BEFORE THE BOARD OF ENVIRONMENTAL REVIEW

OF THE STATE OF MONTANA

BOARD MEETING)

DECEMBER 2, 2011)

TRANSCRIPT OF PROCEEDINGS

Heard at Room 111 of the Metcalf Building

1520 East Sixth Avenue

Helena, Montana

December 2, 2011

9:00 a.m.

BEFORE CHAIRMAN JOSEPH RUSSELL,

BOARD MEMBERS LARRY MIRES, HEIDI KAISER,

LARRY ANDERSON, ROBIN SHROPSHIRE,

JOE WHALEN, and MARVIN MILLER

PREPARED BY: LAURIE CRUTCHER, RPR

COURT REPORTER, NOTARY PUBLIC

WHEREUPON, the following proceedings were had and testimony taken, to-wit:

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CHAIRMAN RUSSELL: It is 9:00, and I will call this regular meeting of the Board of Environmental Review to order. And the first item on the agenda is the review and approval of some minutes. September 23rd, 2011 first.

MR. MIRES: I have a question. On Page 6 of 9, III(c)(1), it reads a little strange to me unless I'm reading it wrong. "Mr. Russell said he would entertain a motion to assign Ms. Orr as the permanent Hearing Examiner for this matter and then called for a vote. The. Assignment to Ms. Orr was unanimous by roll call."

Everything in the minutes seems to have gotten missed out of my set of minutes.

CHAIRMAN RUSSELL: After "the"?

MR. MIRES: After "the," assignment.

CHAIRMAN RUSSELL: So just kind of make it up.

MR. MIRES: Well, I was, and I was debating what was going to end up there. I just noted that kind of got left out. So it was Page 6 of 9, III(c)(1), is incomplete for the action that

was taken. I think somebody made a motion, and somebody seconded it, and then there was a vote.

CHAIRMAN RUSSELL: All right. Joyce, make a note that someone does read the minutes. Good job, Larry.

MR. MIRES: I've got to have some kind of a job here.

MR. MILLER: Do we need a motion and a second or what?

CHAIRMAN RUSSELL: Unless there is other comments.

MR. MIRES: No. That was the only typo that I found.

CHAIRMAN RUSSELL: With that in mind, I will entertain a motion to approve the minutes as they will be amended by reviewing the tape or the transcript. Is there a motion to that effect?

MR. MIRES: I would so move.

MR. MILLER: Second.

CHAIRMAN RUSSELL: Seconded by Marv. Further question? Comments?

(No response)

CHAIRMAN RUSSELL: Hearing none, all those in favor, signify by saying.

(Response)

CHAIRMAN RUSSELL: Opposed.

(No response)

CHAIRMAN RUSSELL: Motion carries unanimously. The next set of minutes are the November 3rd, 2011 meeting, special meeting.

MR. MIRES: Those look good.

CHAIRMAN RUSSELL: Take that big pause, and take a good look at you, and make sure that everything is good, Larry.

MR. MIRES: It looked good from my perspective.

CHAIRMAN RUSSELL: With that in mind, do I have a motion to approve?

MS. KAISER: So moved.

CHAIRMAN RUSSELL: It's been moved by Heidi.

MS. SHROPSHIRE: Second.

CHAIRMAN RUSSELL: For the record, I have signed that. It came up Friday. You did get it back, this order?

MS. WITTENBERG: Yes.

CHAIRMAN RUSSELL: It's been moved and seconded. All those in favor, signify by saying aye.

(Response)

CHAIRMAN RUSSELL: Opposed.

(No response)

CHAIRMAN RUSSELL: The next item on the agenda is executive summary for setting the 2012 meeting schedule. Tom.

MR. LIVERS: Thanks, Mr. Chairman. For the record, Tom Livers with the Department of Environmental Quality. We've prepared and proposed to the Board the meeting schedule, a pretty typical meeting every couple of months to accommodate rulemaking. And we send it out early so that Board members would have a chance to take a look at their schedules prior to discussion.

Just to recap, we're proposing Board meetings on January 27th, March 23rd, May 18th, July 27th, September 28th, and then the Board's choice, either November 30th or December 7th.

CHAIRMAN RUSSELL: Could we leave that choice a choice for now, or do we need --

MR. LIVERS: We certainly could, if we want to revisit that, Mr. Chairman, in six months or eight months, something like that. Sure.

CHAIRMAN RUSSELL: Everyone understands why the meeting schedules are like they are, and can't be modified very far. It's the rulemaking.

There is a specific amount of time that has to pass before you can take action. So these have actually been modified a little bit already, looking at different things.

So do we have to actually take action on this, or would it be best to do that?

MR. LIVERS: I don't know if it's critical to adopt these. I think there's some value in it. If not, we'll just take it as an assent and work with these dates, which is fine.

CHAIRMAN RUSSELL: We can certainly adopt them.

MS. KAISER: Is there a problem with January?

CHAIRMAN RUSSELL: We would still have a January meeting, just we wouldn't have adopted the schedule.

MR. LIVERS: Mr. Chairman, I think the main reason to get these out, in addition to just setting the schedule, is to avoid conflicts with individual members' schedules. So if there is no conflicts that surface in discussion now, we can just work with this schedule, and we'll take it as the Board's schedule, and then revisit the November/December issue later in the year.

CHAIRMAN RUSSELL: Is that fine with everyone? Head nodding is just as good as a vote I guess.

All right. The next item on the agenda. We're going to consider amending the rules to designate a portion of the Gallatin River as an Outstanding Resource Water. Tom, do you want to tee that off. I'm jumping ahead.

MR. LIVERS: Contested cases next, Mr. Chairman.

CHAIRMAN RUSSELL: I'm sorry. Katherine, instead of going to Tom, let's go to you, Katherine. Contested case update.

MS. ORR: Okay. Mr. Chairman, members of the Board, it's good to see everybody in person.

Things have been very busy this last six months. And what I'll do is I'll go through the cases, and if there is a development that hasn't been notated since the agenda was written, I will describe what has been happening.

On II(A)(1)(a) involving Northstar Aviation, this went to hearing in October, and the parties submitted post hearing briefs. This case is deemed submitted, and I'll be issuing

recommended or proposed findings of fact and conclusions of law in the next two weeks on that.

And that is the same situation with the next case, in the Matter of Violations of the Open Cut Mining Act By Deer Lodge Asphalt. There was a hearing held in September. This case has been deemed submitted, and now a decision will be issued in the next few weeks.

With respect to Item (d) here in the Matter of Violations of the Montana Septage Disposal and Licensure Laws by James Vaughn doing business as Any Time Septic and Porta-Potty in Lake County, I have ruled on the motion for a protective order both denying and granting that motion. And this week I've had a telephonic conference with the parties' Counsel, and the case has been reset for hearing on April 16th. And also there has been sort of a reset button because of the ruling on the motion for the protective order with respect to discovery and any motions for summary judgment that the parties may want to file.

Item (f), in the Matter of the Violations of the Open Cut Mining Act by Ell Dirt Works, Ell Dirt Works has just obtained Counsel,

and I expect to receive a status report from the parties' Counsel in the next few days.

Going down to 2(b), in the Matter of the Appeal and Request for Hearing by Roseburg Forest Products, a motion for summary judgment was filed by the Appellant. The Department has asked for an extension on that, and the parties have also asked to vacate and reset the dates of the prehearing conference and the hearing itself, and that will be done.

Item (c), there was a contested case hearing held on both October 19th and November 9th. Post hearing briefs on that are due by December 22nd. And after that point, the case will be deemed submitted, and I'll be issuing recommended findings of fact and conclusions of law.

Item (d), in the Matter of the Appeal and Request for Hearing by the City of Helena, the City of Helena and DEQ filed a proposed scheduling order on November 17th, and following from that will set that for hearing.

Items (e), (f), (g), (h) through (k) are cases, as you know, that involve the appeal of an issuance of an amendment to an open cut mining

permit, and there were pending motions -- there is a pending motion to dismiss, and in the alternative for summary judgment, and I have a draft order on all of those that will probably go out today. As you can imagine, just by the virtue of the number of the Appellants, what they're alleging, which is not all identical, and the fact that they're unrepresented by Counsel makes this case a little more complicated. The relief they're seeking is a public hearing, and so just wanted to let you know that.

Item 3(a) is a case that went to the District Court, so there has been a Petition for Judicial Review that was filed.

And that's all I have right now.

CHAIRMAN RUSSELL: Great. Thank you, Katherine. Any questions on any of that?

MR. MILLER: I've got one. Katherine, back on 2(a), in there it says on January 12th, 2010. That's two years ago. What is happening there?

MS. ORR: Which item are we looking at?

MR. MILLER: 2(a).

MS. ORR: I'm looking at Roman Numeral II(A)(1), and then is there a letter?

CHAIRMAN RUSSELL: It's actually the C. R. Kendall.

MS. ORR: Oh, C. R. Kendall.

MR. MILLER: Yes.

MS. ORR: That's a case that has been hanging around for quite awhile, and there has been a continuance entered in that. But you raise a good point. Maybe it's time to move that along.

MR. MILLER: I was wondering if the date was correct.

MS. ORR: It's correct. Everything is correct here.

MR. MILLER: Okay. Thanks. That's all.

CHAIRMAN RUSSELL: All right. Thanks. Okay. Now let's go to the Gallatin River ORW. Tom, do you want to tee this one up.

MR. LIVERS: Mr. Chairman, thank you. If Mr. Miller was interested in the date on the Kendall issue, it's probably moving along at warp speed compared to this next one. But we're again recommending an extension, and I think for good reasons. We've talked about this in the past. We probably won't rehash all of the issues each time. But there are good reasons to extend this again, and Bob Bukantis is going to give a presentation

for the Department.

MR. BUKANTIS: Mr. Chairman, members of the Board, for the record my name is Bob Bukantis, Water Quality Standards Coordinator for the Department.

Mr. Chairman, I'm impressed by your eagerness to get into this issue this morning. I'm basically just going to hit -- given that we've talked about this a few times over the years, I'm just going to try to hit the highlights, and kind of cut to the chase here, but again, just provide some quick overview.

This issue was first brought before the Board by American Wildlands in December of 2001. It has since, by the way, been passed off to the Greater Yellowstone Coalition from the environment group end, and currently resides with American Rivers, as being the active environmental group.

We first noticed a proposed rule on this in October of 2006. Public comment period, that public comment period closed November 2nd of that year. The rule basically would designate Gallatin River as an ORW, which is the highest protection that we provide for any waters under State law, and also the proposed rule would clarify that the

Department had the authority to regulate sources that are hydrologically connected to the river to protect against any measurable change in water quality, adverse change in water quality, through regulated sources of pollution.

And part of what that rule did was also grandfather in existing discharges, and also address cumulative -- directed the Department to cumulatively address any impacts to the river.

So that is the rule that's sitting there that's been in public -- where we've extended the public comment period at approximately every six months since the fall of 2006.

And the Board has done that at the request of the Petitioners and the development community who have been engaged in conversations to try to craft a local solution that would basically provide the same sort or even better protection than ORW designation.

So the intent, and the Department agrees with this, is to keep extending the public comment period to encourage and support these conversations, and for people to play together nicely, if you would, and craft a local solution that would obviate the need to designate the

Gallatin as an ORW.

So in your packet, you'll have a letter from Scott Bosse from American Rivers asking for that request. We agree with that extension request, and recommend that you extend public comment period until the 24th of April next year.

I'd be happy to answer any questions. We also have some staff here who are more conversant with some of the details.

For example, one thing I meant to mention is one of the things that American Rivers and others, this Wastewater Solutions Group, is looking at right now as an alternative is snow making disposal of wastewater for Big Sky. And we've got Todd Teegarden here if you have any questions about that. He's more knowledgeable about the details of that.

CHAIRMAN RUSSELL: Questions for the Department?

MR. LIVERS: The only thing I'd underscore, Mr. Chairman -- and Bob raised both those points. The groups are working together, and it's been a productive discussion. And a real pivot point to this is the fact that a constraint in an alternative solution is what to do with the

treated sewage, treated wastewater, during the winter. They land apply it during the summer. So the snowmaking is really a critical piece.

They were originally hoping, the group was originally hoping to proceed with that pilot last winter. They weren't able to, but it is underway this winter. So seeing what happens in that pilot is critical to determining what the alternatives are here.

CHAIRMAN RUSSELL: Larry and Joe.

MR. MIRES: Are there any other programs in the country using wastewater for making snow that can be referenced? What are the effects of this --

MR. LIVERS: Mr. Chairman, I think Todd would be the one to answer that, and I do think there is some work particularly in New England and Vermont maybe, but Todd Teegarden would probably be the best one on that.

MR. TEEGARDEN: Chairman Russell, members of the Board, Todd Teegarden with the Department.

And the answer to that question, yes, there is snowmaking going on in Vermont, Arizona, Colorado. Some of them are more isolated

facilities that are making snow in areas that are bermed. I should have mentioned Idaho, too. We've got a facility in Idaho that does make snow on an isolated Forest Service plot where it's disposed and then left to perc during the winter. There is a couple that still do it on snowmaking slopes. That would be Massachusetts and Arizona.

CHAIRMAN RUSSELL: Larry, anything else?

MR. MIRES: That's it.

MR. WHALEN: I'll direct this question to Mr. Livers. Tom, with respect to the momentum of these meetings, are these meetings regularly scheduled, or are they event driven between the groups?

MR. LIVERS: Mr. Chairman, Mr. Whalen. I don't know that. The last I met with these folks directly was not this previous summer, but the year before when pretty much the entire contingent came here and met with John North, Director Opper, and me, and all expressed interest in keeping this going. I don't know if Todd or Bob might have a little more insight to more directly answer your question.

MR. TEEGARDEN: Members of the Board and Tom, the group I don't believe has officially met

since they finalized the preliminary engineering report, which suggested this pilot be done a year ago. They did come meet with the Department since then. But the idea was for the district, Yellowstone Mountain Club, and those involved with that group to be involved in snow, that the pilot was going to ahead this winter.

And with that, the Department, and Big Sky, their consultant, and Yellowstone Club, developed a plan this fall, and they started making snow on an isolated three acre site at a site at Yellowstone Mountain Club. It's above their storage pond that they have for their wastewater treatment storage.

They treat and store, and effluent from that site is being delivered up into this area that we're going to measure effluent quality, fresh snow pack parameters, aged snow pack, and then melt water come spring. And the site slopes down. We've bermed it so that any runoff runs right back to the storage pond. So it is, we thought, an excellent site to -- It's a grassy slope, very few trees on it because they had clear cut it when they made the ponds.

But it's a good site to get some data

this year, see what the data looks like when it's compiled next spring. The Department and the group are working together to try to make sure that enough samples are taken, and then we'll evaluate it, and see if there is a need to do it again next year, or report back to the Board with the findings from this pilot.

MR. LIVERS: And Mr. Chairman, maybe to follow up and get a -- and thank you, Todd. I think what you're looking for is: Is there momentum? Is there a commitment there? And I'll say that when we met with the group a year and a half ago, I was impressed with the dedication and the commitment on all parties to work together.

And I do think that the current strategy is the snowmaking pilot to see if it's going to be viable. So they've been really waiting for an opportunity to test this out. I think there is maybe not a lot of reason for the group to get together until they start to evaluate this pilot.

MR. WHALEN: Thank you, Mr. Chairman.

CHAIRMAN RUSSELL: So all the other landowners along here except for the big one at the head of this project have no issues with moving forward with an ORW? When we first went

through this an awful long time ago, there were a lot of landowners thinking that this was going to affect them.

And now it seems like -- and I apologize for the analogy -- but it looks like we're just kicking a can down the road, and we're going to continue to hold off on doing an ORW until the major landowner and major polluter in the system can find a solution. And it seems to me that if we put the ORW in place, maybe they would find a solution a little bit faster.

I know that people might see this differently than I am, but we're literally catering to one group that has a lot of wastewater that needs to be dealt with.

MR. LIVERS: Maybe I could comment on that, Mr. Chairman. I guess what I'd -- My response to that is any solution is going to require the west fork of the Gallatin somehow utilizing the existing wastewater treatment system. That's really the only feasible alternative if you're looking at all these hydrologically connected systems. That's the system that's in place.

And the concern that that district has

always had is it wants to retain some growth capacity. If it has sufficient capacity, there might be interest in extending access to that treatment facility up and down the corridor, and taking some of the pressure off the river from those isolated systems.

But the big risk for the district is giving up its growth capacity, and that's why it has to look at this constraint, which is the winter storage; and if it can find some ways to alleviate that constraint, then it may be able to absorb some additional systems without sacrificing its capacity.

CHAIRMAN RUSSELL: Tom, not to argue with you, but once again, this is no different than a TMDL. And maybe this is a technological issue that they want to continue to use a fairly primitive wastewater treatment and disposal system, or is it they all pooled up, and maybe they could put in a treatment system that would meet a higher water quality standard.

So it's nice -- I'm glad we're doing this. I'm not making any qualifications on if this ORW should happen, will happen, or whatever. But if a group of people brought this to the BER a

long time ago; and the BER continues to think it's important enough to do. And this is not a DEQ issue, this is an issue with a wastewater generator in the system that -- Yes, capacity is great.

It's the same thing as a TMDL. If you have more -- a higher treatment technology, you're going to be able to take more wastewater because it's a daily load. So I'm just saying that it would be nice if hopefully this pilot works, and we can put this thing behind us, because this has been a long time. We have an EIS that's five years old. How long do they last? I guess if nothing changes, then the EIS lasts forever.

But I know we have to keep this open or that EIS probably just goes away, but it would be nice to get some resolution to this at some point.

MR. LIVERS: Mr. Chairman, I appreciate that, and I understand that it's one thing to look at this incrementally, and then when you look at it cumulatively, and all of the delays, there is some frustration. I would say that at this juncture, my recommendation is it makes sense. The pilot is underway, and it makes sense to see what comes out of it, but --

CHAIRMAN RUSSELL: I don't disagree with that at all, Tom. I don't. It is just it would be nice to put this behind us. If we're doing this five years from now, something is wrong with either the ORW designation or the treatment technology that's being employed in Big Sky.

MR. WHALEN: Or the BER.

CHAIRMAN RUSSELL: Or the BER.

MR. WHALEN: Mr. Chairman. Is the Department in a position to give us a date as to when it expects that the data from the pilot project will be in, so that we can then try to determine when another meeting will take place between these groups?

MR. TEEGARDEN: Mr. Chairman, Mr. Whalen. The idea is weather dependent up there. In April or May, depending -- it may be into late May -- the water will be melting up there. We'll have access to the lysimeter to test the soil, monitoring wells we have in there, as well as the fresh snow pack and the runoff.

And so sometime shortly after that, the report will be compiled by the consultant, we'll get that, and then we'll probably be in a position then to report back to the Board, and ask the

group, "Where do we go from here? What's your plan", in the forums group.

MR. LIVERS: Mr. Chairman, Mr. Whalen. It's possible that there might be a request for one more extension before this information comes in. I'm not sure exactly what the timing is going to be on that. They'll be close. But I guess I do want to be up front about that, that I don't know how much information will be in from the entire winter and the melt situation before we would reach another six month point, and need to be looking at extension.

So in addition to this one, I think it's likely or at least possible that the Board would be asked for one more extension before seeing that information.

MR. MILLER: Todd, on all these other states that tried this -- Colorado, Idaho, Arizona -- has their results -- do you have reports on those? Did it really -- Did they see contamination, or did it really solve the problem? What is the feeling?

MR. TEEGARDEN: I guess, Mr. Chairman, Mr. Miller, the results we've seen, because they're kind of different situations in each state

on how they're applied, the results have been positive that we know of from the monitoring that they've done.

Again, I do think Montana has some higher quality water quality standards, and because we're a headwater state, there is going to be more issues to deal with perhaps than other states that have tried some of this.

Certainly the Idaho example where they land apply snow, and let it melt, and meet, they have elevated nutrients, but they're under ten, which is the standard for nitrate in Idaho. So the facility is operating and working well in that location for that state that has that limit.

Montana has a nondeg limit, so there's other complications and issues in Montana that we'll see. Certainly I think the pilot will help us with more data relevant to Big Sky and this area that is being looked at.

MR. MILLER: Thank you.

CHAIRMAN RUSSELL: Other questions?

MR. ANDERSON: Isn't this entire study dependent on unique factors that change year by year? What if we have this year a unique snow year, in which we don't have the snow, the natural

accumulation that we typically have?

There is always going to be in this study process unique issues that will cause us, it seems to me, to question the validity of a study based on an isolated one year evaluation. So tell me how this particular isolated one year evaluation really is relevant to any long term analysis of this issue.

MR. TEEGARDEN: Mr. Chairman and Mr. Anderson. I think we're doing enough samples on the effluent itself. We're going to be monitoring, and they've got a snow till site right next to this pilot area, so they're very accurately able to measure natural snow fall.

When there is snow made from the storage pond and the treated effluent, we're testing it right away for the effluent quality. Within one day they go and pull a sample from the snow, and we'll be able to test that. Then we're doing this so that we're hopefully going to have about a five to eight foot layer of treated wastewater snow amongst the natural snow.

But certainly climate changes and precipitation will affect the volume of natural snow in the area, but we will be able to monitor

that. And I think a lot of the intent of this is to look at polished effluent treatment, which the district has in Yellowstone Mountain Club, to restricted land application at the golf course.

That type of effluent applied via snowmaking nozzles onto a slope, what can we expect out of the volatilization, the treatment in the snow pack, because there is of lots of studies and evidence that you get a significant reduction in ammonia and nitrification in the snowpack, and then even in the transformation from that to melt water.

And so I think our study is -- Certainly climate will be a big factor of the total volume of runoff in an area, but we're going to have a better idea of the effluent quality and what's happening in that type of effluent land application snowmaking realm.

CHAIRMAN RUSSELL: Todd, when you classify this as a polished wastewater, how polished is it?

MR. TEEGARDEN: Mr. Chairman, members of the Board. It is tertiary treated effluent. The community of Big Sky upgraded in the mid 1990s, late 1990s and early 2000s, to a mechanical

nutrient removal facility that follows that with filtration, disinfection, storage, and application on a golf course. So it certainly is in the level of ten milligrams nitrogen.

It is a good nitrification system, and we're working with them to make sure that they maximize the treatment volume, and so that what we're having there in terms of application on the golf course, as well as a potential snowmaking idea, works. But it is a tertiary treated effluent.

CHAIRMAN RUSSELL: If you're putting out ten for "N," and you're getting dilution, then ten should never be met, right? I mean if nothing else, you're just factoring in some dilution, if nothing else, to get down below our water quality standard, right?

MR. TEEGARDEN: Below the nitrate standard, yes. Certainly we're going to have TMDL issues with in-stream concentrations on any creek in the area, the middle fork, the west fork, all of the Gallatin streams in the area. And nondeg applies, so really we're looking at a lot of these groundwater type of situations where five milligrams per liter nitrogen or nitrate is the

limiting factor.

CHAIRMAN RUSSELL: What's your "P" look like?

MR. TEEGARDEN: Pardon me?

CHAIRMAN RUSSELL: What's phosphorus look like?

MR. TEEGARDEN: Phosphorus, without mechanical treatment or biological phosphorus removal, it doesn't treat phosphorus as well, but you don't really want to maximize that on a land application disposal project anyway. Certainly if you're going to river discharge, phosphorus is much more of a concern, as well as nitrogen.

For a land application, for grasses, forage, crops, land is a good spot to put out a little bit of phosphorus. And so they haven't tried to reduce phosphorus. Certainly it could be done by chemical addition, or again, adding that process to it.

CHAIRMAN RUSSELL: What's a typical BOD out at that plant in the summer then?

MR. TEEGARDEN: It's been in the range of ten to fifteen.

CHAIRMAN RUSSELL: Okay. Well, thanks for your information. I appreciate it.

With all that said, is there a motion to accept the Department's recommendation, and move forward with an extension of rulemaking for the Gallatin ORW?

MR. MILLER: So moved.

CHAIRMAN RUSSELL: It's moved by Marvin. Is there a second?

MR. MIRES: I'll second it.

CHAIRMAN RUSSELL: Any further discussion?

MR. WHALEN: Mr. Chairman, one question. For clarification, did you ever get an answer to your question about the survivability of the EIS? Is there somebody on this panel that can help?

CHAIRMAN RUSSELL: I think as long as we're moving forward it exists, right?

MR. LIVERS: Mr. Chairman, it exists. I think the question -- I'm not going to try to answer it here -- is: What's the shelf life? What's the effect of the shelf life? And I can see if somebody on our staff, when you're asking for public comment before the vote, I can see if somebody on our staff wants to take a stab at that.

I think you're right, though, in terms

of if there weren't a lot of changing development conditions, and development has slowed somewhat, I don't know how many factors are going to be that volatile. But I don't know. Bob, do you want to take a -- no.

MR. NORTH: Mr. Chairman, members of the Board, John North, Chief Legal Counsel. At the point where the Board would adopt the rules to make the Gallatin an ORW, there would need to be an analysis done to determine whether or not there had been changes out there that would necessitate an amendment to the EIS. I don't know if there have been any or not, but that analysis would the least need to be done and brought to the Board.

CHAIRMAN RUSSELL: Thanks, John. And before we take action, is there anyone in the audience that would like to speak to this matter?

(No response)

CHAIRMAN RUSSELL: Seeing none, call for question. All those in favor of extending rulemaking, signify by saying aye.

(Response)

CHAIRMAN RUSSELL: Opposed.

(No response)

CHAIRMAN RUSSELL: Motion carries

unanimously. Thanks.

The next item on the agenda is the Department requests the Board initiate rulemaking to adopt revisions -- which is that's a big "R" -- to the Depar tment's circular DEQ4. Tom.

MR. LIVERS: Mr. Chairman, we've got Steve Kilbreath here to address this issue.

MR. KILBREATH: Mr. Chairman, members of the committee, for the record, my name is Steve Kilbreath, and I'm the Program Manager for Public Water Engineering and Subdivision Program. With me is Barb Kingery, and Barb is a professional engineer on staff who kind of headed up the rewrite work for DEQ4.

DEQ4 is the design standards that all the counties that adopt and DEQ uses for onsite wastewater treatment systems in the State of Montana. Onsite wastewater treatment systems are those systems that use soil for their final treatment and disposal of effluent.

These range from everything from a simple septic tank and gravity drainfield that most people have, to quite complex nutrient reducing systems. They range in size from very small to somewhat sometimes very large. So the

DEQ4 runs a gamut of sizes and a gamut of types of systems.

DEQ4 came into existence in 2000, and was modified in 2002 and 2004, and then we did a slight modification in nine, I think it was, when we added gray water systems to four. And typically DEQ4 is done and revised through a task force, which consists of counties and consultants that work together on the process.

And when we started the revision of DEQ4, I think we were all a couple years younger. It might have been three years younger when we started in on this project.

And we took a little different approach this time, in that we collectively gathered four consultants that have been working in our world, we gathered four county members and four DEQ members. We assigned chapters out. Each chapter was assigned to three people that consisted of one consultant, one county person, and one DEQ person. And we drafted those chapters and put them together.

And then we entered the cyberspace, and we created a DEQ4 blog site, and we'd post chapters on the blog when they'd become available,

and we'd take electronic comments on the chapters. We thought it was quite innovative to enter the modern ages on this, or anyway one of us entered modern ages on this.

And so when we got done with all of the chapters and the modification, we kind of put them all together, and then we did a traveling road show. So we held meetings in Polson, Helena, and Billings to try to get a cross section of people, because our task force in the past usually was a handful, six or eight people, the same six or eight that always contributed and always came, and you didn't get a good cross section of people.

So we took it on the road, and we found that to be a real successful thing, that we got to groups of people we had never heard of before. Like when Barb went to Billings, she learned all about concrete septic tank makers, and ASTM standards for concrete, and all this stuff that we kind of like brushed over in the past. We knew it was out there, but we got these guys to the table. So it was a real useful thing to go out on the road.

Then when we got done with the road shows, we took this and sat down, and internally

put together the draft that you see in front of you today. And DEQ4 went from this -- (indicating) -- to this. And Barb will talk to you about the way it was restructured and revised. And we put together the draft, we took the draft through WPCAC, and we're here today to ask you to go forward in rulemaking.

And one of the two things that -- one thing we were going to ask for, and one is just a notification. We would like to have a longer public hearing, public comment period, because this is a significant document; and as Chairman Russell can attest to, it takes some time to wade through it. We'd like a longer period, probably six week public comment period, so we have more time to get comment from the interested parties.

The other thing is this is just a notification. As we work through this, we have added some new chapters. For instance, we're adding a chapter on high strength waste, and high strength waste is those are things that aren't like what comes out of your house. And so we've made a lot of headway on that, and what we're finding is we know very little about high strength waste, and there is a whole lot of things out

there that are way more difficult to treat in an onsite system.

A for instance would be: We've been working with the Montana Department of Transportation on rest stops, and we find that the wastewater that comes out of a rest stop has 1,000 to 1,500 milligrams BOD, or the organic content, where your house has 150 milligrams BOD; and a rest stop has 500 milligrams total nitrogen in its wastewater, where your house has 50, 60 milligrams total wastewater.

So we're finding that there is a lot of things out there that we deal with in this document that we kind of say household waste strength is what this addresses, but there is a whole lot of things like restaurants, and RV parks, etc., that have very different wastewater characteristics.

So we will continue our work on that, and we'll come back to you with another chapter or two on DEQ4 probably in the next year. So it's still a big change. It's a work in progress. And you'll see us again with this.

And Barb can kind of run through the major changes, because there's been a lot of

changes to this document. So --

MS. KINGERY: Mr. Chairman. I'm Barb Kingery. I'm an engineer with the Department here. And I think as part of your packet, you received both a copy of the draft, and then you also received a summary of changes. And the summary of changes you received was very brief, and I kind of just wanted to give you guys a heads up of what we see coming down the road as part of the public comment period, and hopefully you'll understand our request to have a little bit of a longer one.

We've reorganized the entire document into a new structure, which always makes it a little bit of an eye opener for people when they open it up for the first time. It looks quite different than it did before. We get down to the nuts and bolts of it all.

We've gone through and worked through many definitions, which in DEQ's realm, we have definitions in statute, definitions in rules, and definitions in our circulars, and we worked real extensively with the legal staff here to try and get all of those definitions to coincide together in DEQ4.

We've run into problems in the past with people making comments, "So your definition here is quite different for a public water system compared to an individual system." So we've been working real hard with them getting that together. And I anticipate some comment on the definitions we've come up with because not everybody is used to using those.

We've added a chapter where we kind of go through it systematically here. You look at your site, you look at your wastewater, you look at your treatment systems, in sort of sequential order; and hopefully that will make things a little more clear for both those who -- for all of the people who use this, both the regulators and the people who do the designs out there.

With site evaluations, you know, one of the things we heard through the comment period was that when you have limiting layers and you have areas of concern, we need more information from a site evaluation than what we're getting currently. So we've added provisions for additional perc -- test pits, or perc tests, or some sort of site evals in there, so that we are able to more adequately classify where this onsite system will

be.

We've also seen that commonly out in practice, there are some slight site modifications when you put in a drainfield, and people have just been doing this without any kind of guidance from us at all, and so we've added a section where you can do some minor modifications to a site. We've tried to clarify that, what's allowable, what's not allowable.

So we've looked at the site. Now if you look at the wastewater flow, one of the areas that I think we'll get some comments on is we've changed how we classify wastewater flow for large systems. In the past, we've done it for large residential systems. We've just done it on the number of bedrooms. And now we're going to go -- If you have essentially a public system, we'll use the public numbers of 100 gallons per capita per day. That may receive some comment also.

Steve mentioned that when we're talking about wastewater, not only do we have to deal with quantities, we have to deal with quality of the wastewater. So we've add a chapter on high strength waste that we feel is still in progress, but we wanted to put this out there now. This

document, as Steve mentioned, has been going on for a couple years now. We've just got to get moving on it. And we've made lots of changes to date.

We have a very skeletal chapter on high strength waste. We're currently going to require a PE to come in and give us -- a professional engineer -- come in and give us their assessment of the strength and their treatment, but we would like to -- and we are working on some more specific guidelines for that.

We also added a chapter on water treatment wastes, and that's a new chapter out there, which I know was a controversial issue in the past. I don't know if we'll receive comment on that this time or not.

One of the other -- So now we've talked about our waste, now we're going to talk a little bit about the collection system and the distribution system of it.

And one point of confusion is we have both DEQ4 -- which deals with onsite waste treatment -- and we have another circular DEQ2 which deals with sort of the distribution and the collection; and we've added DEQ2, the portions of

it that relate to an onsite system, into four, so essentially you have a one stop document for your onsite systems. Before engineers would have to flip flop between two and four, and now it's all going to be contained in one document. So we have added DEQ2 components to this one.

We've allowed some new innovative technologies that we're seeing in there, and some old ones. One is we've added the use of drop boxes. Before you didn't permit those. And so we've added that into your effluent distribution system.

Steve mentioned that we worked real hard to try and -- so now we've distributed it. Now we've got it in a place that we can work it. We're going to start treating it now. And so we worked through the systems of treating, and all onsite systems have to go through a septic tank, and we call that a primary treatment.

And when I was in Billings, it was real interesting. We got into a great discussion with the septic tank manufacturers there. They weren't happy with the way the old DEQ4 was configured. And so we got together a group of -- We invited every manufacturer in the state we could to come

to Helena for a special work session strictly on septic tanks, and we got people from Missoula, from Butte, from Billings, all over, just had this great work session, and came up with some changes to how our septic tanks are reviewed and designed.

And the big one here is that we're going to require a professional engineer to stamp off on the structural integrity of both precast septic tanks and cast-in-place septic tanks. I see -- As a professional engineer I'm knowledgeable in wastewater things, but I'm not a structural engineer, so we need somebody who knows that component of it to say these systems are good and can withstand certain burial depths. I can see that that might receive a few comments.

We then go into the distribution and treatment into the soil, and we talk about how you can treat it once you get it there, whether it's through a standard absorption trench or through a gravelless trench.

One of the things that has come to light, and this will also be an area of comment I believe, is that there is a certification out there, and I think it's the National Sanitation Foundation maybe, or Federation, that certifies

wastewater treatment components, and they have --

It's similar to an ASTM certification or American Concrete Institute certification. It's called an NSF certification, and they have a testing protocol that tests wastewater treatment systems for BOD treatment and TSS treatment, and it's an NSF 40 classification. If you can get below 30 milligrams per liter BOD or 30 milligrams per liter TSS, you get this NSF 40 certification.

And we are proposing that if you have NSF 40 certification for that level of treatment, or a similar protocol for treating, that we would allow a 50 percent reduction in your drainfield size. This is also going to be an area I hope we receive lots of comments on because it's a big change.

MR. KILBREATH: And a generalized comment on that is it's fairly relatively common across the United States, and NSF 40 equals smaller drainfield, and cleaner water. You're not plugging soil pores off, so you go to smaller footprints, and we're starting to see some of those technologies come to us today and say, "We've got this. What do you think?"

CHAIRMAN RUSSELL: A standard 40 is for

a specific type of treatment. There is other NSF comparables, and previous rules allowed the Department to set comparable standards. Are you going to take that out?

MS. KINGERY: I'm sorry. Repeat that.

CHAIRMAN RUSSELL: In previous rules, it said, "NSF or Department comparable standard." How do you do that?

MS. KINGERY: Well, we have a system in place for testing systems when you apply for a level two treatment of one, and there is a protocol where you have a certain number of systems that are operating in the state for a certain amount of time.

And we've been toying with the idea of applying that protocol that's already established at DEQ for BOD and TSS, since that is what NSF 40 only focuses on for those standards, and using that same system or protocol.

CHAIRMAN RUSSELL: But the standard 40 is for a Norweco type plant. A trickle plant gets different standards. It meets the same outflow standards, but it's -- I can't remember what it is. It's not standard 40, though.

But my point is we have for years only

been an NSF county. You couldn't -- We didn't take the Department's, "Oh, it's okay. It meets the standard." It had to have an NSF seal on it. So when you guys -- this was prior to you coming in and saying, "Oh, we'll do a comparable."

I can remember a company that operated in Idaho that started operating here that was given the blessing that didn't meet the standard after awhile.

So just a point. NSF is the sanitation standard setter, and I would strong encourage taking out your comparability, and making them go to that standard.

MS. KINGERY: That is a good comment. The worry that I have there is that to get NSF 40 certification is very expensive, and --

CHAIRMAN RUSSELL: What's your point? Other people have done it. Other companies do it. They know it's a standard throughout other parts of the country, and then we say, "You can do something comparable here in Montana." We have great wastewater rules. Why do we dilute them by not using NSF?

MR. KILBREATH: One of the other issues that goes with that specific item is that through

the level two designation of systems, when the level two rules came out April 29th, 1993, DEQ designated intermittent sand filters, recirculating sand filters, elevated sand mounds as a level two or 60 percent reducing system.

And someplace in there there was a magic wand that gave them a 50 percent reduction in drainfield sizing because of BOD and TSS. And we've carried that intermittent sand filter recirc filter, and we carried when we came up with the category in current DEQ4 of recirculating trickling filters, our level two designations.

They've carried that 50 percent reduction in drainfield sizing from the day one, and if we adopted an NSF 40 standard, we're fairly certain that our legal staff is going to tell us that we must keep that 50 percent that we've already applied to those guys, but make the new standard from this day forward 40, which is 30/30 for BOD and TSS.

CHAIRMAN RUSSELL: And we follow these parallel tracks. We want to polish the effluent so we can reduce the drainfield, but we're disposing it into the ground where our biggest concern is nitrogen. They don't do -- those

technologies don't do the same thing.

MS. KINGERY: Right. And Chairman Russell, that was one thing we tried to be real careful about in this document was to make a distinction between treatment for BOD, and TSS, and phos. Those are the three things we talk about in DEQ4. There is another set of rules and things that we look at when we look at nondeg, when we look at phosphorus, and nitrogen.

So we wanted to try and make this clear line because just because you can make your drainfield work in DEQ4 standards, it's not necessarily going to pass -- you're not going to be able to pass nondeg. And so we want to make sure that four is four, nondeg is nondeg, and we're going to make a clear distinction between the two.

CHAIRMAN RUSSELL: And that's the parallel, because we're trying to protect groundwater. We're one of the only states that focuses on "N." Most of other ones focus on BOD and "P." I think we're doing the right thing, but we've got to make sure that when we do what we do --

MR. KILBREATH: We have gone back and

done data audits on our level two providers right now, those systems that we have designated as level two, through this process of -- "You must install this many systems," and we have hundreds of data points now that show our standard two or three level two type systems. The ones that are used most often are meeting the nitrogen reduction standards. They're doing a good job.

CHAIRMAN RUSSELL: But the old ones don't.

MR. KILBREATH: The intermittent sand filters don't.

CHAIRMAN RUSSELL: The Norweco doesn't either.

MR. KILBREATH: The Norweco doesn't.

CHAIRMAN RUSSELL: Which is a standard 40 system.

MR. KILBREATH: But 40 isn't a nitrogen reduction standard, 45 is.

CHAIRMAN RUSSELL: I agree.

MS. KINGERY: So that, along with addition of new chapters, and new technologies -- and sort of like I said, this document has included some illustrations in there, worked on some grammar, and clarifications of how we've

always interpreted those words to read in the past, and try to make them a little more clear -- I foresee that we will have a lot of comments from what we've done so as far.

And I guess I still look at this as a fluid document, one that will probably be changing as part of this process, and hopefully future ones also.

MS. SHROPSHIRE: I had numerous comments and questions, and you alluded to definitions, and some of the definitions that I had questions about, and some of the terms that weren't defined that could be added, or I would recommend need to be added. And I could go on and on, and I don't know if this is the time to do any of that, but --

CHAIRMAN RUSSELL: Are you going to make a formal comment?

MS. SHROPSHIRE: My question is: In the context of rulemaking, how constrained is the rulemaking process in terms of scope of rulemaking? So that if I did have formal comments that I wanted to make -- I don't need to make them now, but I just want to make sure that the scope is broad enough that I can make them later. Does that question -- do you understand the question?

CHAIRMAN RUSSELL: Well, yes. I've already made comments on the first six chapters, just as a sanitarian/health officer type, and I do have a few more, and I'm going to make them now, because once we start into this, I'm going be a Board member. So I want to get my other comments out before, because I'm not sure that as a Board member, once we start the formal process, if I should be making comments except as public comment, in the public. That would be just my own --

MS. SHROPSHIRE: I'd like to make some, too, as well.

CHAIRMAN RUSSELL: I don't know. John, how do you feel about Board members actually making comments on a rule that they're going to adopt as in their other life?

MR. KILBREATH: You have another life?

CHAIRMAN RUSSELL: I do. I have a couple other ones.

MR. NORTH: Mr. Chairman, members of the Board, I'm looking at Katherine. Katherine, do you want to take a stab --

MS. ORR: Mr. Chairman, members of the Board. What strikes me is I think your instinct

is probably correct. There is no law, and there is no rule that would prohibit a Board member from making a comment. Then I think it is odd that then you'd be voting on it.

This is a rulemaking proceeding. We have in the past had a situation where an issue came up, and the Department itself has filed a comment, and then provided a rationale and put that in the final notice, but I think it's odd with the Board.

CHAIRMAN RUSSELL: If you're going to make a comment, I'd make it now.

MR. KILBREATH: We had the same thought. We got this document ready, and we took it to WPCAC, and we got through WPCAC, and we went like, "We should have done this. We should have done this," and maybe we can give our own public comments and then modify, because it is just --

CHAIRMAN RUSSELL: This is one of those interesting times. If you look at the MAR, it's signed by both Richard and me, because it's also a Department rulemaking and also a Board rulemaking, because of how it fits with other things that we don't have jurisdiction on.

MR. KILBREATH: If you think about what

Barb was saying about definitions, we've got definitions in multiple places in the rules, and it's really interesting when you go from public water supply rules, to the subdivision rules, to the statute, to the circulars, you find that the same word has slightly different meetings.

MS. SHROPSHIRE: Or even a scientific definition.

MR. KILBREATH: And you go, "How did that happen?," and you find words, like a simple word, like the word "bedroom." Everybody knows what bedroom is. A bedroom is used for sleeping.

MS. SHROPSHIRE: It means a closet, too.

MR. KILBREATH: Building Codes has a definition of bedroom, and it's got square footage, and it's got windows, and it's got closets. Our current definition of bedroom is any room that may be used for sleeping. Well, heck, you can sleep in the garage. There you go. There's another bedroom. You bring up in the discussion of bedrooms, and we have a county in the state of Montana that says, "We like the definition vague because that leaves us any ability to do what we want with it."

And so we're trying to get away from

vagueness in some of the definitions, but it's a real interesting --

MS. SHROPSHIRE: Would now be the time for me to just dive in?

CHAIRMAN RUSSELL: We'll take a ten minute break.

(Recess taken)

CHAIRMAN RUSSELL: Let's get started. Robin, you had some questions. I have a few really quick ones, if you want to get those over, and then Heidi has got some, too. So let's start with you.

MS. SHROPSHIRE: Broadly I had numerous comments on the definitions. I'll give you a couple of specific examples.

I'm looking at, at least on my document, it's page 39. It's in the Board minutes -- or the Page 9 of 205, 2.1.1.8, the definition of bedrock. "Bedrock means material that cannot be readily excavated by hand tools, or material that does not allow water to pass through it, etc." I guess my comment is that's not really the definition of bedrock. And maybe in a geological sense.

And so some of these definitions in here maybe have more scientific definitions that I

would recommend be applied, especially in light of what this rulemaking is, is that you can have fractured bedrock and unfractured bedrock, and fractured bedrock can easily transmit both contaminants and water. And so I think making a distinction between maybe fractured bedrock and unfractured bedrock would be helpful because there is clearly --

MR. KILBREATH: One is a limiting layer that doesn't allow water to go beyond, and one is a limiting layer that doesn't allow treatment because it goes too fast for bedrock.

MS. SHROPSHIRE: And so I'm not sure I understood your comment.

MR. KILBREATH: One is fractured bedrock and one is unfractured bedrock, and unfractured bedrock allows water to move without treating it.

MS. SHROPSHIRE: Why?

MR. KILBREATH: Open fractures. We see that a lot with onsite wastewater. If you don't have adequate soil separation between trenches and fractured bedrock, that's just like having it sitting right on top of the water table.

MS. SHROPSHIRE: Okay. So anyway, I think distinguishing between permeable bedrock --

which at least to me is fractured bedrock -- and something that's more of a confining layer I think would be helpful.

2.1.1.9, "Bedroom," the definition there I think is defined differently later on in the document, so that's just not a big deal from my perspective, but I wanted to point that out.

MS. KAISER: Can I ask while we're on that page? Back to bedrock, is that a new definition? You've got one X'd out, crossed out. Should that be underlined?

MR. KILBREATH: Oh, the new definition. Probably should be.

MS. KINGERY: You know, I believe with the bedrock definition, we had it two different places. We had both in this section, and then we have an appendix in the back that is more soil information. And the definition from the -- We were trying to make both the definitions in the front of the document and the definitions in the back of the document match. So the second one here I think is more in line with our old definition that was in our appendix.

MS. KAISER: So it's not new text, it's --

MS. KINGERY: It's new in this section, but it probably could be underlined. That's a good comment.

CHAIRMAN RUSSELL: But it's the same -- What you have crossed out and what you have under there is exactly the same.

MS. KINGERY: Mistake. Good catch. Perhaps it was the back one that changed. I don't remember. But one of the two changed.

MS. SHROPSHIRE: You might consider adding a definition -- and I'm completely drawing a blank on the word. I'll think of it maybe as I go on -- but there is soil, definition of soil, then there is bedrock, but there is a unit that's actually highly weathered bedrock, that's bedrock that's weathered in place, that's not necessarily soil or bedrock. You can -- it's often friable enough that you can auger it, drill it, but it still maintains all of the properties of bedrock except it's more permeable, and it has higher porosity. And I'll think of the --

CHAIRMAN RUSSELL: I think it's called weathered bedrock.

MS. SHROPSHIRE: There is an actual soil term for it that I can't think of. I'll think it.

It's a different word. It's more specific. I'm drawing a blank.

Moving on. I'm at 2.1.1, "Definition of escarpment means any slope greater than 50 percent." Again, that's often -- I think an escarpment is sometimes bedrock as opposed to just any slope. So you might look at that definition and make it more clear.

The definition of "Horizon," it refers to "layers of soil profile," but you can also have horizons in bedrock. You might expand that definition to include -- the interface between soil and bedrock is also horizon, so you might consider expanding this to include more than just soil horizons if it's appropriate.

MR. KILBREATH: I've always seen that transitional zone described in soil terms, you know, you've got an "A" horizon, which is your organic, and "B" horizon which is your mineral, and "C" horizon which is your parent material; and there is always one that's called like a CR that's a transition zone. So it's something that you get to, and there is good definitions of that out there.

MS. SHROPSHIRE: Okay. So maybe just

soil horizon is the word that you're defining as opposed to just horizon?

MR. KILBREATH: Yes.

MS. SHROPSHIRE: Some of these are kind of nitpicky. "Impervious layer," you've defined it as minutes per inch, and usually rates are distance per time instead of time and distance.

MR. KILBREATH: But minutes per inch in our world means -- it's kind of an industry standard.

MS. SHROPSHIRE: That's fine. That's a trivial one.

This is the one that I probably had the biggest issue with, and maybe it is just my understanding, but I think understanding the definition of limiting layers is something that was confusing to me in the definitions, because when I think of limiting, I think of it as not being able to go through. And so I wasn't sure why the groundwater table would be limiting.

MR. KILBREATH: In our world, you look at separation distances to different things, and we call those limiting. They limit the depth you can put trenches in, etc. If you have a seasonal high groundwater at 48 inches, that limits you to

putting no trench in the ground, and you must put a system on top of the ground. If you have a seasonal high groundwater at 60, that limits you to a 12 inch depth of trench to maintain a 48 inch separation. So our world has kind of used "limiting layer" as meaning multiple things.

MS. SHROPSHIRE: So it is not limiting in terms of contaminant transport?

MR. KILBREATH: It's limiting in terms of contaminant transport, in terms of impermeability. It limits the ability to deal with the wastewater correctly.

MS. SHROPSHIRE: And the way that I interpret it was limiting in terms of contaminant transport, or flow, and it was confusing to me.

CHAIRMAN RUSSELL: Maybe it isn't a bad idea in there to maybe more describe the fact that it is the limiting layer that precludes further treatment.

MR. KILBREATH: Further treatment.

CHAIRMAN RUSSELL: Because we always go like it could be a real like clay layer. We just say, "Hey, that's your limiting layer. Stay four feet above it." It's a suitable treatment media, what precludes suitable treatment.

MS. SHROPSHIRE: I looked at some different definitions for modeling and redoximorphic, and just encourage you to be consistent with your maybe scientific definition that wasn't -- The definition that you had here wasn't consistent with what I saw in like soil physics textbooks, for example.

The definition of natural soil, "Soil that has developed in place," again, some soil maybe could be transported potentially, and so just make it broad enough so that you're not limiting yourself to that definition.

MR. KILBREATH: With the word "natural soil" -- and I'm sure Chairman Russell might have an opinion on this topic -- but what we're dealing with there is the idea that for new systems and new lot creation, you can go get a backhoe and a dump truck and front end loader, and you can solve all of the soil problems there are, and you can create sites that you can put systems in, and there is other issues besides just using fill. We really -- This is --

CHAIRMAN RUSSELL: I think that the concept through natural process, and we get a lot of below sands in places which were naturally

deposited above really gooey -- (inaudible) -- and they work really well; but if you're in the wrong place, things change really fast. So I kind of like the definition where it says "naturally deposited."

MS. SHROPSHIRE: I don't have a lot of heartburn over it.

The next one is another area that was of concern to me, and that's the percolation test, and the procedures for the percolation test. I'm not exactly sure how to couch my comments, but it ties with being a qualified individual, which isn't defined in here.

MS. KINGERY: This is an issue we have struggled with, and this document covers all of Montana, and whether you're eastern Montana, western Montana, wherever, different counties have addressed that issue of qualified site evaluators differently.

MS. SHROPSHIRE: I understand the challenge. Believe me. A little bit later you have professional engineer for the structure -- for the --

MR. KILBREATH: We have requirement -- we have levels that are required for a

professional engineer.

MS. SHROPSHIRE: And you have it -- and I'm kind of jumping, putting two comments together here. But you specify that it has to be a Montana licensed professional engineer.

MS. KINGERY: Right.

MS. SHROPSHIRE: I don't know if that's -- I can appreciate that that brings more jobs for Montanans, which is a good thing unless you're licensed outside of Montana, but I'm not sure why it has to be a Montana licensed --

MR. KILBREATH: The Montana professional engineering licensure board says if you're going to be doing engineering in the state of Montana, thou shalt have a Montana license. And so yes, that carries from the Board of PE's.

MS. SHROPSHIRE: Back to the percolation test. It's my understanding that Montana does not have a professional designation for like a qualified professional geologist or professional hydrogeologist.

MR. KILBREATH: Correct.

MS. SHROPSHIRE: Other states do. And as a hydrogeologist, or hydrogeologist myself, when I look at your percolation test procedures, I

don't know that they would be consistent with what a professional hydrogeologist would follow necessarily.

MR. KILBREATH: Probably not.

CHAIRMAN RUSSELL: I totally agree with you. If you don't saturate your hole well enough, you're going to get totally skewed results.

MS. SHROPSHIRE: So having a qualified hydrogeologist -- and I know that this is a big deal because it limits the amount of people that can do it -- but it just seems like that is the core data that you're using to determine whether or not you're going to contaminate the groundwater; and if you do your testing incorrectly, and have anybody just follow those procedures, I don't think that those procedures are adequate to protect the groundwater.

MR. KILBREATH: The core tests for doing perc tests I would absolutely agree with you. I hate perc tests. I think perc tests should not be in this document, period. We removed -- There were two perc tests in this document, test one and test two. The test two was a quick one that got added, a perc test that got added to this document eight or ten years ago or something. And the

qualified consultants love it because they can do it in five minutes, and they don't have to spend any time doing it, and they can charge for it.

The core for onsite wastewater treatment is proper site evaluation. If you do the soils work and the site work correctly, everything will fall in place. And we have toyed with the conceptual idea of how to do a state certification for site evaluators. We have Gallatin County --

Joe, do you do a site evaluator certification?

CHAIRMAN RUSSELL: No.

MR. KILBREATH: Gallatin County does.

CHAIRMAN RUSSELL: We don't allow anyone -- Except when they're doing the subdivision work, it has to be a registered sanitarian, and liability falls with the county to do a good site evaluation.

MR. KILBREATH: Gallatin County has a --

MS. SHROPSHIRE: To me it is -- and again I'm biased, because I have a masters degree in hydrogeology, and so I think that it takes more than just a course to become qualified.

But to me it is similar to saying that you could give somebody a training course to say

whether or not a bridge is structurally sound. It's more complex than that. And to me, that's the heart of this, is these are incredibly complex, and I think it takes qualified individuals, and I feel that the appendix isn't adequate to -- data collection in order to determine what we need to determine it.

So I don't know if that's enough information for you guys to work with. That's probably my biggest comment on the process, is we need to understand what a qualified individual is, and make sure that we're protecting our environment.

MR. KILBREATH: I have completely alienated myself with the Board of Professional Engineers by saying the same thing to them to their face in a meeting saying that I don't think this is about having a PE designation. I think this is about being competent. Because we get -- what we get in our world is we get submittals from everybody. We get them from mom and pop; we get from you; we get them from engineers; we get them from everybody. And simply our whole process has been set up to do that, and accept that.

And I agree with you wholeheartedly on

qualified. I just absolutely do. But the steps to get to something like that is a pretty uphill step for us right now.

MS. KAISER: I guess that was one of my comments along the lines -- In the group that you had helped craft this document and make the changes, I'm sure you must have had professional geologists.

MR. KILBREATH: Four professional engineers, and four registered sanitarians, and our staff that was dominantly professional engineers.

MS. KAISER: So no geologists or hydrogeologists?

MR. KILBREATH: My insight is being a masters geologist but -- and the appendix on soils that Robin was talking about was that appendix is pretty much as is. It was authored by Dennis McKenna, who was formerly in my position, and he was a masters degree certified soil scientist for that one.

The perc test stuff, that perc test has been in the rules for probably since -- thirty years, Joe? I mean that has just been in there.

CHAIRMAN RUSSELL: Longer than that.

MS. KINGERY: We did have -- There is a soil scientist who is retired now. Who was that?

MR. KILBREATH: Joe Plumber?

MS. KINGERY: No, not Joe Plumber. Jim Bauder from MSU -- who looked at not the entire document, but just specific components of it that related to soil, and he made some comments on the percolation test and the rates that we added to our soil triangle.

MS. SHROPSHIRE: I'm moving down to the definition "Seasonally high groundwater," because I've run into this before, clarifying whether or not the perforation need to intersect the water table as opposed to having the monitoring wells simply be perforated.

You could have a monitoring well that's perforated at depth, and have an artesian well where the water table is above the surface. So I would recommend that you provide some clarification on whether or not it is a -- which water table it is. Is it one that's in an unconfined aquifer? In which case, I would recommend that the perforations intersect the water table, because that really is the best measurement for knowing where the water table is.

Does that make sense?

MR. KILBREATH: Uh-huh. Usually what we see with those is we see the backhoe excavation for the test pit. When they backfill the excavation, they stick a piece of perc'ed pipe in that hole, and the measurements are done there; and those give you good results, they give you bad results.

CHAIRMAN RUSSELL: Until you -- if you don't -- they just create a bathtub, you can get some really artificially high groundwater. But you don't even need a perforated pipe in an uncontrolled aquifer, because unless you seal the bottom, you're going to get water in there. If you go through the water.

MS. SHROPSHIRE: Right, but it's not necessarily quality data.

CHAIRMAN RUSSELL: But --

MS. SHROPSHIRE: And I'm -- There is complexities here in terms of where the water table is, where the perforation of the pipe is. You get very different results depending on how your monitoring wells are installed. And anyway, that goes back to the qualified individual.

MR. KILBREATH: Most of the time those

shallow groundwater wells for seasonal high groundwater are less than ten feet in depth. They're typically put in with a backhoe excavation.

MS. SHROPSHIRE: I'm getting close to the end. And I think you alluded to this. I've jumped down to "Site evaluation," and it says under "General" and then "B," "soil permeability determined from soil texture or percolation tests," and I just wanted to confirm that it doesn't have to be both. "Or."

MR. KILBREATH: It is "or."

MS. KINGERY: Some counties don't require percolation tests. Every county requires at least a test pit to be done. And I think the reason they've gone away is just your reasoning before, is that those percolation tests are done by such a variety of competency that they're reliable in some cases, and not in others.

MS. SHROPSHIRE: It is a huge conundrum because from my perspective, if you were to do all of these correctly, it would be prohibitively expensive.

And again, just going through the document, and putting the definitions. When

"limiting layer" is throughout the document, put it in the context of -- it's not limiting to contaminant transport, is really what I'm interested in. I don't want it to suggest that you're limiting contaminant transport when you're not. Does that make sense?

MS. KINGERY: Yes.

MS. SHROPSHIRE: There is a place later where you're talking -- I think it's in the appendix -- talking about percolation tests, and it says you can use clear water. I think that needs to be replaced with "uncontaminated," because there is lots of clear water that can have contamination in it. So I would suggest replacing that with something more specific, "distilled water" or something, but not just "clear."

I think that's pretty much it for me.

CHAIRMAN RUSSELL: Thanks, Robin. Heidi, do you have anything else?

MS. KAISER: Just a couple things. Section 2.1.4 under "Site conditions," the second paragraph which reads, "Soil within 20 feet of the boundaries of the proposed absorption system and the replacement area are required for soil descriptions." But "soil pit" was struck out of

there.

MS. KINGERY: Well, in the provisions of gray water that was adopted, we allowed not necessarily pits, but augers to be used.

MR. KILBREATH: We just need to expand that.

MS. KINGERY: So that was sort of a carry over from the gray water chapter to try and make things consistent throughout the document.

MS. KAISER: Should that be soil samples?

MS. KINGERY: We could call it soil samples.

MR. KILBREATH: Yes, description of something that -- right. Right. Because in the next sentence we say, "Soil pit should be --"

MS. KAISER: My only other comment, and I noticed it in the subsurface strip irrigation section primarily, was the use of the "must" and "should." In some of the construction constraints, I think putting the drip tape should be placed two feet apart, but the emitters must be two feet apart from the drip tape. And I guess that -- I don't know what's enforceable there or --

MS. KINGERY: Musts are enforceable, the shoulds are not. And we tried to be kind of careful with where we used "must" and where we used "should." Some of that might be site specific. You might want your drip lines farther apart than two feet or closer than two feet in certain circumstances, depending on slopes and things like that.

MS. KAISER: I think that would be true in the case of emitters also. Actually I think when it comes to subsurface drip, it's going to be definitely site specific, and you do allude to that and say, "They should be designed per the soil table" to whatever that was. So I guess that was my concern, if you're restrained to certain spacing that might not be appropriate.

MR. KILBREATH: Because if you see systems that are maturing, drip systems that are maturing, you'll see -- they'll look like green polka dots, where you've got grass growing like this around the emitter, and then places that it's brown because there is no water. So the world of drip is a little new to us here.

MS. KINGERY: I was going to say that's brand new, one of our new technologies that we've

added.

MS. KAISER: May I ask who helped the Department with that section?

MS. KINGERY: I did. I worked with Scott, and I worked with representatives from two of the -- Geoflow and Netafim. There is two manufacturers that are using that. And I also worked pretty heavily with Lake County. They have several of those systems in as experimental systems right now.

MS. KAISER: Thank you.

MS. KINGERY: We worked together on that.

MS. KAISER: That's all my comments.

CHAIRMAN RUSSELL: Just a couple quick ones. Why did you dump siphons?

MS. KINGERY: We've had nothing but trouble from siphons, and everything in this document can be deviated from. And our thought is every time -- If somebody would like to use a siphon, it could be part of the deviation process, and then we'd have more of a control over what exactly is going to be designed and how they're going to put it in. The way --

CHAIRMAN RUSSELL: A good engineer can

design a siphon system that will last forever.

MS. KINGERY: Yes, it will, and I'm very aware of that. But a consultant can also just throw in a siphon, and it's problematic from day one.

CHAIRMAN RUSSELL: You have to know what you're doing.

MS. KINGERY: Exactly. So that's why we took it out, just because we thought we wanted to have a little better look at those systems.

CHAIRMAN RUSSELL: It's not a big issue. It's probably about the same cost as throwing in a small pump just to get the stuff flowing out the top.

MR. KILBREATH: I think siphons also have an incredible maintenance issue if they're not dealt with on a regular basis. I can't tell you how many times I've gone out to individual homes and looked at them, and the siphon is trickling, and nobody put air under the belt, or nobody has lifted the belt to get air in it. They're just sitting there trickling, and it just fails. I think siphons are great if you're the kind of guy that likes to go back in the back yard and look at your siphon tank.

CHAIRMAN RUSSELL: The other thing is when you commingled these rules, there is a section in there about venting wet wells, and I'm a little concerned when you apply the definition of wet wells to what we call a pump chamber, that there is going to be some issues around meeting that venting requirement where we don't generally --

MS. KINGERY: We're kind of starting to look at that a little bit this morning. Steve gave me a heads up on that. And that venting section came straight out of the DEQ2 requirements.

And I'll have to double check it because I didn't have a chance to look real close at it, but my intent was that that venting requirement would be under the pumping stations that pumped raw wastewater. So those would be ones that would be like a collection wet well before it went to a septic tank, that kind of a thing.

That venting requirement with the air exchange requirements was not meant to be applied to a dose tank, because that in my mind is effluent quality wastewater, rather than raw wastewater.

CHAIRMAN RUSSELL: You want to make sure, though, because --

MS. KINGERY: And I want to double check that that's clear in here, that that was my intent, was that we make a distinction between raw and effluent.

CHAIRMAN RUSSELL: We've had other reviewers at DEQ that have required venting pump chambers, and so this could be misconstrued. Before you guys --

MS. KINGERY: Let me double check that because as much as I've had this sleeping, eating, drinking, I don't have it all memorized yet.

CHAIRMAN RUSSELL: Then the last -- This is a general comment. I would strongly encourage that the State put in some sort of certification mechanism for site evaluators, because if Robin's need for a qualification goes all the way to hydrogeology, and we're letting surveyors do this work with no formal training, something is wrong with our system. And you will take surveyors information from every county on soil pits, perc tests, and you have nothing in there to say, "You are not qualified to do this work."

MR. KILBREATH: We had this discussion

with the Board of Professional Engineers over my terms of competency put out on the table in front of them, and we went from having endorsements on PE licenses -- because when you take a PE test, you have to do a civil, an environmental, and a mechanical. You have to do something, and they're not willing to move on an endorsement so that you have somebody who is within a field.

And they said that they would support us and make their members take a competency test if we could figure out how to put it together, and more importantly, fund it.

CHAIRMAN RUSSELL: But that's for engineers.

MR. KILBREATH: No, these were for all site evaluators.

CHAIRMAN RUSSELL: But if they're not an engineer, how can the Board of Engineers have anything to do with it?

MR. KILBREATH: The Board is going to revisit, and we'll have information on that in the not too distant future. They're revisiting this whole, "What is the practice of engineering?"

CHAIRMAN RUSSELL: The last time we went through this, I was strongly opposed to the

lessening of the standards around the designs that were put in place, and Flathead County still hasn't lessened off those very much. So just a thought.

We also have -- We're a design county, so we require all of our designers to have taken a test and show some competency on designing systems. The site stuff is extremely critical. The design is also critical. But we require all -- anyone who wants to design a septic system to go through. And we're uniform pressure distribution, so it's even more important that they show their competency to us before they design any systems. But we haven't gone to the other side and done it for site evaluation.

MS. SHROPSHIRE: Joe, can I add one more comment? And I agree. I'm not a professional engineer, but I am a hydrogeologist, so just making sure that it's not driven by the Board of Engineers to me would be important also, because a lot of the people that are looking at these are actual geologists and hydrogeologists as opposed to professional engineers.

Then back to Heidi's point, if it's not too late, I would recommend that you add somebody

to your team that's got contaminant transport experience as opposed to maybe the -- in addition to all of the other qualified people you have in there. I think this really is a contaminant transport issue, and having that expertise would be valuable for you.

MR. KILBREATH: We have that expertise internally, and we had it on staff until we went through all of our funding issues. We had a masters level hydrogeologist.

MS. SHROPSHIRE: Maybe it could be one of your consultants, an external resource that's not internal, but somebody that has that experience.

CHAIRMAN RUSSELL: Doesn't Eric have those --

MR. KILBREATH: Yes, but he's no longer in our program.

CHAIRMAN RUSSELL: Thank you very much. Larry, go ahead.

MR. ANDERSON: More of a comment for the good of the order. My impression of these rules are that they are rules developed by the fundamental and abiding influence of the industry that they affect; and invariably when rules are

developed from that perspective, they end up being watered down rules, and these are not -- I don't think these are optimal rules by any stretch of the imagination. Am I correct there?

MS. KINGERY: Yes, very correct.

MR. ANDERSON: And I think what we failed to forget here is in 1.1. It says these are minimal standards, and we should never forget that fact. And too often people think that if they meet the "minimal standards," they somehow satisfy their obligations, and I don't think that should be the standard.

The question is whether or not whatever they're doing with respect to these particular rules or any particular standards that we have, whether there is any risk of injury, or serious injury or death associated with the activity that's being regulated, the reasonable means to minimize or eliminate serious injury or death, then they ought to be used. And the emphasis should be on the fact that these are minimal standards. The fact that you meet these standards does not alleviate your obligations.

MR. KILBREATH: Just a follow up thought on that is if you design a system, an onsite

wastewater system that meets this design criteria, it still has several other sets of rules that it has to go through. It has to go through the Water Quality Act, it has to go through nondeg, it has to go through subdivision rules or the local government rules. So this is the design standard on how you build this, and then it's got a series of other steps that are evaluated in it.

But I understand your point because I used that frequently, that comment about if you want minimal standards, you get minimal standards, you know.

CHAIRMAN RUSSELL: I hate to throw this out. It's only been three weeks since the case up in Flathead County about the kid drowning in the septic tank, and issues around locking tank lids, and kid catchers. I don't know if we should be reactive, but I think other states are -- you may want to look at other states' requirements for absolute locking lids.

And the septic tank manufacturers were not found guilty in that case, but there was clearly negligence at the site. But there are kid catchers out there that are locking type tank lids, and we're one of those counties that

requires risers to grade, and will probably consider that pretty strongly when we do our regs.

Anything else? Marv.

MR. MILLER: Well, just a comment. After listening to all this, it really seems like you have really been actively engaging a large group in all this, and then with all these questions and so forth, and potential changes, I guess I'm kind of sitting here wondering. Why don't we --

Instead of starting rulemaking, why don't we leave it open, and have you continue to get all of the verbiage correct, and your chapters kind of finished, and maybe ship it out -- you've got it all on email or whatever -- and ship it out to all of the local communities, and so forth, and continue this process, so we get maybe another version that is pretty well up to date.

And maybe I'm being a devil's advocate here, but it just seems like -- It's not like our ORW that we've been working. You guys have really got everybody working on this. And maybe after listening to the comments here, I certainly agree with Robin and Joe, and so forth, and Heidi, that there is a lot of things that can be changed or

improved, and just kind of continue that thing before we start to rulemaking.

You kind of requested an extra long comment period, and it sounds like to me there is going to be a world of comments, and most of them are just tinkering with this to get a better and better document. And you guys have certainly engaged a lot of people, and now maybe engaged a few more, and get the first salvo of all these comments in place, and then come back, and we'll get our comment period. I don't know. I'm just throwing that out.

MR. LIVERS: Maybe I can speak to at least part of that, Mr. Chairman. I do want clarify. When Steve and Barb mentioned we were asking for an extra long comment period, we didn't mean this morning. I guess we should have printed that out.

At the risk of surprising these folks, we have had some discussions with John Dilliard, John North, and I; and at least from the standpoint of what we heard this morning, it does sound like there might be some value in going back and incorporating some changes, and not initiating this morning, and seeing if we can incorporate

some of the comments that we've heard from the Board.

I'm not sure. I'll speak to Mr. Miller's comment about whether it would go back out to the entire community or not, but certainly at a minimum, I think we can -- We don't have a tight deadline on this, and there is enough meat in what came out this morning that there is probably value in us taking another crack, weighing some of the comments we've heard.

CHAIRMAN RUSSELL: And I agree. And as much as I'd like to see this move forward, it may be wise to -- outside of a formal process. And I'm sure you've had a lot of comments -- that I think at least from my discussion with Steve earlier, that you were maybe going to take some of my comments in a more formal fashion. You can do it informally, too.

And what you've heard today literally are not formal comments because they're not within the rulemaking process. But you also have a Board that has some pretty fair expertise here, too. So it may be worthwhile to put it off one session, use what you heard, and bring it back. At least you're not going to have an hour and a half worth

of discussion on this again.

I think you've heard from the Board, at least from their point of view, what they feel is necessary. And it really wasn't that big of a -- they're not substantive enough that if they weren't included, and we didn't do it before we started rulemaking, it could be a little messy getting them in. I don't know how the rest of the Board feels, but maybe we could put this off for one time, and be ready to go next time.

MR. KILBREATH: As Arnold said, "We'll be back."

CHAIRMAN RUSSELL: With all that, Tom, I guess we could take some public comment if there is any out there, since we've opened the box. I don't see anyone jumping up, but I do -- tremendous work, and illustrated. It is a great document. It's literally close. So thanks for your efforts, and we'll see you next time, or maybe we'll just hear from you.

MR. MIRES: Does that require formal action?

CHAIRMAN RUSSELL: I don't know. What do you think, Katherine?

MS. ORR: I don't think it does.

CHAIRMAN RUSSELL: All right. So we're just going to move on.

The next item on the agenda is the Montana Strip and Underground Mine Reclamation Act, proposed amendments to ARM 17.24, Subchapters 3, 4, 5, 6, 7, 9, 10, 11, and 12. Tom.

MR. LIVERS: Mr. Chairman, thank you. Eric Urban will be walking us through this one.

MR. URBAN: Mr. Chairman, members of the Board. My name is Eric Urban, and I'm the Technical Coordinator of the Department's Coal and Uranium Program, requesting the initiation of rulemaking to amend the rules that implement the Montana Strip and Underground Mine Reclamation Act.

As proposed, the rulemaking will include modifications to nine subchapters within ARM Title 17, Chapter 24, which are the rules under which the Department regulates coal and uranium mining.

The proposed revisions fall into the following general categories: One, implementing legislative changes; two, adopting provisions of federal regulations that govern the applicant violator system and ownership and control; addressing conditional approvals and disapprovals

for the Federal Office of Surface Mining; four, making substantive modifications to existing rules recommended by the Department's coal and uranium program; five, correcting grammatical errors; and six, correcting reference citations. And I will briefly address each of these categories.

First, rulemaking necessitated by legislation. House Bill 370 by the 2005 Legislature transferred authority for contested case hearings from the Department to the Board. The proposed amendments in Subchapter 4 reflect this change.

House Bill 370 also made significant revisions to the bond release process within Subchapter 11. Amendments to Subchapter 11 bring the rules into compliance with the process mandated by House Bill 370.

House Bill 278 by the 2009 Legislature provided for an exception to the requirement that reclamation bond not be released for ten years following seeding. The Legislature exempted support facilities such as sedimentation ponds that remain in place following vegetation of the mine from this requirement. The proposed revisions to the Subchapters 7 and 11 implement

the statutory change.

Senate Bill 286 was passed by the 2011 Legislature at the request of industry to define and shorten the timeline used for the processing of a prospecting permit application for certain operations that use drilling. The proposed amendments in Subchapter 10, and the addition of New Rule V reflects Senate Bill 286.

Proposed amendments to Subchapter 10 exempt operations subject to the streamlined process created by Senate Bill 286 from the more extensive permitting process contained in the rules.

The second category of changes are those mandated by the Office of Surface Mining, commonly referred to as OSM, regarding the applicant violator system, or AVS. The Department is proposing to create New Rules I through IV, and to amend Subchapter 3 in response to the OSM's directive in 2009 to adopt rules that govern the ownership and control of the AVS.

The OSM maintains an automated information system of applicant permitting operator violation and related data to assist in implementing the Surface Mining Control and

Reclamation Act of 1977. Under that act, persons with certain outstanding violations cannot obtain permits.

Previously the Department's obligation to input data and utilize data from the AVS was regulated by a Memorandum of Understanding between the OSM and the Department. The OSM has mandated that these requirements be put in rule. As proposed, New Rule I defines what information the Department must enter into the AVS, and provides a schedule for the entry of this information.

New Rule II provides a process for the Department to utilize the AVS system to determine permit eligibility. If an ineligibility determination is found, New Rule II provides the Department direction on noticing the applicant of the finding, and informing the applicant of the right to challenge the finding.

New Rule III is the process in which an owner or controller of a coal mining operation may request information regarding their capacity as described in the AVS. New Rule III also describes the process to challenge an ownership control listing in the AVS.

New Rule IV provides the procedures that

the permittee must submit to update ownership and control information in the AVS system after the issuance of a cessation order.

The third category of changes are those mandated by OSM in order for the Department to maintain regulations that are equally as stringent as the federal regulations. The OSM identified three separate concerns within Subchapter 7. These are technical amendments dealing with revegetation, and I will not address them in detail.

The fourth category of rule change is substantive changes proposed by the Department. The Department is proposing substantive changes to Subchapters 4 and 6 that provide the authority to specify application in reporting formats. For example, the Department may receive annual hydrology data in hard copy format. This data must be analyzed and used by the Department staff.

If the data were to be delivered in a specific format, such as a standard electronic format, there would be less strain on Department resources. Currently the Department does not have the authority to require an electronic submittal of this data.

The Department is proposing multiple changes to embankment, spillway, and drainage control designs within Subchapter 6 and 9. The proposed change will modify the engineer design parameter from a 100 year 24 hour storm event, to 100 year six hour event. These structures are required to be designed to withstand a specific storm event, and not sustain structural damage.

Most of the Department design standards are based on NCS rainfall runoff models. Essentially a given rainfall depth in inches is assumed to fall on the land. The amount and timing of the rainfall is then modeled. The intensity of rainfall at any given time over the storm duration is then approximated by a standardized somewhat bell shaped curve, that is, the rate of rainfall is assumed to begin with low intensity, rise to a peak, and then decline over the duration of the storm.

Generally the total rainfall amount associated with a 100 year six hour storm will be less than that of a 100 year 24 hour storm. However, the lesser six hour rainfall amount is distributed over a shorter time period, and will

likely have a higher peak intensity in inches per hour than the longer duration storm.

The difference in the spillway and drainage control design sizes due to the proposed changes is largely based on the particular geometry of that drainage. For example, impoundments with small quickly draining drainages, a higher peak intensity for the six hour storm is anticipated, and will likely result in a larger spillway size. On the other hand, for impoundments with larger slower draining basins, a lower peak intensity for the six hour storm is anticipated, and may result in a smaller spillway size. It is almost necessary to model the basin in question to determine which storm event would result in the greater spillway design size requirement.

The purpose of the proposed rule change is to provide consistency between the federal regulations and the Department's, and to align spillway requirements to be the same design standards as existing reclamation design standards for stream channels.

The Department is proposing to modify Subchapter 10. The prospecting permit renewal

window is currently required to be submitted at least 120 days, and no greater than 150 days prior to the anniversary date of the permit. The proposed changes remove the window, and reflect a time frame that is adequate for the Department's review.

Also proposed is an increase to the minimum disturbance associated with a drill hole with respect to calculating the prospecting bond. It is the Department's experience that the activities associated with drilling require a typical footprint greater than the current one-tenth of an acre.

The Department is proposing to modify Subchapter 12. Currently the Department does not specify a process to follow if a concern is identified during an aerial inspection. The proposed language aligns Montana's rules with the existing federal regulations.

Finally, the fifth and sixth category of changes are nonsubstantive changes proposed by the Department that primarily correct grammatical and reference citations errors throughout the nine subchapters.

As proposed, the rule package affects a

large audience of interested parties. In order to further refine this rulemaking effort, the Department hosted a stakeholders meeting in Billings, Montana on May 4th, 2011. The meeting included representatives from the coal industry, property owners, and private interest organizations.

The comments received were accepted on an informal basis, and are addressed in the rule package as presented, with the exception of the applicant violator system and prospecting amendments, as they were drafted post May 4th, 2011.

With that I'll open it up to questions.

CHAIRMAN RUSSELL: Thank you. Questions?

MS. SHROPSHIRE: I'm not sure if I understood correctly, but it relates to the requirement of the 24 hour -- I'm sorry -- 100 year storm event over a six hour period instead of the 24 hour period. And you're changing it from 24 hours to six hours; is that correct?

MR. URBAN: Mr. Chairman, Ms. Shropshire. That is correct. We are proposing to change it to six.

MS. SHROPSHIRE: And a follow up is just that -- Is that data readily available? My understanding is a lot of the meteorologic data comes in 24 hour events, but I'm not sure about that. Will that be easy data for people to come by?

MR. URBAN: Mr. Chairman, Ms. Shropshire. The data -- I believe the data is readily available, but if this comes to a design requirement which a PE will certify, so it would be up to the professional engineer to acquire the data in order to properly design the structure. I'd have to pass that to a different member if you need a more specific answer.

MS. SHROPSHIRE: This is the part that I'm not entirely clear on, but I think when you look at historical records, the 24 hour event is much more common data available, and I want to make sure that that historical information is available in a six hour time frame. So just a recommendation to look at, to make sure you're not requiring something that -- for data that's not available.

MR. URBAN: Mr. Chairman, Ms. Shropshire. The requirements for the federal

regulations on the same subject matter is for the 100 year six hour event, and it has been for quite some time.

MS. SHROPSHIRE: That helps.

CHAIRMAN RUSSELL: Anything else?

MS. SHROPSHIRE: I have one more. And I apologize because I haven't read all of this in excruciating detail. But something I've come across in the past that has made a difference is whether or not the -- in terms of the design of an impoundment, whether or not free board is explicit in the rule. I was curious whether there is defined free board requirement in this rule.

MR. URBAN: Mr. Chairman, Ms. Shropshire. The regulations that the coal and uranium program has specifically require one foot free board on these structures.

MS. SHROPSHIRE: So it's designed for that?

MR. URBAN: Yes.

MS. SHROPSHIRE: Okay. Thank you.

MR. MILLER: Eric, when you had your stakeholder meeting, I think you said May, was there a lot of comments from industry and so forth here on your document?

MR. URBAN: Mr. Chairman, Mr. Miller. Generally speaking, the comments were fairly simple. A lot of this rule changing package is noncontroversial, so the comments were relatively benign and easily addressed. Nothing stands out as a difficult comment.

MR. MILLER: As an obstacle. Thank you.

CHAIRMAN RUSSELL: Anything else?

MR. WHALEN: Mr. Chairman. I heard what I thought was a bright light in the presentation with respect to the reporting requirements with respect to the amendments, in shifting from hard copy submissions to digital submissions. Did I hear that right, or am I hearing what I'm listening for?

MR. URBAN: Mr. Chairman, Mr. Whalen. The coal and uranium program has made a great effort in going electronic in all levels of the program. Adding the application and the annual hydrology requirements would give us authority to require it if at any time we had a permittee that was less than interested in providing that format.

MR. WHALEN: Just as a follow up. And this would probably be directed to Mr. Livers.

Tom, is this something that the

Department is looking at doing Department-wide with respect to the submission of reporting requirements from hard copy to digital, so that people who are compiling these reports can put them on Excel spreadsheets or whatever the format is that the Department requires, submit them in that format as opposed to hand writing in these data?

MR. LIVERS: Mr. Chairman, Mr. Whalen. Yes, it is, and a couple specific examples off the top of my head in addition to this, our air program is working to move that direction; subdivision application, looking for some online tools for ensuring that we get complete applications. It certainly is an area.

We have to phase it, given the fact that we don't have resources in our IT shop for development. We have limited resources for developing new applications. But it's clearly this, conjoined with a real intense look at our own business processes, to first find efficiencies in restructuring those business processes; and then having done that, looking at electronic tools to effect those new processes.

MR. WHALEN: Thank you. This is

something that's going to make public utilities directors across the state ecstatic. Thank you for doing that.

CHAIRMAN RUSSELL: Anything else?

MS. KAISER: One thing. For the record, I need to recuse myself on taking action on this item.

CHAIRMAN RUSSELL: Okay. I don't know if you do or not, what we just did with the wastewater, but --

MR. LIVERS: Mr. Chairman, I very much appreciate Ms. Kaiser's diligence in looking into it. Most of the actions of the Board are governed by Montana Code of Ethics. In addition, there is specific Federal Code of Ethics with respect to coal programs that are more stringent and allow very little leeway.

CHAIRMAN RUSSELL: We haven't actually been signing those documents recently, have we?

MR. NORTH: Mr. Chairman, John North. You'll be getting those in the next meeting. The deadline is February 1st.

CHAIRMAN RUSSELL: Great. Before we take action we'll be signing this. Thank you very much. Nicely done. Anything else? Anyone in the

audience that would like to speak to this before we take this matter up?

MS. HEDGES: Mr. Chairman, members of the committee. Ann Hedges with Montana Environmental Information Center.

Very quickly, I think this rule package is actually quite a bit different than the one that was out for public comment last May. There are some questions that we have. We do support moving forward at this time, but we definitely have some questions, and we think that there is some changes that are necessary in this before it becomes final. So we look forward to working with the Department in getting some questions answered.

I do think that there's some really good stuff in here, like the electronic information. Air quality has already moved to that, in that direction, and that's exactly where the coal program should be going. So I absolutely support that.

But I think there is some questions that still exist beyond what happened in May. Thank you.

CHAIRMAN RUSSELL: Thanks, Ann. Anyone else?

(No response)

CHAIRMAN RUSSELL: With that, I would entertain a motion to move forward with this rulemaking, and adopt the MAR, and get it published.

MR. WHALEN: So moved.

CHAIRMAN RUSSELL: Second.

MR. MILLER: I'll second.

CHAIRMAN RUSSELL: Seconded by Marv. Further discussion.

(No response)

CHAIRMAN RUSSELL: The only comment I'd make is remember, any substantive changes kind of throw things in a monkey wrench when you're doing rulemaking, but oh, well. So all those in favor, signify by saying aye.

(Response)

CHAIRMAN RUSSELL: Opposed.

(No response)

CHAIRMAN RUSSELL: Motion carries unanimously. We're going to take a break.

(Recess taken)

CHAIRMAN RUSSELL: Let's go ahead and get started. The next thing on the agenda is the triennial review, temporary water quality

standards for the New World Mining District Project.

MR. LIVERS: Actually I think Bob Bukantis is going to introduce the topic, and I know we have people from the Forest Service here as well.

MR. BUKANTIS: Mr. Chairman, members of the Board. Again, I'm Bob Bukantis, Water Quality Standards Program Manager for the Department. And the Forest Service I think is going to carry the bulk of the weight on this issue, but I basically want to briefly introduce this, and present the Department's perspective, and hit a few highlights, then pass it on to Mary Beth Marks.

And basically just recall that in 1999, the Forest Service requested this Board to adopt temporary water quality standards, and the purpose of these standards was to basically give the Forest Service some protection from liability from standards exceedence while they did cleanup of legacy mine waste on federal property.

And since then, they've been working closely with the Department, and reporting back to you every three years in terms of what kind of

progress they've been making, etc. And following my presentation today, Mary Beth Marks from the Forest Service will provide that forest report to you.

These standards were put in place in 1999, and they're set to expire right now in 2014, so we're twelve years into it. Since the adoption of the temporary water quality standards, the Department's role has mostly focused on working with the Forest Service on reclamation issues, and enhance your expectation, Mr. Chairman, that Jon Koerth would be up here again to introduce this topic.

The reclamation is now complete on this project, so that the Department's role now shifts more to how do we solve the temporary standards, what are we going to do when this project is over, and I'll talk in a little bit more detail about that, and that's why I'm up here, is because it has become more of a water quality standards issue, if you would.

Under Montana State law, we have direction to terminate the temporary water quality standards in three different cases. This by the way is in addition to the fact that they'll just

expire on their own if no action is taken in 2014.

But the first thing that would cause us to terminate the standards is if the parameters improved to B-1 levels, that is, they're cleaner than what's necessary for the temporary standards.

The second category is if the water is reclassified, for example, if we were to go to the -- decide that site specific standards were necessary for those waters.

And the third option or the third case would be if the restoration plan is not being implemented to the Department's and the Board's satisfaction, so that they're not making adequate progress in cleaning this up, if you would. But I think you'll see from the presentation that will follow, and I think agree with us, that we think the Forest Service is doing a great job on the restoration, and that water quality in fact has improved quite a bit, and we're expecting it to continue to improve.

The data does suggest that some parameters at some of the sites at this point seem to have improved to B-1 conditions, so this leads me to our recommendations which I'll go over with you briefly before the Forest Service comes up.

But given that restoration was just completed this past field season, just in recent months, we think the best thing at this point is to give the restoration time to stabilize, because given that there has been a lot of landscape disturbance, etc., we think it's going to take some time before those water quality parameters that are improving reach kind of a stable state, if you would.

And I guess a couple other considerations is in terms of the monitoring, we've been taking three samples a year at each of these sites, the Forest Service and their contractors, and so we think it's best to have a couple more years data, and provide a more robust data set, if you would.

So there is an expectation that given the highly mineralized area that these streams originate in, and given a lot of the data and the work that's been done by the Forest Service and the contractors up there -- USGS by the way, too -- that we're not expecting that we will necessarily achieve B-1 standards with all of the parameters, especially with copper.

So our recommendation is going to be --

or is to take no modification to -- or no action to modify the temporary standards at this time. Your options, of course, are to terminate all of the standards, some of them, or to modify them as you see fit; and the Department will continue meanwhile to work with the Forest Service, and monitor progress on this.

We think from the technical perspective, probably the best approach would be for us to reevaluate in a couple years prior to the 2014 expiration date, and at that time, number one, we expect to have a more robust data set for a conclusive evaluation that those parameters which now are indicating they're cleaner than the B-1 standards, that they've got a better data set for that; and at that point, if we still have some parameters -- that I think is what a lot of people expect -- that haven't achieved B-1 standards, particularly copper seems to be a little bit problematic, that we might ask for an extension for the temporary standards to collect more data, to get better data, in particular especially if we think we need to set site specific standards for certain parameters.

And if we ended up wanting to extend the

temporary standards, where the water quality still warrants the B-1 standards, I think at that point we also want to recalculate those standards to reflect the improvement that is happening at that point.

The other piece that I want to mention is that we think that that would be also the best time to terminate any of the temporary water quality standards with a more robust data set, where we have more of a conclusive determination on those parameters.

So with that, unless you have any questions from me right now, I'm inclined to turn it over to Mary Beth Marks from the Forest Service, and I'll be here to answer questions, and also we have Jon Koerth here to help.

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CHAIRMAN RUSSELL: Thanks, Bob. And now we've heard the Department's comments, anything past this we are holding a public hearing, so we'll hear from anyone who wants to speak to this matter.

MS. MARKS: Mr. Chairman, members of the Board. For the record, my name is Mary Beth Marks. I am employed by the USDA Forest Service on the Gallatin National Forest, and I am the on-scene coordinator for the New World Mining District Response and Restoration Project. It is my pleasure to come before you today to update the Board with progress we've made on the New World Response and Restoration Project.

For this briefing, we assembled a handout containing figures of the location of the New World Mining District, and graphs showing improvements to water quality in the headwater areas of Fisher Creek, Daisy Creek, and Stillwater River. Improvements to water quality in these drainages are a result of the US Forest Service's reclamation efforts that I will describe to you in a moment.

The information I will refer to is also available in a progress report that was submitted

to DEQ and the Board as part of our statutory obligation in adhering to the temporary water quality standards for portions of Fisher Creek, Daisy Creek, and the headwaters of the Stillwater River.

As you know, these streams do not support their designated uses due in part to impacts attributable to historic mining. The temporary standards allow the US Forest Service to proceed with cleanup of these historic wastes, and move incrementally towards water quality improvement in support of the designated uses for these streams.

Most of the major reclamation activities at New World took place prior to the last three year cycle in 2008. In 2003, we reopened 1900 feet of the Glengarry Adit in the Como Raise to backfill and install water tight plugs in these mine workings. This essentially eliminated the contaminated audit discharge into Fisher Creek.

Also in 2003, the McLaren Pit was backfilled and capped, eliminating a major source of contaminated drainage to Daisy Creek.

In 2005 and 2006, an impermeable cap and lime amended soil cover was placed on 5.5 acres of

mineralized and disturbed soils in the Como Basin at the headwaters of Fisher Creek.

From 2005 through 2007, the remaining adit and drain discharges on district property have been evaluated to address source control and treatment of the contaminated water.

Sites totalling 22 acres have undergone waste removal and capping, and have been reclaimed and revegetated.

Other reclamation activities have included regrading and revegetation of road corridors, stabilization, and placing barriers to off road vehicle use in select areas, placement of runoff controls, and stabilization of stream channels below the Como Basin and McLaren Pit areas.

As of 2008, all major sources of surface and groundwater loading have been addressed. Surface groundwater monitoring continued through 2011, as in previous years. Additional reclamation work completed from 2009 through 2011 included stabilization of the incised Fisher Creek stream channel, passing through the Glengarry Mine site; plugging the Glengarry Mill Site Adit, and regrading the surrounding areas; relocating and

restoring the Lake Abundance hiking and equestrian trail; constructing a rock lined ditch to direct discharge from the Lower Tredennis adit into an infiltration basin; constructing a closure and infiltration basin to passively treat discharge from the McLaren Adit; and finally restoration and stabilization of road cuts and drainage controls on roads throughout the district.

With these recent reclamation activities in mind, I would like to review water quality trends over time in the Fisher Creek, Daisy Creek, and Stillwater River drainages. During this discussion, I will be referring to your hand-outs that contain various maps and graphs.

Figure 1 is a general location map of the New World Mine District located just east of Yellowstone National Park outside of Cooke City. And Figure 2 shows these three principal drainages being regulated under the temporary water quality standards, and the surface water sampling stations along these drainages. The remaining Figures 3 through 6 display water quality trends for the three monitored drainages.

With the elimination of the Glengarry Adit discharge and construction of the Como Basin

cap in 2004 and 2006, substantial improvement to water quality occurred in Upper Fisher Creek. On the third page of your hand-out is a bar graph, Figure 3, demonstrating the reduction in metals concentration in Upper Fisher Creek at surface water station SW-3, which is several hundred yards downstream from the Glengarry Mine.

As you can see, there has been a considerable reduction in metals at both high flow and low flow. Overall, post-adit closure changes and metal concentrations have decreased an average of 40 percent during low flow, and 58 percent during high flow conditions.

The next two graphs, Figure 4 and 5, are graphs that illustrate changes in copper concentration over time at surface water stations in Fisher Creek. At Station SW-3, which is Figure 4, located on Upper Fisher Creek, we can see that since 2004, we've had some of the lowest concentrations of copper reported over the 21 year history of data collection.

Station CFY-2 is located on Lower Fisher Creek near its confluence with the Clarks Fork of the Yellowstone River. Data presented on Figure 5 suggests that there has been no significant change

with regard to copper concentrations at CFY-2.

In the Daisy Creek drainage, improvements to water quality have been measured downstream of the McLaren Pit since the cap over the pit was completed in 2003.

As the McLaren Pit is located at the headwaters of the Stillwater River, it was one of the major contributors to water quality degradation in the upper portion of this drainage. The construction of this eleven acre capping system was designed to eliminate the infiltration of snow melt and rain through the waste rock, consolidate the waste, and thereby reduce metals concentration and loading that had historically occurred in Daisy Creek.

On the bottom of the fourth page hand-out is a bar graph, Figure 6, demonstrating the average reduction in metals concentration in Upper Daisy Creek at Surface Water Station DC-2.

Post-McLaren cap, 2004 through 2010, metals concentration in Upper Daisy Creek have decreased an average of 9 percent during low flow periods, and an average of 63 percent during high flow periods. Also at Station DC-2, Figure 7 on the top of Page 5 indicates that seasonal high and

low copper concentrations have been the lowest since capping the McLaren Pit.

At Station DC-2, the most dramatic changes have been measured during high flow conditions when a large volume of water, of snow that collects on the capped area, which has historically become contaminated as it infiltrated through the mine waste, now runs off as essentially clean water. The runoff has the added positive impact of diluting metal contamination and acidity derived from other natural sources in Upper Daisy Creek.

The results measured during low flow conditions are not as dramatic, but decreases in metals concentration are realized for all metals monitored except for zinc.

On the fifth page of the hand-out, Figure 8 shows copper concentrations measured at Station SW-7 on the Stillwater River. The trend in copper concentrations over time at this station is similar to that discussed above for other stations, that shows that water quality has improved as a result of the capping of the McLaren Pit.

During high flow events, a considerable

amount of suspended sediment is scoured and transported in surface water, and these suspended sediments likely account for high flow exceedences of the aquatic life standards.

With one exception, no temporary water quality or narrative standards were exceeded since the third three year review cycle between 2008 and 2010 on Fisher Creek, Daisy Creek, or the Stillwater River drainages. The exception was an iron concentration of 34.3 milligrams per liter at DC-2 in September of 2010. The narrative standard for iron is 30 milligrams per liter.

Water quality improvements occurring since the beginning and completion of reclamation work are summarized in Table 1 on Page 6 of your hand-out.

These data show that metals concentrations at CFY-2, DC-5, SW-7 were greatest prior to the beginning of reclamation activities in 2001. Mean metal concentrations decreased considerably in the time since reclamation began, 2001 through the present, and continue to decrease after completion of the reclamation work, which is the 2008 through present, the last column under each water quality sampling station on your table.

Studies of natural background surface water quality conditions and a regional study of background groundwater quality have recently been completed as a means of determining realistic technically supportable and attainable long term water quality goals for closure of the New World Mining District.

The New World Mining District Response and Restoration Project will enter a long term operations and maintenance phase in 2012. Water quality monitoring will continue during this time, although at a reduced frequency and at fewer locations. Surface water quality monitoring will be conducted each year at ten of the twelve sampling stations identified in the original long term surface water quality monitoring plan, and this includes the seven stations monitored for compliance with the temporary water quality standards.

Instead of three times per year, April, June/July, and September/October, samples will be collected twice per year, once during high flow conditions in the spring, June and July, and once during low flow conditions in the fall, September and October.

The April monitoring event is being eliminated as this degree of resolution is no longer necessary in the post-reclamation data set. April data is typically similar to or bracketed by data collected during the other two monitoring events, and the April monitoring event poses health and safety concerns due to the high snow depth encountered in the district during this time.

In conclusion, the rule adopting temporary standards for portions of Fisher Creek, Daisy Creek, and the Stillwater River has allowed the New World Response and Restoration Project to proceed with clean-up actions on an established schedule that has resulted in significant water quality improvements in this district.

We continue to believe that the reclamation activities completed will result in additional incremental improvement in water quality as equilibrium conditions are re-established in these drainages. The USDA Forest Service is recommending that there be no adjustment to the temporary standards at this time.

This completes my update to you. Thank

you for your attention. And I would be glad to answer any questions you might have.

CHAIRMAN RUSSELL: Thanks, Mary Beth. We'll get this public hearing done. You may be it for all I know.

MS. SHROPSHIRE: Do you want to wait for questions?

CHAIRMAN RUSSELL: I do. It's kind of like executive session. We'll close it since I haphazardly opened it.

Is there anyone else that would like to speak to this matter?

(No response)

CHAIRMAN RUSSELL: Hearing none, the public hearing is closed, and we'll let you take some comments then or questions.

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MS. SHROPSHIRE: I know we've had presentations in the past, and I may have asked these questions before, so I apologize in advance if I'm asking you stuff I've already asked, so I appreciate the refresher.

When I look at the data, clearly at high flows concentrations go up. As flow increases, there is a broad trend that concentrations increase with flow; is that true?

MS. MARKS: Mr. Chairman, Ms. Shropshire. It depends on the station. Again, if you look at the McLaren Pit data, clearly the high flow is significantly lower concentrations than low flow data because of the reclamation, the impermeable cover placed on the McLaren Pit, that allows -- the snow accumulates there, rather than precipitating through the waste and collecting additional contaminants, and does flow off as clean water.

MS. SHROPSHIRE: And I guess that's my point, is that there are examples that remain where as flow is increased, the concentrations increase, and I'm wondering if that's evidence that there is still reclamation needed in those areas.

MS. MARKS: Mr. Chairman, Ms. Shropshire. What we see, number one, is it depends on the contaminant, and there are places where we do get higher concentrations during high flows, and we do sample for total and dissolved, so that we can look at, try to discern sources; and we think in a lot of cases that some of the high concentrations are from scouring and sediment in the sample, rather than from the mining events.

MS. SHROPSHIRE: So you don't see the -- Because you just have totals plotted here. I don't see a dissolved data.

MS. MARKS: Correct.

MS. SHROPSHIRE: You don't see the same trend with dissolved?

MS. MARKS: Not necessarily.

MS. SHROPSHIRE: Is it your point that when you see higher concentrations with higher flow, it may be an indication that there's scouring? It seems that there may be -- it may a be a strong argument that there is reclamation still needed.

MS. MARKS: Mr. Chairman, Ms. Shropshire. The reason we did our last reclamation effort that was completed this field

season was stabilization of road cuts, cut and fill banks, drainage controls off roads. So that was our last anticipated reclamation work, and the reason we did that was to try to eliminate as much sediment going into the stream. But we do believe that a lot of the scouring and sedimentation is just natural in the streams themselves.

MS. SHROPSHIRE: You don't have arsenic data plotted. Are you collecting arsenic data?

MS. MARKS: I don't know.

UNKNOWN SPEAKER: Yes, we are.

MS. SHROPSHIRE: Maybe you're not familiar with that, but I'm curious if you see decrease in copper, if you're seeing increases in arsenic.

MS. MARKS: Mr. Chairman, Ms. Shropshire. My understanding is arsenic is not an issue at the site, and that's why we're not presenting it and showing it. I'd have to go back and look at the detail data to see if there is --

MS. SHROPSHIRE: It might be something to look at, because sometimes when you immobilize copper, you mobilize arsenic, so even though you're seeing a decrease in copper, and arsenic may not have been an issue in the past, you may be

inadvertently creating an arsenic issue. So it's something you might want to look at if you haven't.

MS. MARKS: Okay.

MS. SHROPSHIRE: This may be a question for the Department, but I guess clearly there is improvement in water quality with time, it seems generally; not in every case, but generally. What's the advantage of the temporary water quality standards? Are you approaching this differently with temporary water quality standards that you wouldn't approach it without? How was your approach different?

MR. BUKANTIS: The temporary water quality standards basically are calculated from data where they're set at the mean plus two standard deviations above the mean of ambient data, just to pull numbers out of the air, just as an illustrative example.

Say, the standard is five, but the temporary standard might be 100. Then when the Forest Service is going in and disturbing all that land, there is no liability, if you would, for exceeding the standard when it's already naturally high in there, and it's meant to be a temporary

relaxation of the standards to reflect ambient condition to protect the Forest Service from liability while they're in there working.

MS. SHROPSHIRE: Are there other examples that you have where there are temporary water quality standards applied?

MR. BUKANTIS: We had one other example in Montana that I'm sure Chairman Russell and perhaps some others will remember. We had a similar situation in the Upper Blackfoot Mining Complex, and in that case, that has been moved over to Super Fund because there were issues with ASARCO going through bankruptcy, and they bought Grupo Mexico, etc. And they weren't making good on their clean-up, and they were pulled off the table.

So this is the only example we have in Montana that's currently alive, if you would, and one of two examples that we've had.

CHAIRMAN RUSSELL: A fine example of not doing anything that you're supposed to, and what happens if you neglect moving forward with some of your remediation program. Not that you'd ever do that.

MS. MARKS: Mr. Chairman, Ms.

Shropshire. If I could say, on the temporary standards, I find it interesting that the temporary standards rule allows for fifteen years of temporary standards; and as you know, I keep joking, and I said, "I'm watching the Board grow old, and they're probably watching me grow old," because I've been here for ten years, coming to talk to this Board for ten years now.

So I think it's kind of interesting that the New World Project, it just took a long time to get all our work done, and so if it were a project that were a three year project or a five project, then you would have those ten years left in the standards to work through, "Where do we go from here?," and "How do we close out the project."

In the case of the New World Project, we've been working out there for eleven, twelve years, and so now we have another three more years in the standards -- we don't anticipate any more major work -- but just to let that site equilibrate, and then determine what do we with the temporary standards -- there is provisions in the rule to extend them for another five years -- or do we take another avenue, such as site specific standards.

CHAIRMAN RUSSELL: There is a potential you're not going to exceed the temporary standards, but will you meet the historic water quality standards?

There is some hedging in the report around natural acid flow, drainage, and such like that, that to me appears to be -- and I don't mean this in a bad way -- some hedging, and I've heard it -- since I'm the only Board member that's ever been up there. I've seen it. But there seems to be a little hedging there that you may not ever meet what the historic water quality standard was.

MS. MARKS: Mr. Chairman, members of the Board. And I touched on that in my presentation to say that we have done work out there to look at that natural background, and to study streams, and pH, and some creek deposits to predict what pre-mining water chemistry is, and we have provided that information to the Department. We believe that there are constituents that we are not going to meet B-1 standards as a result of our work, and the streams likely never reach the B-1 standards.

CHAIRMAN RUSSELL: What does that mean?

MR. BUKANTIS: I'll try not to get into

the weeds on this, because basically it's a natural background issue, we think, to a certain extent. And when you think of Clean Water Act, and restoration, Montana Water Quality Act, the goal is to restore to what? To natural. In this case natural is above our standards which are set to protect the use probably for a couple parameters anyways.

So then we have to figure out how we're going to address that administratively. Site specific standards is one way that EPA prefers, because then you adjust the standard in kind of an affirmative way, although it's subject for review and revision as any standard is, based on new science and new data.

That requires going through rulemaking process. In this case, it's in an area that development is basically off limits for minerals development because of how this area is being protected. There is some private land areas basically inaccessible for six months. But we need to sort that out clearly, and we need to do something to acknowledge what those conditions are, and how much of that source is controllable. How much money have we spent up there?

MS. MARKS: Probably about $23 million.

MR. BUKANTIS: And I've been at public meetings with the Forest Service -- I think the next one is scheduled for January 18th -- where we've heard from environmental groups that they're pretty satisfied with what's been done, but we need to work forward to some administrative wrap-up. Site specific standards might be --

CHAIRMAN RUSSELL: Just so I'm clear. Everything is done, the adits are closed, all of the capping is in place. The McLaren tailings are going to be there. They're not going through Wyoming to be -- so they're going to stay there now, right?

MS. MARKS: Mr. Chairman, members of the Board. The work up at the New World Mine District on National Forest System land has been completed. There is an EECA, which is our documents, Engineering Evaluation Cost Analysis, coming out that has looked at all the remaining adits in the district that have water discharging that does not meet standards, and it makes a decision on what we're going to do with those.

There is four of those that have no action, for several different reasons, presented

in that report. So basically the work is done on the National Forest System lands.

The McLaren tailings is on private land, and Mr. Jon Koerth is proceeding with the clean-up out there, and doing a great job.

MR. KOERTH: Would you like a briefing on that?

CHAIRMAN RUSSELL: I don't know. I didn't know we were moving forward. So just to know that it's moving forward is a good thing.

MR. KOERTH: We're in two years of a six year construction project, starting the third year next work season. It's a complicated project, and a very short time frame to do it. You're right. We've dropped the proposal to remove some of the waste, and have it processed and disposed in the tailings impoundment at Golden Sunlight Mine. That didn't work with the state of Wyoming, and their highway weight restrictions that they were going to impose. But we are moving forward with that clean-up.

CHAIRMAN RUSSELL: That's great. It is just too bad that Wyoming wouldn't look at the resource, and maybe think a different way. That's good. So it still looks like we're going to end

up -- The only reason I bring it up is we're probably going to set some new standards on that because it is just never going to be -- There are some B-1 standards that just aren't going to be met.

MS. MARKS: Mr. Chairman, members of the Board. I'd like to extend an invitation to have you come out to the site and take a look at the work that we're doing. Bob mentioned that it is a open six months a year. It is more like two months a year that you can be assured of not being in snow. But usually August and September.

CHAIRMAN RUSSELL: It's an incredible road trip. Beautiful up there.

MS. MARKS: Anybody is welcome. Give me a call.

CHAIRMAN RUSSELL: Thank you very much.

MR. MILLER: Maybe just one question. I was just wondering. You mentioned in your report of at least one of the adits that was plugged and so forth, it collapsed, and you had to dig it out and regrout it and so forth. I guess that brings a question in my mind is: Of all of these that you've plugged and so forth, how long do you anticipate the plugs to stay in there? Forever,

or a period of time, or how many more of them are going to collapse?

MS. MARKS: Mr. Chairman, Mr. Miller. There is two answers to that. One is the designs that we have done and the plugs that we have installed have been -- we've spent a lot of money on walk-away solutions. So we've done back-up engineering designs, such as water tight plugs, and then physical backfill in between the water tight plugs, multiple water tight plugs, so not just one plug at the surface, but many of them, and then physical backfill between them, so that if the mine were to collapse, it would not effect the plugs. So the designs have been very robust and frankly state of the art.

The other important point is that we are implementing a long term operations and maintenance plan. As Bob mentioned, our public partners are very happy with the work that we've done out there, that they do want to ensure that we're not just done and walking away, and so we have put together a 20 year -- we call it operations and maintenance plan that includes the monitoring we will do, and how we will maintain that site for any failures in our work. So we're

committed out there.

MR. MILLER: Thank you.

MR. WHALEN: Ms. Marks, I'm seeing references to surface water monitoring throughout the report. My question is: What's happening to the groundwater? Is there monitoring wells on the site where that information is being integrated, so that we're not going to have some time bombs five years, ten years down the road, when we get a real flushing in those high drainage soils that bring that water back up, and there is some additional leaching that occurs that will spike these figures down the road?

MS. MARKS: Mr. Chairman, Mr. Whalen, we do have provisions for groundwater monitoring, so that is part -- I guess I am saying surface water monitoring, but it is a water monitoring program, and it includes surface water sites, as well as groundwater sites. And I believe there is a figure in the progress report that's on the website that shows the groundwater monitoring that we are doing.

MR. WHALEN: Thank you.

CHAIRMAN RUSSELL: Any other questions?

(No response)

CHAIRMAN RUSSELL: Thanks for coming. I guess just have another procedural question. When we've done a review, we don't actually have to take action unless we want to change them, right?

MR. NORTH: Right.

CHAIRMAN RUSSELL: So thanks for your time, and we'll move on then.

Katherine, we are at final action on contested cases.

MS. ORR: Mr. Chairman, members of the Board, the first item under III(c), is III(c)(1), in the Matter of the Violations of Open Cut Mining Act by Concrete Materials Montana, CCM. And this is in Yellowstone County. It was an open cut mining case. The violations were conducting open cut operations in a non-permitted area on contiguous unpermitted land prior to obtaining a permit, and failure to follow the plan of operation in several ways.

The initial penalty that was asked for or cited in the notice of violation, which was issued on March 21st, 2011, was $11,640, plus some remediation efforts. And the AOC is in the materials, and the penalty that the parties have arrived at is $2,640. Part of that is that it was

determined that as to the first violation, that was time limited. So you have before you a stipulation to dismiss under 41(a), and an order.

CHAIRMAN RUSSELL: With that in mind, I do have a dismissal order for Case No. 2011-04-OC, and would entertain a motion to authorize the Board Chair to sign.

MS. KAISER: Moved.

CHAIRMAN RUSSELL: It's been moved by Heidi. Is there a second?

MR. MILLER: I'll second.

CHAIRMAN RUSSELL: Seconded by Marv. Any further discussion?

(No response)

CHAIRMAN RUSSELL: Hearing none, all those in favor, signify by saying aye.

(Response)

CHAIRMAN RUSSELL: Opposed.

(No response)

CHAIRMAN RUSSELL: Motion carries unanimously. Next.

MS. ORR: Mr. Chairman, members of the Board, Item III(C)(2) in the Matter of the Appeal and Request for Hearing by Meat Production, Inc. a/k/a Stampede Packing Company. This is up in the

Kalispell area.

This is in an appeal from a groundwater pollution permit, and the appeal consisted of several contentions regarding frequency of monitoring, cost of sampling; and the Department and the Appellant reached agreement, and you have before you a motion to dismiss under 41(a)(1), and a proposed order.

CHAIRMAN RUSSELL: And so it sounds like the Department is going to issue a new permit for Stampede.

MS. ORR: Right.

CHAIRMAN RUSSELL: Okay. With all that in mind, I do have an order to dismiss for Case No. BER 2010-18-WQ, and looking for a motion to authorize the Board Chair to sign.

MR. MIRES: So moved.

CHAIRMAN RUSSELL: It's been moved by Larry. Is there a second?

MR. WHALEN: Second, Mr. Chairman.

CHAIRMAN RUSSELL: Seconded by Joe. Further discussion.

(No response)

CHAIRMAN RUSSELL: Hearing none, all those in favor, signify by saying aye.

(Response)

CHAIRMAN RUSSELL: Opposed.

(No response)

CHAIRMAN RUSSELL: Motion carries unanimously. Next.

MS. ORR: The next case, Mr. Chairman, members of the Board, Item (3) in this section, In the Matter of Violations of the Montana Strip and Underground Mine Reclamation Act by Carbon County Holdings. This is near Bridger, Montana.

The violations in the Notice of Violation issued almost a year ago this time, December 14th, 2010, there is one violation, failure to obtain a prospecting permit prior to conducting drilling operations. There were several holes discovered on inspection on July 30th, 2010, where they had been drilled, cased, and in some cases even reclaimed without a permit.

The penalty sought was $20,700, and the parties were able to reach agreement regarding that penalty, and you have in your materials an AOC that indicates that the penalty that will be paid is $15,000. You have before you a motion to dismiss and a proposed order of dismissal.

CHAIRMAN RUSSELL: Thanks, Katherine. I

do have a dismissal order for Case BER 2011-01-SM, looking for a motion to authorize the Board Chair to sign.

MS. KAISER: I need to recuse myself from taking --

CHAIRMAN RUSSELL: That's fine.

MR. MILLER: I so move.

CHAIRMAN RUSSELL: Can I get a second?

MR. MIRES: I'll second.

CHAIRMAN RUSSELL: Any further questions?

(No response)

CHAIRMAN RUSSELL: All those in favor, signify by saying aye.

(Response)

CHAIRMAN RUSSELL: Opposed.

(No response)

CHAIRMAN RUSSELL: Motion carries unanimously. I think we have one more.

MS. ORR: We do, Mr. Chairman. This is a case involving a challenge to the issuance of an amended certificate of compliance under the Major Facilities Siting Act. The amended certificate was issued by the Department on July 22nd, 2011, and Mr. McRae, Item (4) here, appealed from that

on August 5th, 2011.

And the Intervenor and Applicant MATL filed a notice under 75-20-223 to have this case removed to District Court, and oddly under the statute, which is broken out in the order recommending dismissal that I wrote, if there is a conflict as to the jurisdiction of this matter, it must proceed to District Court by the wording in the statute. And MATL has moved for dismissal of the action before the Board under that statute.

So I wrote an order recommending dismissal, and so today you have before you an -- I have the order here. You don't have it in your materials -- but basically it adopts by reference my order recommending dismissal, and ordering dismissal with prejudice. Let me hand that to you. Sorry that you're just getting it now.

CHAIRMAN RUSSELL: Any questions procedurally to Katherine before we move forward with this?

(No response)

CHAIRMAN RUSSELL: I will entertain a motion to authorize the Board Chair to sign the order of dismissal for Case No. BER 2011-19-MFS.

MS. SHROPSHIRE: So moved.

CHAIRMAN RUSSELL: Is there a second?

MS. KAISER: I'll second.

CHAIRMAN RUSSELL: Seconded by Heidi. Further discussion.

(No response)

CHAIRMAN RUSSELL: Hearing none, all those in favor, signify by saying aye.

(Response)

CHAIRMAN RUSSELL: Opposed.

(No response)

CHAIRMAN RUSSELL: Motion carries unanimously.

MS. ORR: The next case is under the new contested cases. The first one is in the Matter of the Request for Hearing by Plum Creek regarding DEQ's final decision on the amendment of their groundwater permit. Both of these cases are appeals of groundwater permits.

This permit was issued on August 24th, 2011. Plum Creek appealed, and there are several interesting bases for the appeal. Plum Creek had submitted comments, and three out of the four of them were not adopted by the Department, so that's why we're at the appeal stage.

One of the comments I thought was

interesting was Plum Creek is saying that the permit limits are lower than background conditions, so that will have to be resolved.

CHAIRMAN RUSSELL: I'm going to guess you're going to watch the process to resolve it. I would entertain a motion to appoint Katherine the permanent Hearings Examiner on this matter.

MS. KAISER: I would so move.

CHAIRMAN RUSSELL: It's been moved by Heidi. Is there a second?

MR. MILLER: I'll second.

CHAIRMAN RUSSELL: Any discussion?

(No response)

CHAIRMAN RUSSELL: I just want you to know, I know Mitch Leu very well. He's in the Kalispell office. I have not had any contact with him on this matter, and plan on not having any, so just kind of for the record.

So all those in favor of assigning Katherine -- and we did hear, and I would literally not be part of the Board body that hears it. All those in favor, signify by saying aye.

(Response)

CHAIRMAN RUSSELL: Opposed.

(No response)

CHAIRMAN RUSSELL: Motion carries unanimously. Next.

MS. ORR: The final case here that we're considering under the new contested case category is In the Matter of the Request for Hearing by Frank Gruber, Broadwater Estates, regarding DEQ's denial of permit modification to a groundwater permit. This takes place here in Lewis & Clark County. The permit is for discharge of treated wastewater through two subsurface drainfields. The final renewed permit was issued on October 3rd, 2011, and Broadwater Estates has appealed that on November 2nd, 2011.

CHAIRMAN RUSSELL: Thanks, Katherine. Questions for Katherine before we assign this, or questions to the Board?

(No response)

CHAIRMAN RUSSELL: Hearing none, I would entertain a motion to appoint Katherine permanent Hearing Examiner for this matter.

MS. SHROPSHIRE: So moved.

CHAIRMAN RUSSELL: Is there a second?

MR. ANDERSON: Second.

CHAIRMAN RUSSELL: It's been seconded by Larry Anderson. Further discussion.

(No response)

CHAIRMAN RUSSELL: Hearing none, all those in favor, signify by saying aye.

(Response)

CHAIRMAN RUSSELL: Opposed.

(No response)

CHAIRMAN RUSSELL: Motion carries unanimously. All right. Now comes the time in the meeting for general public comment. Is there anyone in the audience that doesn't work for the Department that would like to speak us on matters that the Board has jurisdiction on?

(No response)

CHAIRMAN RUSSELL: No one is jumping up. All right. Before we adjourn, I hope everyone has a joyous holiday season. It is December. It is the time -- it seems like we always meet in December.

MR. MIRES: And Santa Claus will have plenty of time.

CHAIRMAN RUSSELL: So I would entertain a motion to adjourn.

MR. WHALEN: Moved.

CHAIRMAN RUSSELL: It's been moved by Joe. Is there a second?

MR. MILLER: Second.

CHAIRMAN RUSSELL: It's been moved and seconded. All those in favor, signify by saying aye.

(Response)

CHAIRMAN RUSSELL: Good meeting.

(The proceedings were concluded at 12:47 p.m.)

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C E R T I F I C A T E

STATE OF MONTANA)
: SS.
COUNTY OF LEWIS & CLARK)

I, LAURIE CRUTCHER, RPR, Court Reporter, Notary Public in and for the County of Lewis & Clark, State of Montana, do hereby certify:

That the proceedings were taken before me at the time and place herein named; that the proceedings were reported by me in shorthand and transcribed using computer-aided transcription, and that the foregoing - 141 - pages contain a true record of the proceedings to the best of my ability.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my notarial seal this day of , 2011.

LAURIE CRUTCHER, RPR
Court Reporter - Notary Public
My commission expires
March 9, 2012.