGERY: Can you get that data for the state? I think that's a good idea. We might learn something.

RALPH KNODE, POWER RESOURCES, INC.: Yeah sure. I don't have a problem doing that. I've offered a couple times and nobody's asked for it so. We can do that.

BOARD MEMBER GINGERY: Okay. Does that meet the changes you mentioned Chet?

BOARD MEMBER SKILBRED: Yeah, that's fine.

BOARD MEMBER GINGERY: Rick, how about some word smithing there a little bit for us.

RICHARD CHANCELLOR, LQD: Well, Bill's where we're on real shallow subsidence we may not want to use a tremie pipe but the question is how deep can you do that safely without having bridging? So if we do leave it up to the Administrator's discretion I think some additional language needs to be in 6(c)(iii) to clarify that normally a tremie pipe is used for deeper.....when it subsides that much but the Administrator can allow other for shallower subsidence.

BILL KEARNEY, POWER RESOURCES, INC.: Typically when one comes back and cements to finish it off, the well has sat there for some period of time and the water that may be above the cement has dissipated out. I've actually gone out and probed these hole's before to see how deep it was along any annulus and stuff and most of them you hit cement you don't hit water or anything but they may have been sitting there for several weeks. So, I think what would be common would be you might have some small area there of a little bit of rubble or some 'floury' cement unless it would be something very deep. But the one's that I've gone out there and probed myself from the surface down to 30 feet it was usually hard cement that you hit.

RICHARD CHANCELLOR, LQD: Some proposed language said at the end of 6(c)(iii) the tremie pipe to ensure that bridging does not occur. You want some flexibility for shallower issues. Unless approved otherwise by the Administrator for shallower subsidence.

MARION LOOMIS, WYOMING MINING ASSOCIATION: Roberta, could you read that again I can't read it.

ROBERTA HOY, LQD: I'm not sure that you want to say that though because then every time they'd be.....it almost sounds like they have to call you every time that they have one that's less than 5 feet.

RICHARD CHANCELLOR, LQD: Or may be in the State of Reasons explain what rational to use to do otherwise.

ROBERTA HOY, LQD: Okay. I'll leave it at this for right now.

RALPH KNODE, POWER RESOURCES, INC.: Mark, weren't you saying that the section above that, that's what it's really saying there too? It doesn't make any difference if the initial cement job or some subsequent topping off that's required from bottom to top.

RICHARD CHANCELLOR, LQD: Mark was saying that the first sentence is biased from the bottom up. But also there's a difference of interpretation of that so I just want to try to make that clear that when we talk about the bottom up you're talking about physically replacing the bottom and coming up as opposed to pouring from the top and letting it fall to the bottom.

ROBERTA HOY, LQD: And I think the first sentence is talking about that initial reverse circulation and then the last sentence is being specific to the settling conditions, right?

RICHARD CHANCELLOR, LQD: To top it off.

RALPH KNODE, POWER RESOURCES, INC.: Can you read that to us? We just can't read it.

BOARD MEMBER GINGERY: Yeah, I understand a little bit. Back down there in(iii) and what you have highlighted, we're not going to put anything beyond for the Administrator?

RICHARD CHANCELLOR, LQD: I think that's open to discussion yet. We want to see if this language would suffice so far and then take the next step and see if there's additional clarification.

ROBERTA HOY, LQD: Let me read this.

MARION LOOMIS, WYOMING MINING ASSOCIATION: I can see it now. I think I got it. With a tremie pipe to ensure that bridging does not occur. Is that what it says?

ROBERTA HOY, LQD: Right.

BOARD MEMBER GINGERY: Are we leaving it there or do we want to.....

ROBERTA HOY, LQD: Well, again going back to 6(a)(iv) where we've added the deviation then that's where you could allow for that. I mean, that's one place we already have some flexibility unless we want to try to write specific language like less than 5 feet or something like that here.

BOARD MEMBER GINGERY: Oh, okay.

RICHARD CHANCELLOR, LQD: So 6(a)(iv) will cover this section also?

ROBERTA HOY, LQD: Correct. So we could go either way.

BOARD MEMBER SKILBRED: Are we in agreement on that since Marshall had to leave?

RICHARD CHANCELLOR, LQD: I think so.

BOARD MEMBER SKILBRED: Okay. I guess we can probably move on then.

RICHARD CHANCELLOR, LQD: We're in somewhat of agreement.

BOARD MEMBER SKILBRED: Somewhat of an agreement then.

ROBERTA HOY, LQD: The next change is in 6(c)(iv)(A). Originally there was a table in there that talked about properties of neat cement slurries and we looked at it and thought we could say it more readily in text. So the text now reads, *Neat cement slurry shall be composed of one sack of Portland Cement (94 pounds) to the appropriate gallons of clean water to yield a slurry weight of approximately 15 pounds per gallon.* And then you can just delete the table.

RALPH KNODE, POWER RESOURCES, INC.: Can I make a comment?

BOARD MEMBER GINGERY: Yes.

RALPH KNODE, POWER RESOURCES, INC.: I like the way that reads better, but it's standard practice in many industries to add some percentage of bentonite to the neat cement slurry. Neat cement is just that, it's cement and water there's no aggregate and it's common to add a few percent, up to 8 percent bentonite. If you would add as much as 8 percent bentonite to the neat cement your weight is only going to be 13.1 pounds. We can request that under the earlier deviation but I guess our comment would be could you make that approximately 13 to 15 pounds?

MARK TAYLOR, LQD: What we intended here was neat cement means just cement. We do have a provision in here that you can put in bentonite and other additives, and yes, it would result in a different yield and a different pounds per gallon and that's all gonna be approvable. We're saying if you're going to use a neat cement, and that's what it's saying if you're going to use a neat cement, this is what you mix it with. To write in here all the possibilities would be tremendous and we're saying they're all possible under, where is that where we talk about the additives?

ROBERTA HOY, LQD: I think it's 4.....

DAN KEEFE, LQD: 4(C).

RALPH KNODE, POWER RESOURCES, INC.: It just forces us to go ask for a deviation as opposed to.....

MARK TAYLOR, LQD: No, not ask for a deviation. There's an area in here and I don't know where it is exactly right now.

RICHARD CHANCELLOR, LQD: Is it 6(d)(iv)(C)?

BOARD MEMBER GAMPETRO: Bentonite claim issues?

ROBERTA HOY, LQD: Let me talk about the structure of this section. The first thing is 6(c)(iv), that's the umbrella and it says, *Sealing material shall consist of neat cement slurry, sand-cement grout, or bentonite clay mixtures meeting the following requirements.* So you're saying there's a bunch of different approaches. Then (A) like Mark said is just talking about neat cement and (B) is just talking about sand-cement grout. We removed concrete because that isn't something that's normally used in these circumstances. (C) talks about bentonite clay mixtures and then we left out (E) which was cement accelerators and various things. What should now be (D) is talking about you can't use old drilling mud and then what should now be (E) is the minimum time.

RALPH KNODE, POWER RESOURCES, INC.: I'm still not seeing what you're saying.

DONNA WICHERS, COGEMA: Part (E) was struck and that's where it says you can have additives.

RICHARD CHANCELLOR, LQD: The last part of old (E)?

RALPH KNODE, POWER RESOURCES, INC.: Yeah.

DONNA WICHERS, COGEMA: The entire old (E).

RALPH KNODE, POWER RESOURCES, INC.: Okay, but I'm asking is where do you get relief to add 8 percent bentonite without going to the Administrator. That's what I'm asking.

ROBERTA HOY, LQD: Well I thought it was in there.

BILL KEARNEY, POWER RESOURCES, INC.: It was taken out.

?: That's how it was originally.

BOARD MEMBER GINGERY: Are all of us reviewing 6(c) the (D)?

BOARD MEMBER SKILBRED: They're looking at this one right here, Marshall.

BOARD MEMBER GINGERY: (E), oh okay.

ROBERTA HOY, LQD: I apologize we inadvertently deleted what was 6(c)(v)(E). So if we show that not as struck, I think that solves the problem.

BOARD MEMBER SKILBRED: You're leaving it in there entirely as it is written?

MARK TAYLOR, LQD: Yes, we're trying to leave all that flexibility there.

BOARD MEMBER SKILBRED: Okay.

RALPH KNODE, POWER RESOURCES, INC.: I'm missing what you want to do. Is it leave (E) in? That (E) is different.

ROBERTA HOY, LQD: Well, I'm sorry that's because we were trying to fix this but we're leaving this one....special quick-setting, etc.

BOARD MEMBER GINGERY: Okay, does that resolve the issue?

RALPH KNODE, POWER RESOURCES, INC.: So you're going to leave (E) in there?

ROBERTA HOY, LQD: Right, there's a section that says, *special quick-setting cement, retardant* etc, etc, we're leaving that in.

RALPH KNODE, POWER RESOURCES, INC.: Okay, then I don't have a comment.

BOARD MEMBER GINGERY: Okay, we've made a little progress here.

RICHARD CHANCELLOR, LQD: And just a note, we will fix the numbers.

ROBERTA HOY, LQD: Yes, we will fix the numbering scheme.

The last change was in Section 6(d) and all we did was leave out the last phrase *or other materials if approved by the Administrator* because we felt it was redundant. We now have the flexibility per 6(a)(iv) to allow for variations so we just dropped out the phrase. And that's the last change that we had for Section 6.

BOARD MEMBER GINGERY: So this is where we wanted to get to then? Are there any other changes? Yes Bill?

BILL KEARNEY, POWER RESOURCES, INC.: Mr. Chairman, there is one change we would like to make on Section 6(b)(ii) and we discussed this last time. In the middle there where it says, *the well shall be closed with a water tight cover to prevent undesirable materials and surface water from entering the well and to help assure the safety of humans and animals.* In the last meeting we discussed that the top of production wells and monitor wells are not water tight. Water tight is just not a good.....you know, covered, and there sufficiently covered that they're not going to provide any safety problems to humans or animals unless you're talking about spiders or something falling in. So I think for good regulations, water tight is not a good word.

ROBERTA HOY, LQD: And we have that, we just haven't shown that. There's all those changes that were discussed last time that we haven't tried to go back through this time. So we have that in the transcript so when we finalize this package for the EQC then all those changes we talked about last time will be in that. We were just trying to focus on the construction issue this time. We just didn't get around to all the changes.

BILL KEARNEY, POWER RESOURCES, INC.: Oh, okay. We did see where you changed the stuff about the intermittent streams and drainages.

ROBERTA HOY, LQD: We got to some of it but we didn't get to all of it.

BILL KEARNEY, POWER RESOURCES, INC.: Okay.

BOARD MEMBER GINGERY: Okay, so we have all those corrections or changes on record.

ROBERTA HOY, LQD: Correct.

BOARD MEMBER GAMPETRO: I have a question about that. I visited a well this last week, as a water well where a silting situation had occurred in over, I don't know, 5 or 6 years it had actually come up about 3 or 4 feet. Is that an issue at all here with these monitoring wells and water tight caps or are they monitored often enough that if silting was occurring it would be recognized and any potential for the silting to actually get down in to the monitoring well?

BILL KEARNEY, POWER RESOURCES, INC.: The monitor well and the other well all terminate a couple feet above ground.

BOARD MEMBER GAMPETRO: This one had gone up 4 or 5 feet. The silting.

RALPH KNODE, POWER RESOURCES, INC.: They're visited.....

BILL KEARNEY, POWER RESOURCES, INC.: Every two weeks.

RALPH KNODE, POWER RESOURCES, INC.: Every two weeks we sample them.

BOARD MEMBER GAMPETRO: So it would be caught way before.....

RALPH KNODE, POWER RESOURCES, INC.: Oh yeah.

BOARD MEMBER GINGERY: Okay, does anyone else in the audience have a comment? Okay, so I believe we're to the stage here that we could just vote on this particular part Rick, we've voted on the other part already have we not?

RICHARD CHANCELLOR, LQD: I think we did. At the last meeting we voted on the changes except for this portion.

BOARD MEMBER GINGERY: Does somebody know the record?

SANDRA GARCIA, LQD: I think you guys did.

RICHARD CHANCELLOR, LQD: To me you could re-vote on it and say that the last meeting changes are accepted along with the changes today because that way we're covered, but I think we did.

BOARD MEMBER GINGERY: Okay. That's a good way to solve that, so.....

BOARD MEMBER GAMPETRO: So moved.

BOARD MEMBER GINGERY: Do I have a second?

BOARD MEMBER SKILBRED: I'll second that, but I'd like to make a comment since I wasn't here and wasn't involved with that I'm not sure that I can vote on something that I haven't heard about. So I'm hoping that you did vote on that because, I can vote on this one but I'm not sure that I want to vote on the other one.

SANDRA GARCIA, LQD: I thought at the last meeting, like Dan said, you had mentioned that you approved all changes as.....

RICHARD CHANCELLOR, LQD: That's my recollection.

BOARD MEMBER GINGERY: Okay, sir, would you like to modify your motion?

BOARD MEMBER GAMPETRO: So modified.

BOARD MEMBER GINGERY: I hope everyone's following the course of this.

BOARD MEMBER SKILBRED: I second the as modified motion.

BOARD MEMBER GINGERY: The motion was the changes that we have done the last hour or so dealing with Chapter 11, Section 6, correct and the aspects that's been recorded. So any additional discussion? If not, all in favor of the motion signal by saying aye.

BOARD MEMBERS: Aye.

BOARD MEMBER GINGERY: Aye. Those opposed same sign. Motion carries three to zero. Thank you. Yes?

MARION LOOMIS, WYOMING MINING ASSOCIATION: Mr. Chairman, I just wanted to thank you for your patience on this and your willingness to continue it over to another meeting and work with the industry on it and I appreciate it very much. And we still have some issues that we raised the last time that didn't get resolved and I'm sure we'll take those issues to the Environmental Quality Council and discuss them again. I don't want you to be surprised if there are still some comments that we make about some portions of the reg's but you've made a lot of very positive changes that we will support and we really thank you for that.

BOARD MEMBER GINGERY: Let me ask you a question if I may. Have the soda ash people, the companies, their representatives, commented back to your Association on this?

MARION LOOMIS, WYOMING MINING ASSOCIATION: Mr. Chairman, no. I sent these all out to the industry and asked them to look through them and I didn't get any comment's back and I would guess it's because they're, right now they're not conducting any in situ operations and they played around with it and DEQ may know of some that are looking at it but I didn't get any comments back.

BOARD MEMBER GINGERY: Okay, I hadn't heard either and appreciate the information. So, this important exercise that we went through to today was primarily the uranium industry.

ROBERTA HOY, LQD: We also sent the package to the two operators who have expressed interest and there is one permit and two Research and Development license's so there is, as Marion said, there's interest but they haven't necessarily gone gung-ho yet.

BOARD MEMBER GINGERY: The reason I brought that out I thought that would be information that should go forward to the DEQ Board that for all the industry that would possibly use this technique, but primarily our comments are from one industry, the uranium industry. I really appreciate your guys sticking it out these two meetings on this. I think you find that sometimes the staff tries to educate us but we certainly appreciate the industry and others trying educate us on these more technical aspects. It was quite interesting, I found. A lot more complicated then I thought it would be. So it's 11:50 right now, Rick or board members, do we want to take a break now or do we want to work up until 12 and take a lunch break, come back or how do we want to do this?

RICHARD CHANCELLOR, LQD: I think we could be done within a half hour.

BOARD MEMBER GINGERY: Okay, then we should proceed. Well let's set this information aside and then move to the coal Rule Package 1S and discuss that.

RICHARD CHANCELLOR, LQD: Mr. Chairman, we're not actually bringing rules to you at this meeting. We've been working on what we call Appendix A in our coal rules for several years because they need to be revised. The Mining Association also worked on their own version and what we'd like to do since the rule making is a public process is to get guidance from the Board to meet with the Mining Association and discuss the two packages with either a consolidated rule package or at least a rule that package identifies where we're in agreement and where their version and our version differs and bring those to you at a later date. Since rule making is a public process, I'd like to do it publically in front of you to get that guidance to hopefully direct us to do a work session with them to work on the two versions.

BOARD MEMBER GINGERY: Well, let me ask you this question then. What we're primarily discussing is the administrative way we're going to handle this and not the content?

RICHARD CHANCELLOR, LQD: Correct.

BOARD MEMBER GINGERY: So your request is to come forward to us at a future date, staff from your office and also from industry and have really a work session?

RICHARD CHANCELLOR, LQD: Well if you want to do it in front of the Board that's fine but we're proposing to do it outside the board itself and that's why I wanted to bring it to you that way because normally rule packages are discussed in front of the Board but since you have two rule packages side-by-side we thought it'd be more efficient to first meet with the Mining Association, go over the two versions, then come before you with the results of that meeting and let you decide on the whole package that way.

BOARD MEMBER GINGERY: How do you guys feel about that?

BOARD MEMBER GAMPETRO: Does this require a vote on our part?

BOARD MEMBER GINGERY: Well we probably should give instruction is that what you're saying?

RICHARD CHANCELLOR, LQD: Yes.

BOARD MEMBER GAMPETRO: Sounds reasonable.

BOARD MEMBER SKILBRED: I think this is a really good approach.

BOARD MEMBER GAMPETRO: No problem here.

BOARD MEMBER GINGERY: I'd entertain that we request the staff meet with the industry to bring these two packages, review these two recommendations and then bring it forward to us at a certain time that will be established.

BOARD MEMBER GAMPETRO: Subsequent meeting.

BOARD MEMBER GINGERY: Subsequent meeting, good point. Do I have a second on that? Yes?

MARION LOOMIS, WYOMING MINING ASSOCIATION: Mr. Chairman, that's fine and we're more that willing to do that. The only thing I would request is that this not be delayed. We did our package and I don't think the DEQ has a package done yet, do you?

RICHARD CHANCELLOR, LQD: We have a package done, it has not been out to the staff for review yet, but our package is done as far as everything written out and we started developing a side-by-side, I believe, of the two packages. Our proposal would be to let our staff look at what we did to get comments

from them and then come to you after we addressed their comments then work on it together then come to the Board. And our hope would be to have a Board meeting late January due to Marshall's schedule and we also have possible hearings in front of the Council on other rule packages that may slow things down but we'd definitely like to do it the first part of next year to have it in front of the board.

MARION LOOMIS, WYOMING MINING ASSOCIATION: Mr. Chairman, our point was we didn't want this to be delayed if it was going to be a long period of time because we'd like to keep pushing this and do it.

BOARD MEMBER GINGERY: But if we had this on the latter part of January or the first part of February, is that stringing out to far or is that a good time table for industry?

MARION LOOMIS, WYOMING MINING ASSOCIATION: Mr. Chairman, Scott Benson's the Chairman of our regulatory affairs committee, the principal author of that package.

BOARD MEMBER GINGERY: All right Mr. Benson.

SCOTT BENSON, TRITON COAL COMPANY: The option we have with the Administrative Procedures Act is to proceed with our rule package straight to the Environmental Quality Council (EQC). We would just as soon work with LQD and resolve any differences we have rather than fight it out in front of the EQC but our concern is as Rick said with the introduction they've been working on this well over two years. Where we are with bond release, we need to resolve these issues. If Land Quality is willing to diligently sit down and work us and get this resolved soon.....

BOARD MEMBER GINGERY: Here it's the 12th of September, if the Land Quality would meet with you within 30 days.....

ROBERTA HOY, LQD: The staff has the package but when we sent it out we didn't set a deadline. May be the first part of November?

RICHARD CHANCELLOR, LQD: Meet with industry?

ROBERTA HOY, LQD: Right. Is that what you're asking?

BOARD MEMBER GINGERY: Yeah, I want to know approximately when you're going to get with industry. Is it in 30 days, 45 days, 60 days? Because it seems everybody wants to move forward.

ROBERTA HOY, LQD: Right, I hate to do it in less than 45 simply because of all the stuff that's going on.

BOARD MEMBER GINGERY: Okay. Why don't we, for the record, within approximately 45 days they will meet. I'm asking you it's more in a question form. Is that reasonable that we would expect your office to meet with the industry within 45 days? Is that reasonable with everyone?

RICHARD CHANCELLOR, LQD: Yeah, let's do that.

BOARD MEMBER GINGERY: Okay and then that would be approximately the 1st of November. Rick can find a date that works with his staff and with you and then it will probably what take at least another 30 to 45 days to be prepared to come to us?

RICK CHANCELLOR, LQD: Well, we need at least 30 days to send out the notice and the rule making prior to our meeting so it depends if we get all done at one meeting or take two meetings with industry or how that proceeds. If it proceeds with just one meeting and we get things resolved then we could probably meet that late January time frame for the meeting. If it's two meetings to work out things then that would shove it back but we do want to also get this resolved and move forward because we realize that Appendix A needed a lot of work. So it's not our intent to delay it but realize too that we have a rule package, our coal rules right now, pending in front of the Council. We're finishing up another rule package that the board passed and making those changes to go in front of the Council and plus the in situ rules, we could have three Council hearings on rules in that same time frame. That's my big concern is that if those three hearings occur in this time frame, it's going to be a stressful time as far as resource for us to devote to this. So it depends on what the Council schedules for hearings. If the Council schedules hearings in that time frame it could really hurt our ability to get this done because those rules are important too I think.

BOARD MEMBER GINGERY: In general terms then, you would meet with them approximately November 1st in that period of time. The suggestion was made that January 28th this board would meet and it will probably take two meetings?

RICHARD CHANCELLOR, LQD: It may not. We'll know more after we meet with industry to see how many differences we have.

BOARD MEMBER GINGERY: Let me come back to my colleagues, how does that sound with you?

BOARD MEMBER GAMPETRO: That's fine.

BOARD MEMBER SKILBRED: That's fine.

BOARD MEMBER GINGERY: Okay. I'd make a motion then that we recommend that you meet with industry in the next 45 days and then we will meet tentatively on January 29th. Do I have a second?

BOARD MEMBER SKILBRED: Yes.

BOARD MEMBER GINGERY: The motion has been made and I have a second. All in favor say aye.

BOARD MEMBERS: Aye.

BOARD MEMBER GINGERY: All opposed? Motion carries three to zero.

ROY LIEDTKE, JACOBS RANCH COAL CO.: I just wanted to clarify what the industry and LQD will have by January 28th. Will it be a final proposed rule package, is that correct?

RICHARD CHANCELLOR, LQD: We will have a rule package that will identify areas that we come to agreement on between the two versions and where there's not agreement we'll have a side-by-side of the two different rules that will be put out to the public and to the board for their consideration that way they see both languages of the different versions where we do not agree so they can get your flavor and our flavor.

ROY LIEDTKE, JACOBS RANCH COAL CO.: Okay, thank you.

BOARD MEMBER GINGERY: That takes care of the administrative direction for this coal rule package. Any other items to be discussed from the audience? Members? Thank you so much for putting this all together.

RICHARD CHANCELLOR, LQD: We need a location for the next meeting.

BOARD MEMBER GINGERY: That was the other part I was going to put in my motion but I would recommend that we have it in Buffalo, Wyoming and Jim can host us. Is that location fairly good for all involved? Okay, we'll try it up at Buffalo and see how that goes.

RICHARD CHANCELLOR, LQD: One other item for discussion. Larry Munn decided not to ask for reappointment so we'll be looking for a new board member for an agricultural representative. If you do know someone who is interested in serving on the board with an ag. background, they can contact me or the Governors office.

BOARD MEMBER GINGERY: Any other business? Staff? I appreciate your time. If there are no other items, let's adjourn this.

BOARD MEMBER SKILBRED: I motion that we adjourn this meeting.

BOARD MEMBER GINGERY: Second. All in favor say aye.

BOARD MEMBERS: Aye.

BOARD MEMBER GINGERY: Okay. Thank you.