

## Water Committee Meeting

May 16th, 2014

J.T. LANE: Good morning everyone. I think we're going to get started. I think we have a quorum, just enough. So I guess good morning and thanks for coming. I think we're going to have a very productive and fun filled meeting, and hopefully the weather outside will stick around. Sheree, if you'll get started with roll call.

SHEREE TAILLON: Dirk Barrios, Vern Breland, Ben Bridges, Robert Brou, Jeffrey Duplantis (absent), Greg Gordon, Jimmy Guidry, Jimmy Hagan (absent), Randy Hollis, Pat Kerr, J.T Lane, Rick Nowlin, Rusty Reeves (absent), Chris Richard (absent), Keith Shackelford (absent), Cheryl Slavant, Delos Williams (absent). We do have a quorum.

J.T. LANE: Thank you all for being here again. One quick reminder about the microphone rule, please be sure before you start speaking that you have a microphone so we can get everything on the record and on the transcript. We did, just as a note before we get into other business, Mr. Nowlin has another very serious commitment out of town so we're going to try to get to his report for part 9 as soon as we can. With that I guess we'll move on to the minutes. Did anyone have any questions about them? All right, with that do I have a motion to approve the minutes for the previous meeting? Any objections? Jake, if you'll give us an update on the amoeba activity since our last update, anything major.

JAKE CAUSEY: I do have a few updates. One we sampled, we re-sampled St. Bernard two weeks ago and all of the, I think it was 11 or 12 locations that we had sampled originally and then in January and the water temperatures were warmer, ranging from 22 to 25 degrees Celsius back using chloramines. They had good residuals for I forget some of them vary I think may be one of the residuals on a home tap was, may be it was probably less than 25, but on the other side of the water meter. But all the samples there was no naegleria fowleri

detected. The water meter in the case patient's home no thermophilic amoebas detected or naegleria fowleri detected. And that was the same as even in January and probably to some extent the nature of the water heater. That was really great news, frankly. Saw John here so we'll be in Desoto next week. We intended to go this week, but the weather got pretty rough. Expecting the same there. The plan is to go back in August in St. Bernard and Desoto to do the same sites again. In addition we do have several lab staff jobs posted so we'll be hiring, and again we're still underway with getting some microscopes in and etc. to do this testing. Our goal is sometime in July we're looking to probably do 15 to 20 water systems this summer looking at ground water, surface water, chloramine, free chlorine, some raw ground water to try to get a good feel for a lot of the different circumstances. Certainly we'll be looking at systems that have been struggling to meet the disinfectant residual and have similar compliance history, as well maybe nitrification. That's really where we're at. I will mention the emergency rule compliance rate, you remember February was 95 percent, March was 96 percent, and then April was actually 97 percent so that's good news.

J.T. LANE: All right. Any questions about that for us regarding the amoeba? We'll go right into part 9 for Mr. Nowlin's report. I would just ask working through part 8, and I eluded to this in my message to you all, when we had the part 8 report sent out one of the things we did find that we wanted probably before we proceeded with rewriting parts and vote on probably wanted more discussion on certain things either from our prospective or more committee input on things that were deleted. And maybe we wanted to know really some of our questions were is it really that we wanted that language deleted and not needed it to be covered at all in the sanitary code, or alternate language that we might want to propose instead in some areas. To the extent that we can why we sent it back for more discussion and we'll bring a revised version for next time. When we get to the parts 9 and 7 anything that pops in your head that we can go ahead and discuss and get some of those down so we

can get as much work on the front before we present back to y'all. With that we'll move to part 9, Mr. Nowlin.

RICK NOWLIN: Rusty couldn't be here today or Jimmy Hagan either, and I'm undoubtedly the most unqualified person to speak on this subject in this room. But I'll at least report from what Rusty provided to all of us. He actually sent out three documents, the point person report, the subcommittee report, and then these detailed TSS report. I'll just take it in that order. If that's okay we'll run through. On the point person report he listed facilitator's recommendations, basically very few comments, only one comment and that was the comment if the list, this is waste residuals, if the list of disposable options listed intended to be all inclusive and he believes that a statement is needed from DHH in coordination with other regulatory agencies, shall review and approve any methods of handling waste that are not specifically listed in this document. That was really the only comment there. Any comments so far? On the subcommittee report we went through the 10 state standards and sort of page by page he sort of summarized it there. There are several places in the report, I don't think you need me to read part 9 to you, but there are several places like in 9.3 F and G and then 9.4 where it requires pilot studies and the subcommittee felt that those should not be required in each one of those cases. That should be something that's determined in conjunction with the consultant in the department as to whether or not a pilot study is required. There are a number of places, we went through part 9 the question was asked on each part, each subpart whether the language should be considered a design standard or something should be included in the sanitary survey. And if you look on the forms if you have a copy they are noted DS or SS. All of the items in there of course noted as DS are design standards and only a few are noted also as SS sanitary survey. For example 9.0 general, this is the section dealing with disposal of water treatment plant waste. That one is considered both a design standard and a sanitary survey item because it deals with taking

steps to prevent potential contamination of water supplies. Pause to see if there are any comments? 9.0 also the language concerning backflow prevention measures is also considered a sanitary survey item. 9.1 and 9.2, 9.3 design. 9.3 F pilot plant studies which should not be a mandatory requirement as in 9.3 G. F deals with mechanical dewatering and calcination of sludge. 9.4 dealing with lagoon size and alum sludge. Again, we recommend delete the mandatory requirement for a pilot study. The rest of 9.4 is considered a design consideration and not part of the sanitary survey. 9.5 red water waste. 9.51 stand filters all considered a design criteria except when you get down to 9.5.1 K red water filters shall comply with provisions contained in section 7.1.3 and 8.10.1 which pertains to the possibility of contaminating treated water with unsafe water. We feel that should also be a sanitary survey item. Just holler at me if you need. 9.5.2 lagoons all considered a design criteria. 9.5.3 discharges to the community sanitary sewer the same design. 9.5.4 discharge to surface water design. 9.5.5 design. 9.6 waste filter wash water. 9.61 is considered design. 9.62 we consider A, B, and C all of 9.62 to be both design and sanitary survey and that has to do with recycling water back to the head of the plant. That's pretty much it. Any questions?

RANDY HOLLIS: I guess I have a logistical question based on what we talked about in previous meetings. For example, 9.62 is design and sanitary survey. The way it reads in 10 state standards is spent filter backwash water thickens liquids process may be allowed by the regulatory agency, that's a may. I thought we said we're only going to include shalls in our new standards so as a clarification point this will not even appear in what we are writing because it will be something 10 state standards we can reference and be for the design engineers, but when we write our new part this paragraph won't even appear because it's a may. Am I understanding that right?

J.T. LANE: As an initial way to get us to focus on what was really critical the shalls and so certainly sort of said this last time if the committee sees other areas when we talked about

chapter 12 last time if you saw areas that could be streamlined or are off, I know when we were doing some review so enlightening for me going side by side for part 8 was that I myself, and I'm not an engineer, I thought it was confusing how far we had to lay waterlines from sewer lines and 6 feet in 12 and 10 feet in TSS. I think again that is a primary focus, but if you see opportunities to include, if you think as a subcommittee that there are some shalls that should be included because initially we did say we wanted this to be representative of what Louisiana needed. And so certainly if there is you know discussion around certain shalls that don't work let's take them out. If there are other shalls that should be there let's put them there if we all agree.

RICK NOWLIN: As understood, the point well taken, focus on the shalls. I think if I understand Rusty and Jimmy they felt this was something the whole committee might want to consider. I know we were focusing on shalls while we did not want to put a whole lot in part 12 that didn't need to be there. Also, we've also had the option of considering things that might should be there and certainly we don't think the subcommittee should make a decision like that. Both of those fellows thought this was something that ought to be considered.

RANDY HOLLIS: If I read this exactly the way it reads says may be allowed by the regulatory agency. If we're trying to tighten these down into black and white then we've got something there that's not conclusive. Let's take it down to the shalls because this still leaves it open. It will still be in 10 state standards. Something the owner and the engineer should consider, but the way this reads won't be mandatory.

J.T. LANE: Won't just adopt wholesale, I think that's part of what we discussed either through our dialogue or through our analysis and the dialogue after that if we should leave that statement out or include a shall. To me that's the decision point.

RICK NOWLIN: As I recall some of the discussion, and I slept 20, 30 times since then, you are correct it is a may, but also A, B, and C are three very specific criteria that determine

whether it remains a shall or not, a little bit vague there.

RANDY HOLLIS: And I'm not arguing for this point at all, I'm just trying to get the logistics down as I write section 8.

JAKE CAUSEY: So I guess one reason I believe Rick and them felt so compelled to conclude this language is specifically covered under EPA regulations filter, backwash and recycle rule. Because it's a may in 10 state standards, in the federal rule it's a may, there are lots of may's and there are factors that determine whether it's permissible or not. I think it probably makes a lot of sense to keep it a may because that's what it's going to be a may. Because if you're operating outside these criteria it's going to be a no, but if the proposal is within these criteria then it's a may be. I think if it's a system that's probably poorly operated over many years may not have a lot of confidence that they are able to operate. A lot of factors that could come into permitting, filter, backwash, recycling. That's why it's written that way. Logistically there's a lot of factors that have to come into play and also federal regulations. And that's probably why in 10 state standards it's a may because at the federal level it's a may. I think they were right on the money.

J.T. LANE: Any questions? What do you guys think? With regard to Randy's comment does anybody have anything? Again, I think what we were trying to do definitely focus on what all the shalls that need to go into code, but again we want to provide y'all flexibility that certainly we all know there are other things that come up or there are issues that are interrelated. And so we didn't want anybody to be confined to not address other things in all of your work. Is that not, do we need to provide more clarity on that? So we will get to work on part 9.

ROBERT BROU: We did have one comment he referred to about the list of disposal options listed not being all inclusive. I'm the one who provided that comment because our permitted disposal method that we have been operating under for 60 plus years is not

covered under that that I can see. The way we handle our waste is not under any one of those items. Somewhat they talk about going back to surface water into the stream from red water specifically, but not for the type of waste residual that we have. We've been permitted, and that's what I also meant in coordination with other agencies, in particular DEQ, a discharge permit that we have specific standards that we have to meet and fully in compliance, but there needs to be a comment that there are other options on there.

RANDY HOLLIS: We have also gotten permits for water plants throughout the state where the primary sludge, if you have only used food grade chemicals and not used anything else, can be discharged directly back into the receiving stream and that's permitted by DEQ. Not listed in here. With coastal erosion and solids DEQ actually likes, in many cases, the solid returned to the stream. This would prohibit that. We need to be very cautious. I think you brought up a very good point. We need to take that in consideration from other regulatory agencies.

J.T. LANE: Totally agree. Certainly support that and we need to do that. With part 8 there's a lot of places we reference that we need to coordinate and check with the state fire marshal. We'll definitely put that on the list and do that. Any other questions or comments on part 9? All right, with that we'll move on to part 7.

BEN BRIDGES: I am going to give this part 7 on behalf of Jim Hagan who could not be here or Rusty, and unfortunately I was not at the meeting either. Part of this may be some shalls and mays also be included in this. This was written I think before some of this other stuff was delineated exactly what we were going to include or not. Start with the subcommittee report, I think y'all have a copy of this. Main discussion on subcommittee was primarily focused on discussion related to minor design requirements on finished water storage facilities. To my knowledge or Jimmy's knowledge there weren't any opposition or disagreements with what came out of the 10 state standards recommended for water works.

A large portion of the time was spent on should it be included in design standards or should it be in sanitary survey or both. The first 10, actually 13 bulletins, but the first 10 were the ones he thought were the most important. Section 7.0 you'll see in red what he has inserted and thought it should adhere to that. Materials and designs used for finish water storage structures shall provide stability and durability, blah, blah as current AWWA standards. That's where he wanted to go with that.

J.T. LANE: The comment about the global change for DHH references other standards is that referring to we should be doing that globally throughout the sanitary code?

BEN BRIDGES: I think that's right. Section 7.0.1 C fire flow requirements established by the appropriate state insurance services office changed to Property Insurance Association of Louisiana to be satisfied where fire protection is provided. Again, I think giving due credit to what agency will be overseeing this specifically. 7.0.6 finished water storage designed to facilitate fire flow requirements and meet average daily consumption should be designed to facilitate turnover of water in the finished water storage to minimize stagnation and/or stored water age. Consideration shall instead of should be given to separate inlet and outlet pipes, mechanical or similar mixing, or other acceptable means to prevent poor water circulation and long detention times that can lead to loss of disinfectant residual, microbial growth, formation of disinfection by-products, taste and odor problems, and other water quality problems. We have a shall in there for separate inlet and outlets, that's the major change. 7.0.7 C overflow for an elevated shall open downward and screened with a four mesh non-corrodible screen to keep animals out. The screen should be, not shall, installed within the overflow pipe at location least susceptible to damage by vandalism. We took out a shall and put in a should. Give a little bit of flexibility to the design of the tank. 7.0.7 E all that would be eliminated referring to the flapper valve or duckbill valve where it's located and would be installed. 7.0.8.2 A each manhole shall be elevated at least 24 inches above

the top of the tank. Finish grade of the surrounding ground, or whichever is higher. 7.0.9 D shall on ground level structures open downward with at least 24 inches above the roof the finished grade of the surrounding covered with 24 mesh non-corrodible screen. Screen should be installed within the pipe at a location least susceptible to vandalism. 7.0.17 B wax coatings for the tank interior should not be used on new tanks. Old wax coating should be completely removed before using another tank coating. 7.0.18 A finished water storage structure shall be disinfected in accordance with AWWA standards C652. Inserted if bacterial testing for coliform organisms is negative and chlorine residuals are at acceptable distribution system levels the storage tank may be placed into service. If such testing shows the presence of coliform bacteria repeat samples shall be taken until two consecutive samples taken at 24 hour intervals are negative. I'll give you a second to think about that.

DIRK BARRIOS: Basically saying if your first sample is good you're okay. If you have a bad sample you have to take two good ones.

BEN BRIDGES: Is that good with DHH? 7.0.19 smooth nosed sampling taps or similar non threaded stainless steel sampling taps shall be provided to facilitate collection of water samples for both bacteriological and chemical analysis. The sample taps shall be easily accessible. 7.2.1 tanks should be located above normal ground surface and struck out housed. 7.2.4 each tank should have an access manhole, a drain, and control equipment consisting of a pressure gauge, water sight glass, automatic or manual air blow-off, means for adding air pressure, operated start-stop controls for pumps. A pressure relief valve shall be installed capable of handling the full pumpage rate of flow at pressure vessel design limit. Where practical the access manhole should be 24 inches in diameter. Here in red see design standard for new systems and improvements also enforced on sanitary survey except for sight glass which has existing LDHH exception if automated controls are provided to maintain air and water.

RANDY HOLLIS: Are you saying by that statement that sight glasses on hydropneumatic tanks will not be required even though it's called for in the main paragraph?

BEN BRIDGES: That is my understanding if it is controllable by other means.

JAKE CAUSEY: Maintain the exceptions in part 12 the way I read it.

RANDY HOLLIS: Okay, just wondering in the main paragraph should we put water sight glass optional or something because it's calling for it to be mandatory in the first paragraph and then we list an exception.

JAKE CAUSEY: I guess more of a report than verbatim code language.

RANDY HOLLIS: I understand the first paragraph is mandatory if you could just say water sight glass optional.

J.T. LANE: We'll clarify that.

BEN BRIDGES: I think most of this is geared towards ground storage tanks not hydro so may be an oversight on the committee and what we left out. If it conflicts then yeah we need to specify what it should mean. 7.3.1 the max variation between high and low levels in storage structures providing pressure to a distribution system should not exceed 30 feet. The minimum working pressure in the distribution system struck the should and it be shall 20 PSI normal working pressure should be approximately 60 to 80 PSI. When static pressure exceeds 100 pressure reducing devices shall be provided on mains or as part of the meter setting on individual service lines in the distribution system. There's our other shall PSI. And the other 4 through 18 pages I won't bore you with that. These are the main focus points of what came out of the committee meeting that had importance placed upon them. The others can be read and deliberated as you see fit.

J.T. LANE: Open up the discussion and any questions?

RANDY HOLLIS: On 7.0.6 where you have in here that consideration shall be given separate inlet and outlet pipes I do agree with that on ground storage, but this is just saying finished

water storage. If we have elevated that's going to be very difficult for the number of elevated tanks. We certainly do not want to take, in my opinion, the inlet all the way to the top of the elevated tank and let it spill out. You're going to lose chlorine and it will erode the top of the elevated tank severely. A lot of people still do that, I don't. So I'm concerned about that comment. I'm fine with ground storage, but I don't think we should require making it a shall separate inlet and outlet pipes for elevated tanks.

BEN BRIDGES: And my thought on that would be if we have, in order to help eliminate some of the stagnant water on fluctuation of that elevated tank works with a common outlet it can float and never mixes completely and may be some of this was if we have a different injection point that's higher it continually mixes all the time so you get pressure water dumped in there which forces the mixture. A lot of these systems are putting in stationery mixers that circulate the water and I think that has eliminated a lot of the problems. But you have stratification, you have temperature changes, mixed by-product at different levels, a lot of issues going on there. And that might have been part of the reason for asking to do that to get away from just the yo-yo affect. I will note that and report back.

JAKE CAUSEY: Is that mandating inlet and outlet, just says consideration?

ROBERT BROU: I have no strong feeling either way cause I do see the concept of changing it, but consideration shall still doesn't mandate so it's either we need to decide if you're going to consider that or if you're going to mandate consideration shall be given.

JAKE CAUSEY: Means just what it says.

BEN BRIDGES: Does it mean we're going to talk about it and think about it or require you to do it?

RANDY HOLLIS: I agree wholeheartedly with stagnant water and deterioration of water quality. I think there are a number of ways to control that, exercising your tanks, pumping out of elevated tanks. Here in Baton Rouge every single elevated tank has a pump on it. We have a

pump out of every elevated tank to turn the water over. By turning these over we have demonstrated we have good water quality so I think to mandate separate inlet and outlet pipes is really a design standard. I think you can exercise tanks or mixing of the tanks with an internal mixer. I think there are means to do that without making the separate inlet and outlet mandatory.

BEN BRIDGES: Point taken.

DIRK BARRIOS: I agree with Randy. This is all design, something the owner should get with the engineer and design how they are going to handle their water quality issues.

JIMMY GUIDRY: When I read it, and I'm not an expert, certainly looking at consideration shall be given to the separate inlet and outlet mechanical or similar mixing or other acceptable means pretty much tells you you have all the options. It's not pinning you down to one option, just consideration has to be given how to address the issue, but it's not like you said a mandate that you have to have one or the other, whatever's acceptable to work. That's how I'm interpreting this sentence.

DIRK BARRIOS: Shall should state the should?

JIMMY GUIDRY: That's all it's saying you got to think about it, but it's not a mandate.

JAKE CAUSEY: I think the purpose of the shall is so that if you read the next red text it says design standard for new systems and modifications. So I don't read this to say we're going to go question every tank that exist and ask them how they are mixing the tank. I don't read this as saying that. So the shall says reviewing plans and specs the engineer who is designing the system is going to have to demonstrate how they are insuring mixing and preventing stagnation. I think the point of the shoulds and the shalls if you leave as a should the engineer says I don't have to explain that to you, just give me my permit. A shall means yeah you have to demonstrate that you've A you're going to be pumping out of tanks, B you know that based on all your calculations you're certifying this tank is going to turnover twice a day,

once a day, I don't know some sufficient level. I think the shall basically mandates that engineer to demonstrate how they are going to prevent stagnation. I can say we have seen large elevated tanks put in certainly for fire protection and that tank doesn't turnover and I'm not sure what the engineer and owners if they thought about the effects on the distribution system and other things. I don't know if we all, may be the reviewer included, paid particular attention to that, but I think if you have language that says when you are looking at these type tanks you are going to have to think about and discuss, and I guess sort of prove that this has been looked at and this is how this is going to be presented. And it doesn't say you have to do one or the other. It certainly leaves it up to the engineer to determine how he's going to demonstrate that's happening.

RANDY HOLLIS: I brought it up, good discussion. I'm fine with leaving it like it is. I'm flexible.

DIRK BARRIOS: The issue of the tank, and I agree with Randy, we need to have a mixing of the water in the tanks and turning the water, we all see that. The issue is that we're going to fight the battle, and I can assure you some of us more than others, when that firefighting entity is going to see that we're not going to install or take down tanks that don't turnover and the only way you can get turnover do what Randy does put an exterior pump and pump it out. It creates issues because in some cases or some places you don't have any place to pump the water, not enough customers. Taking the same old water and pumping it out, coming right back in. It's a fine line in some of these communities, especially the rural, we have a lot of rural customers and what they always want to do, the engineer, the first thing they want to do is install in years past, now I'm sure thinking and design is going to change because of some of this. In years past we need to keep the pressure up as high as we can so the customer has good service. One way to do it and not to have to come in with large line, which take years and tons of money, is to install a water tower. And I can assure you we have water towers in our system and we have tried to do some of the stuff that Randy talks

about. We installing exterior pumps, change the water in and out. Our biggest problem is getting our operators to understand that's what it's there for. However we do have tanks, I know I got a couple I would like to yank out. I pull them out the fire department is going to raise seven kinds of hell. Because they don't look at it from a water quality standpoint, they look at now they have a fire I need to have the quality of water. The other hand you put in bigger waterlines, but they get the fire flow, but you don't have enough customers to turn the water in the lines so you have the same issue. Especially now instead of it being at .1 it's a .5. These are issues that we're going to try to solve this right here for the sanitary code and construction, but these are issues that because of the emergency rule that is going to affect each and every one of us, believe me. And St. Bernard's doing real good right now 22 to 25 degree Celsius, come tell me the same thing in August and September, and Jake knows.

JAKE CAUSEY: I hope we can.

DIRK BARRIOS: I hope we all have that type, but I just don't feel comfortable.

J.T. LANE: Any other discussion points?

ROBERT BROU: My only other comment was under 7.0.19 sample tap shall be easily accessible. It's such a subjective term. I understand could have should, but I would feel more comfortable change that to a should. Need to do it not only for DHH for their own operators, but I don't know, I would prefer to see that changed.

DIRK BARRIOS: I'd like to give y'all an example of easily accessible. We have ours installed in boxes, we don't lock them, easily accessible. Well, one of them one day he takes a sample never noticed, and he knew how we ran our sample, guy had a hose connection for a water trough for his horse. You got to be careful when you say easily accessible sometimes. We have that box now we put a padlock on it in that location. And some places easily accessible is accessible to customers also.

JAKE CAUSEY: I think the main purpose behind that is just that A the tanks do need to be secured. I'm not sure I see it in here, but there should be some fencing or something that provides...

DIRK BARRIOS: In general, sample sites.

JAKE CAUSEY: I guess that's what I was going to say, like even you wanted to, felt more comfortable modifying the sentence to go on like within the enclosed fence or something like that just in case the concern someone would take it to mean something more than what it really means. We have had issues the tap on a storage tank with the bottles and ice chest and other things you can't get to it, it's pointing in the corner somewhere. And that's the issue is that it's difficult to use, it's not going to be used, and that's really the only thing. I'm sure you can add some language on there that just says whatever you want it to say, but I don't know. Probably I guess you could just say shall be accessible for by staff for sample collection or something like that, rather than just easily accessible. I'm sure we can flex that out, perhaps not as broad and more specific for its purpose. That might relieve the concern.

BEN BRIDGES: But again, we're talking about storage tanks which should have fencing and some type of perimeter, not your substation and distribution. If you have the appropriate nozzle on there they're going to regulate, which they can do, I have seen all kinds of things modified for theft of utility. But if it's on a tank the general consensus was it would be waist high, not you have to get on a ladder or whatever. We have seen some really poor installations where you can't get to a sample tap without wading through a creek to go to it. This is on the side of tank accessible by ground level without a whole lot of trouble. That's the thought behind that.

DIRK BARRIOS: My understanding what you are saying is all tanks are going to have sample taps permanently at all times?

BEN BRIDGES: Why would they not?

DIRK BARRIOS: We have sample taps on the lines going into the tanks on the tank side, but we usually make our taps in the pit. You have to realize years ago you didn't require fencing around the tank sites. Years ago, I'm talking about years ago.

JAKE CAUSEY: I wasn't here.

DIRK BARRIOS: The older systems have taps on all these lines when they have to do work or any kind of cleaning of the tank they just go back and tie into that sample tap and extend it above the ground to get the sample tap and put the tank back in service. And that's how we've always done it. We don't have a sample tap that per say go and the tap is there, but to be able to actually put it together. It won't be a big deal cause everything's there we just have to make it permitted.

JAKE CAUSEY: I would say yes.

BEN BRIDGES: J.T., you want me to go through the rest of these?

JAKE CAUSEY: Is there more then there what you have already covered?

BEN BRIDGES: That was the important stuff, but 13 more pages.

DIRK BARRIOS: I do have one more question. It says it's a should, 7.3.1 what is the deal with 30 feet? Where it says maximum variation between high and low levels in storage structures providing pressure to a distribution system should not exceed 30 feet. Ground storage tanks are notoriously much, much higher than 30 feet.

BEN BRIDGES: I honesty don't know that.

ROBERT BROU: Designed to maintain pressure.

BEN BRIDGES: I don't know where the 30 came from.

DIRK BARRIOS: I'm looking at the engineers. Most of our elevated tanks the variation is around 30 feet, but not all of them. And I can assure you I've been to your tank site, ground storage tanks those of us, and I don't have them, but I know a lot of y'all do. Ground storage tanks in the system very much in excess of 30 feet in most cases. Just trying to get understanding

what the 30 is for.

RANDY HOLLIS: Because it's a should it doesn't bother me, but on our standpipes the level of those standpipes can vary as much as 75, 80, 90 feet every day because we're pumping out of them. So we maintain the pressure in the system, but the level in those tanks in order to get turnover, in order to get water quality a standpipe one of the large ones over 3 million gallons we pump out of it routinely every day 60, 80 feet. Because it's a should though it doesn't bother me.

DIRK BARRIOS: I realize that, I'm just trying to get the...

RANDY HOLLIS: There are many elevated tanks depending upon the size of them and the configuration the range is 40 feet. So you're going to get an economical tank some cases it's a 40 foot tank, not a 30. So that's a major cost we have to consider. We definitely do not need to make that shall, should is okay.

J.T. LANE: With regards to your question I think everybody's received, does anybody want to go through and discuss any major points within it you want to discuss, otherwise move to part 8.

BEN BRIDGES: I just don't want to insult your intelligence to read it. If you want to take a minute to browse through it and I'll find out Dirk.

DIRK BARRIOS: I'm just curious.

RANDY HOLLIS: I did have one comment 7.0.7 which is on overflows. Says all water storage facilities shall be provided with an overflow which is brought down to an elevation between 12 and 24 inches above ground service. Can consideration be given to ground storage tanks with the crom tanks that have the eyelids on them and those actually serve as their overflows. To add an internal pipe inside the tank is a redundancy when actually the other ones suffice as overflow.

BEN BRIDGES: I fully agree and I don't know, that's going to be an engineering question for

DHH how they are going to allow that. Because the crom tanks are designed the overflow is built into the design of the structure and so to make them come back and grandfather them in or maybe them go back and retrofit it. I don't know that and I don't think they need an extra one. That's what it's going to call for from here forward I think that would be enforceable on the ones already existing. I don't think they should be because it was already permitted 20 years ago when it was built. It was approved at that time as acceptable, why is it not meeting the code now because it still functions as it was designed. I don't know that. Do you have any comment? Like your crom tanks, or natguns, or any of those that are prestressed concrete.

CARYN BENJAMIN: There were issues with crom tanks in region 5 or 4, Lake Charles area. There were several meetings and I think there was an agreement that, I don't know if Dr. Guidry remembers, I don't think it dealt with the overflows. The eyelids those were acting as vents and they weren't protecting against rain and so fourth so there was an agreement on that. I don't know what the agreement was. I don't remember anything about an overflow issue.

RANDY HOLLIS: On every crom tank that we've built in the past 10 years, all the new ones, every one of them have the eyelids that are designed for overflow, but we have included an internal pipe on every one of them because it's in 10 state standards. It's a redundancy that cost the owner money that really is useless because if a water level gets up any higher it's going out those eyelids, actually it's the vents. The eyelids are the fiberglass covers we've added now over those to prevent rain and wind blown debris from getting into them. I hate to make it a shall when that's a redundant feature on those types of tanks because we really don't need. It's a minor cost, but it's still something that has to be maintained down the road. You have penetration to the wall of the tank that you have to maintain and it serves no purposes.

JIMMY GUIDRY: It would make sense to make it a should or would it make more sense to put shall and say there's an exception. You are giving an example of one exception as opposed to a should where we're not going to make it required. This is for design for future as well. To me I like the should or the shall, but may be acknowledging that we will accept something else as well. I don't know, just for discussion.

RANDY HOLLIS: I don't think we should make a should for every tank because you need an overflow coming down on many tanks. It's that particular type of tank that you don't.

JIMMY GUIDRY: Makes more sense to give that exception.

RANDY HOLLIS: For that type of tank.

ROBERT BROU: But spell out the exception.

CARYN BENJAMIN: I think the primary concern was the eroding of the foundation so if it's going to, the new tanks should be designed to where they are not going to have that issue. On existing tanks I don't see an issue with providing an exception. On the new ones I really think they need to have an overflow that doesn't allow for erosion of the foundation of the tank.

RANDY HOLLIS: We put in splash pads for the overflows as they are. Splash pads are routinely called out underneath where those vents are anyway so as long as those splash pads are there. You can even make one of the eyelids lower so it's the primary overflow just like the overflow pipe on the inside.

CARYN BENJAMIN: I hadn't seen one that designated flow for a certain splash pad. If that can be done that protects the foundation.

RANDY HOLLIS: We don't do it now because we put the overflow inside. If we get rid of the overflow inside and make it primary and handle it that way.

J.T. LANE: Any other questions or comments on part 7?

GREG GORDON: Just from a logistical prospective putting together the part 3 report Sheree,

DHH, J.T. when you guys do the side by side is this format pretty good? Cause I have something kind of like it and I just want to make sure it's easily discernable. What should be in the sanitary survey and what should be the design standard. The format they used would this work?

SHEREE TAILLON: Yeah, I thought seven was awesome.

GREG GORDON: One thing I was looking at, these things I thought we were also going to discuss if something should be discussed and/or acknowledged or reviewed in the grandfather clause when you write these sentences, for example design standard for new systems and or improvements not enforced on sanitary survey. Should there be something at the end of that sentence also referring to the grandfather clause that needs to be something that is looked at or, I'm just trying to make sure I do it comprehensively.

J.T. LANE: Yes, I don't know if you were here when we talked earlier, but if there's anything else that when y'all are doing your reports or having your meetings that, again, just like when we talked about things in chapter 12 if there are things that should be addressed, the grandfather clause for example, something that should be either noted for discussion when you give your report or passed along for the grandfather subcommittee then please do note that.

GREG GORDON: Thank you.

RANDY HOLLIS: 7.16 grading, or 7.0.16. I can't believe that some of you in the lower areas of the state haven't brought this up. It says the area around ground storage structure shall be graded in a manner that will prevent surface water from standing within 50 feet of it. Many ground storage tanks in the coast are going to be on pilings and so it's going to be difficult. Now you just increased the footprint of your tank by 50 feet around the perimeter of it and if the tank's sitting on pilings pure water it doesn't matter. I don't think that should be a shall throughout the entire state. I think there should be an exception there, or may be just

be a should instead of a shall.

DIRK BARRIOS: I agree with Randy.

J.T. LANE: So you prefer a general should, or should we make it a shall with exceptions?

RANDY HOLLIS: I prefer should, not mandatory. A good design standard, but many areas it's not practical.

CARYN BENJAMIN: The distance may be.

RANDY HOLLIS: If you have an area that let you put a ground storage tank, in a bay for example, put it 15 feet above on pilings. You're as protected as you can be anywhere. And you could have water underneath. There are exceptions that are practical.

CARYN BENJAMIN: May be just add it needs to be a provision shall be provided protected from surface water build up in the surrounding tank if it is elevated; if it's above taken care of.

JIMMY GUIDRY: Yeah, I read this as surrounding a ground level structure, doesn't mean up in the air.

RANDY HOLLIS: But your ground storage tanks can be sitting there on the grounds but on pilings.

JIMMY GUIDRY: I guess you have to define what that means.

PATRICK KERR: What purpose does it serve?

RANDY HOLLIS: With all the insect screens on it and everything. And we've specified, I think we discussed earlier that the minimum level should be above BFE so you're not going to have ground water getting in, specified the minimum height of these tanks. I'm not sure what good it does. In this type of soil if we allowed storage tanks to be below ground you'd have saturated ground conditions anyway.

J.T. LANE: So add this discussion point and come back with recommendations. Any other comments or questions on the remainder of the report? All right, with that we're going to get to part 8 for I think the, y'all say if you want something different, but we were thinking

just for the ease of discussion we would use the side by side comparison as a basis instead of the text that we sent as well. I think that might be easier to run through format wise. Is everybody all right with that? So Caryn is going to go through that for us. Grab a mic. As we go through, obviously for each one, we're going to stop she can do a quick review, stop where we need to have discussion. Obviously made notes in the right hand column before we thought discussion was needed and we wanted to go ahead and have that there as we go through this. So Caryn if you would please kick us off.

CARYN BENJAMIN: Based on the subcommittee report for section 8.0 general indicated this section would be deleted. No rational was given, DHH agreed. For section 8.1 materials the subcommittee report indicated that that section be deleted, no rational was given. Currently the sanitary code covers most of this. It is slightly different. We have more provisions regarding low lead and our water quality, water piping quality doesn't include AWWA standards and these need to be included in the code so we're recommending to use the sanitary code language or a revised version of it to be included in the code.

J.T. LANE: We went through after we did our initial take and sat down last week and this week and started going through it. This was one of the areas that we saw duplication and therefore it wasn't clear to me what was going to be the rule so we took out 10 state standards language and said why don't we just start from part 12 language and see what needs to be altered in that so again we have one set of rules. This was a major discussion point for us. With that I'll open it up.

ROBERT BROU: With all of the language that is currently in chapter 12 or part 12 of the sanitary code we as a subcommittee weren't recommending taking any of that. We were taking out sections in 10 state standards that were either duplicating it or going on or above it. But yes, I 100 percent agree that all that language talks about whether it needs to be revised, but I just didn't feel there was a need to utilize the language they had.

PATRICK KERR: There is one issue that's going on at the federal level with EPA and with Congress about lead in fire hydrants, existing and future. I wonder if we couldn't put instead of water not anticipated for the use of human consumption because we do anticipate using in fire hydrants in emergencies, not to be routinely used or something like that just so that we could use a fire hydrant in an emergency to provide water for people. It's something EPA actually came off of their initial ruling. In their answers to frequently asked questions they said fire hydrants had to be lead free because they may at some point be used for a drinking water emergency. But they've come back and said by flushing them completely we can ameliorate that lead in the water and so it's okay to use them. I would hate for the state to conflict with that.

J.T. LANE: Any other comments on that language?

RANDY HOLLIS: Were we just talking about 8.1.1?

J.T. LANE: We were talking about number 2 subcommittee recommendation 8.1 and that entire section deleted starting on page one and if you go to page two that's where it ends. We took the language from part 12 of our code and pasted that in as the recommendation. And just so we're clear, a lot of places where, again as Robby indicated, they took language out because it was elsewhere.

RANDY HOLLIS: I guess my question is 8.1.1. The very first part.

DIRK BARRIOS: Just for consideration, would you want to maybe consider putting reference to AWWA in there? That's what a lot of the water systems are familiar with. Talks about I guess in C 1 the recommendation DHH has, might want to consider AWWA standards. In most cases I do believe standards are the same. What I'm bringing up whether or not I want to add AWWA as part of the standards would be acceptable.

CARYN BENJAMIN: Yeah, I was noting currently for piping quality AWWA is not listed in the code.

PATRICK KERR: So we should have or AWWA in there.

CARYN BENJAMIN: Yeah, to revise section of part 12. Actually I think the idea is to strike that part of the part 12 and put it in this new chapter that's going to cover all this. All right, I'm noticing 8.12 is not listed in the side by side so if you go to the other document.

J.T. LANE: The side by side all we did we included what the subcommittee changed or modified, deleted, etc. If there is something in the text also that we sent y'all that y'all think should be discussed at this point hopefully we've gotten to some of that when we had the subcommittee report. If there are things y'all do want to discuss and the text we sent as well that provoked any other questions certainly we can talk about it. So if you want to talk about 8.1. 2 let's do that.

RANDY HOLLIS: I'm okay.

PATRICK KERR: I think we need to be careful because a lot of people do use transite pipe which is permeable and designed under pressure to leak to keep organics out. A prohibition like this is going to have to be addressed. I know that no one uses it anymore, but there's lots of it in the state and all piping systems have leak allowance. If it can leak out it's not impermeable, leak in also and we handle that with 15 PSI requirement or 20, but I don't know how we address that other than may be in the grandfather clause. But again, even new piping systems PVC with gases has an authorized leak coefficient. We can't say they're impermeable. Randy, you have any ideas how we might address that? I think what we're talking about, for example using specific gasket materials and piping materials in areas passing by old service stations where they had ground field issues where we take specific engineering requirements because there are volatiles in the soil, but the way this is written we couldn't use any permeable pipe anyway. Just need to be careful about that.

RANDY HOLLIS: We'd have to use welded steel everywhere.

ROBERT BROU: It does say distribution systems are installed in areas of ground water

contaminated by organic compounds.

PATRICK KERR: But everything is contaminated.

ROBERT BROU: PVC is absolutely permeable. The only ones that are not is ductile or steel and definitely is intended for those ground field type situations. It also is definitely intended that it would only be for new construction, not be for existing.

RANDY HOLLIS: But Robby, even if you use the special real expensive (inaudible) gaskets and everything a duck liner pipe if you're going through an area that's previously contaminated while the intent is for those to be water tight and not permeable, the design of the gasket is such that it is that way. You can get a leak in it. So to specify something so specific is not practical. I guess what we are saying although it's in 10 state standards and the intent is there, we're calling for something that's impossible to build. The wording of that non-permeable.

PATRICK KERR: And what is contamination, all soil is contaminated.

RANDY HOLLIS: The intent's there and you currently want to make it that way.

J.T. LANE: It just doesn't reflect reality.

RANDY HOLLIS: Correct.

SIDNEY BECNEL: If you have a gas station and the tanks are leaking and contaminating your line what are you going to do?

RANDY HOLLIS: We have run into this exact problem where the type of chemical products were going right through the PVC pipe and people were complaining downstream of the smell. You can't remediate the entire area, it's not our responsibility to begin with, but we got to put a waterline through there so we use ductile iron with the real expensive gaskets that are 24 inch about 3 or 4 dollars apiece just for gaskets. Supposed to be impermeable.

SIDNEY BECNEL: Isn't that what this is saying?

RANDY HOLLIS: It is, but my point is when you make a word and say non-permeable that means

it is 100 percent and that's impossible. You can put in welded steel through the area, but that's not practical.

PATRICK KERR: But to answer your question also in practical terms what we do today we would immediately take that line out of service, but the pipe is permeable with small molecule organics. Even under pressure there could be, actually an AC line in that situation would be a better line because it's always exuding some water so it's protecting itself. But today we take the line out of service and we may not find out about that until we get a complaint downstream. People can smell a lot of these organics and so we get a complaint and go out and investigate it and a lot of folks get involved. We would put customers out of water, we'd put yellow line pipe above the surface to transmit water to customers. It's done and that is exactly how we deal with it now. And then we have to find out what the problem is and how to get it remediated outside the boundaries of what would be a cleanup site because obviously it's been moved out into a public area. It's not impermeable pipe. My point is it's simply not possible to do and we probably need to set a level for what is contamination. And I'm sure there are places out there where some boneheads put used motor oil into the dish in front of their house and that soil is contaminated. We got to figure out how we address that kind of issue.

SIDNEY BECNEL: One half the MCL, something like that.

PATRICK KERR: Try some language and throw it past us, I don't know. The question is if it affects water quality we have to act, if it doesn't affect water quality we don't. And certain organics will transmit through the plastic and others won't. It depends on what it is, I hate to say it.

SIDNEY BECNEL: I guess my question is now saying take this whole section out?

PATRICK KERR: No, just get some language that gives us a trigger point where it's important, but if it's not important we're allowed to continue to do business. If it affects public health

we need to figure out a way to fix it.

RANDY HOLLIS: I think when it says non-permeable materials shall be used I think what we can rephrase it to say is materials shall be used for all portions of the system that prohibit as much as possible introduction of organic compounds.

PATRICK KERR: Or where specific organics are found during construction, engineering fix, solutions will be utilized, something like that.

RANDY HOLLIS: Addressed by practical means.

SIDNEY BECNEL: Y'all don't like the word non-permeable.

RANDY HOLLIS: Exactly.

CARYN BENJAMIN: I think we're on 8.1.3 used materials. Subcommittee's recommendation was to delete that section, no rationale was given, DHH agreed.

RANDY HOLLIS: Back that truck up. Let's say that I've just laid a brand new 24 inch pipeline for 3 miles and its current technology is the best material we can get and DOTD decides to 4 lane that road and says move your pipe. That pipe has a service life of 50 years. If I want to pull it out of the ground and put in new gaskets and reuse it I think that's something we should be allowed to do. I would hate to waste that expense on piping. Now how do you address some small guy that's got PVC pipe that's 30 years old that wants to pull it out of the ground and reuse it?

ROBERT BROU: This would not prohibit us from using it. Just silent on the issue, you still have to meet all other criteria.

RANDY HOLLIS: As long as we were not prohibited from doing that we're fine.

J.T. LANE: I think a lot of those issues will come up in plan review interacting with y'all going back and fourth and negotiating.

CARYN BENJAMIN: Section 8.1.4. I believe this is the packing and jointing materials. First sentence, first and second sentence was stricken and the third sentence was left repairs to

lead joint pipe shall be made using alternative methods. Last sentence was deleted, no rational was given. These standards need to be in code. Otherwise anything can be used including materials that may cause contamination of the water supply.

ROBERT BROU: Already addressed materials that could be used in section B1 10 state standards 8.1 materials. Still not any material could be utilized for that. And then during the full committee discussion we did have some discussion that still be able to utilize some of the lead to repair joints as long as it was not in contact with the water.

J.T. LANE: We did, so if we drafted some language based on the discussion, Pat's comments in April, we did suggest that.

PATRICK KERR: The language on page two is fine. C1.

J.T. LANE: Okay. Any other comments?

CARYN BENJAMIN: 8.2.1 pressure. Subcommittee recommended to delete the first line, first sentence and leave the second sentence. No rational was given and DHH agreed.

PATRICK KERR: Just a suggestion, this is something we've been dealing with for a long time. There's no penalty, if you want to call it that, in the code for failure to meet 20 PSI. There's no work around. I really would like to work into this the language what to do in a system that fails to meet the 20 PSI. What it takes to bring that line into service in the code instead of, a very well written article by Sidney in 1980, the only guidance we had for returning a line of service that's dropped below the pressure requirement. In the article you wrote about 30 years ago. So we need to incorporate something in the code about how we return a line to service or a system that's dropped down below 20 PSI. Do you remember the article you wrote?

SIDNEY BECNEL: In 1997 about MCL violation?

PATRICK KERR: Well, there's another one about returning a line to service after pressure loss. May be it wasn't you. My point is simply the regulation needs to talk about how we return

the line to service and this is probably where it needs to be.

SIDNEY BECNEL: Currently if you drop below depends if it's system wide or...

PATRICK KERR: Right now my point is we drop below 15 we notify the office. All the steps that we take there's nothing in regulation about what we need to do to return that to service. We just do it until the regional engineer is satisfied that it's safe. For example, if I worked outside today on this street we would issue boil water advisories to everyone who is affected by it, we'd do our thing, we bring the line back in service. All of that is done at our volition. There's no regulation. The only threat is if we don't do it the way they want Dr. Guidry will issue a boil water notice for the whole city, we're not going there. My point it needs to be here, we need to put what you need to do to return.

J.T. LANE: More rules and guidance.

PATRICK KERR: May be as easy follow the requirements of AWWA C651 which is what all of us do, that's the industry standard.

CARYN BENJAMIN: 8.2.2 diameter. This section was stricken by the subcommittee. DHH feels that this is needed in code otherwise there's no limit on diameter pipe to be used for fire protection and non-fire protection mains, which if undersized can result in low and negative pressure conditions compromising water quality. So we feel a minimum size needs to be listed in code.

ROBERT BROU: Part of the discussion was that there's a lot of existing systems that have lines serving for fire protection or for not that are below those standards and they work adequately. When you mandate larger size you run into the problem that you have additional retention in your system which could lead to negative water quality. St. Charles for one we have a lot of 4 inch water mains that serve for fire protection. If this were to be put into place and mandated my answer is not going to be I don't have the money to go out and increase the size of those lines, or could handle the additional retention and still meet

water quality in some cases. I will be taking out fire hydrants that the fire departments and the homeowners have depended on for decades. They serve adequately. I meet the requirements. PIAL for a residential structure needs a thousand gallons a minute you can't get that out of a 4 inch line if it's adjacent and being fed by a larger line. We have situations in St. Charles that meet that. It goes on to a further part a minimum 6 inch lead, do not put a 6 inch lead or a 6 inch hydrant with a pumper on a 4 inch line. You will draw a negative pressure, but a fire department who's aggressive enough and big enough trucks can suck a negative pressure on a 6 in line depending what is being fed by it. I think this really comes down to design standard and meeting the requirements of that particular community. He's saying it's addressed with the minimum pressure. Even under a fire department that is flowing from 3 different hydrants I still have to maintain 20 PSI.

SIDNEY BECNEL: Aren't we saying minimum 3 inch period? In other words not a 2 inch.

ROBERT BROU: It says minimum 3 inch when there's no fire protection. We do have 2 inch lines serving communities. We have a few blocks that is adequately served by a 2 inch line.

SIDNEY BECNEL: But are we talking about, this whole discussion is it about sanitary code enforcement today, or is this new construction?

CARYN BENJAMIN: The DHH recommendation is for new construction.

ROBERT BROU: And I have a dead end line coming off of a subdivision, the main line's an 8, but I have a cul-de-sac. Why is a 2 inch not adequate if I still have fire protection and I'm not looking to add additional retention? We for 20 plus years have required 8 inch and it is coming back to haunt us. We've looped everything, we put 8 inch lines everywhere and now it's harder to maintain quality because I have excess water in my system.

SIDNEY BECNEL: What are we talking about in this whole discussion today? Did we agree or not that on new construction they're going to follow the 10 state standards as a guide?

ROBERT BROU: Not the recommendation of the subcommittee. Recommendation of the

subcommittee that it would be maintain your pressure, maintain your system, no minimum line size. That would be up to the operator of the system and design engineer.

SIDNEY BECNEL: I meant the committee, it was agreed, okay it's a brand new system y'all are fine and good with 10 state standards.

J.T. LANE: Sidney, what's going to happen when we're done we're going to take from that plus all the other experiences and expertise we have and put this in sanitary code. Those will be the design construction standards for the state. If anyone chooses to follow additional guidelines for 10 state standards on top of that they are certainly welcome to, but we're going to place these standards for the state in the sanitary code.

SIDNEY BECNEL: So this is in the sanitary code applicable to everybody, is that correct?

J.T. LANE: Yeah.

SIDNEY BECNEL: What about how low can you go on that line, can you go down to one inch?

PATRICK KERR: May be.

CARYN BENJAMIN: I still think we need a minimum diameter. If you choose or want to put in a lesser diameter show justification. That's how it is today, that's how it needs to stay.

SIDNEY BECNEL: I think we agree with you, if you put too big of a line you're going to have problems for water quality.

PATRICK KERR: I'm sorry, but we're talking about 6 not 8, and we're talking about 3 where you might use 2 now. We don't choose to put 2 lines even in our small systems anymore because we don't know what the loading is going to be in the future. Would 3 and 6 be objectionable to you?

ROBERT BROU: I wasn't the only one who had the problem.

DIRK BARRIOS: We don't use it for new construction anymore.

PATRICK KERR: If no one objects to it then why fight about it?

ROBERT BROU: Again, I haven't done this, we've backed off on this, but we were putting

cul-de-sacs running 8 inch line to the edge and 2 inch line going around the loop. This would prohibit us from doing that.

CARYN BENJAMIN: It depends on how many customers are served by the cul-de-sac first of all.

ROBERT BROU: Three or four.

CARYN BENJAMIN: And if you provide the pressure.

PATRICK KERR: One more question Robby, where do you put your flushing assembly? You're not going to get the velocity you need to flush the line in the subdivision at the end of cul-de-sac through a 2 inch. We use 4 inch in those cul-de-sacs now so we can get adequate flushing velocity in the mains, but my point is this calls for 6 inch to feed fire hydrants, you stop at your last fire hydrant I don't care if it's a cul-de-sac or not, if downstream can be supported by a 3 this allows you to put a 3 downstream at your last fire hydrant.

ROBERT BROU: I guess only for new. I can't tell you how many dozens of hydrants I have on 4 inch lines.

PATRICK KERR: That's Mayor Breland's issue on the grandfather clause.

JOHN NELSON: John Nelson, Desoto Water Works. We have gotten permission to use smaller than 3 inch lines cause we showed justification for it. We submitted and we got that. But I would like to go back up to 8.2.1 where we have to maintain 20 PSI under all conditions of flow. May be we ought to put all normal conditions of flow. I can see any system if you have three or four outbreaks of fire at one time nobody's going to be able to keep up with that, not a big enough line anywhere. I would like to revisit that all condition of flow.

ROBERT BROU: Recommended change is 15 to 20, always been all conditions, never drop below it.

PATRICK KERR: If you drop below the stated pressure you have to take other actions to lift the boil water advisory and that's why I'm saying we need to put some language about that. You can't anticipate three fires simultaneously on a line that can't support it. You don't design

for that. You do design for fire demand, reasonable fire demand in a residential subdivision. The numbers are different in commercial areas, but we should be designing for that. If you drop below it you're in violation. Till you bring it back into compliance you have to do something about it. It's a concern, but you know we throw a word in there like reasonable nobody knows how to define that. It's a trigger if you go below 20 you take action to protect public health which is don't drink the water unless you boil it till we let you know otherwise. Is that what you are saying or am I missing it?

JOHN NELSON: No, I don't have a problem if you violate the 20 PSI to go to a water valve, I don't have any problem with that at all. But I'm just saying the language under all conditions of flow well, you don't know how to define normal, you don't know how to define reasonable. I know how to define all, that's all. And I don't think an engineer could design any system of my sizes or a lot of sizes to meet 20 PSI under all conditions. If you go under that all and say you have 14 fire hydrants as many as I have, 8 fire trucks pulling 8 hydrants in a row you can't design any reasonable thing.

PATRICK KERR: But the truck operators need to be trained also the minimum suction pressure 20 PSI. I know they are not going to do that, but most professional fire departments understand that they don't want to do anything less than that. Again, we're designing for a system that's compliant with the regulation. If we have acute problem in the system and go below 20 it should set a trigger for us to do something.

J.T. LANE: We have an hour and 15 minutes left and we have 14 pages to go.

CARYN BENJAMIN: 8.2.3 fire protection. This section was recommended to be deleted by the subcommittee. DHH's recommendation is to seek input from the Office of State Fire Marshal.

PATRICK KERR: Different than insurance service office, two different people. It's PIAL, not the marshal.

CARYN BENJAMIN: 8.2.4 dead ends. This section was stricken by the subcommittee, DHH agreed. 8.2.4 A was stricken. B first sentence left and the last sentence was stricken out. DHH has issues with deleting the last sentence of B, connection to sewer can result in contamination of the water supply system. This shall should be left in the code.

ROBERT BROU: It was just our thought, and possibly in error, but that it's already covered somewhere else.

CARYN BENJAMIN: It's not specifically addressed elsewhere except for just general backflow prevention practices. It's not listed specifically for that.

J.T. LANE: We all fine with keeping it? Okay.

CARYN BENJAMIN: 8.3 valves. First part of the section stricken, the last sentence was left in and revised to include valve spacing says should, should be shall, shall not exceed 1 mile except for transmission mains 24 inch or larger.

PATRICK KERR: Actually says should shall.

BEN BRIDGES: Circle the one you want it to be Pat, gives you some flexibility.

CARYN BENJAMIN: Also during the committee discussion the last meeting it was discussed to add a maximum distance of 5 miles for those transmission mains to have a valve.

J.T. LANE: Comments?

PATRICK KERR: They are identical, there's no difference in what they are saying right? Just picking a should or a shall.

ROBERT BROU: They're also commenting about what came out of the full committee about adding the 5 miles. It's not addressed in the initial report.

RANDY HOLLIS: What it says is valve spacing shall not exceed 1 mile except for transmission mains 24 inch or larger. It doesn't say what to do, there's an exception there. We're just trying to say shall not exceed 1 mile for small valves 24 inch or larger shall not exceed 5 miles.

PATRICK KERR: What is magic about 5 miles?

RANDY HOLLIS: The discussion here was some people trying to put them in 20 miles without a valve.

PATRICK KERR: Why does it matter?

RANDY HOLLIS: Well, we're trying to put in a maximum of 5 miles to say you ought to have a valve at least every 5 miles.

PATRICK KERR: A vacuum break well before that, not going to get the water out of the main 5 miles long. It will come from the break, it moves back a certain distance, but vacuum break won't get the water out of the main.

RANDY HOLLIS: The intent here is to provide a distance of valves so you can maintain the main, that's all.

BEN BRIDGES: For repairs.

RANDY HOLLIS: For repairs. It's to keep some people from putting 30 miles without a valve anywhere.

PATRICK KERR: Why does that matter to us? They have to bring the line back in service correctly. If they do 30 miles they're nuts. I can't imagine going more than a mile cause I have to rehabilitate that whole line if I have a loss of pressure. So why does it matter to DHH if you want to go more than a mile long as you go from valve to valve and restore that to service correctly?

CARYN BENJAMIN: It depends on the customers serviced by that section of pipe so the greater the length the more customers affected, so that's why we wanted to minimize.

RANDY HOLLIS: We can put them in every quarter of a mile if you want. We're just trying to specify maximum for practical purposes.

PATRICK KERR: Say not exceed 5 miles.

RANDY HOLLIS: For transmission mains 24 inch or larger.

PATRICK KERR: Valve spacing shall not exceed 1 mile except for transmission mains 24 inches or larger which shall not exceed 5 miles?

RANDY HOLLIS: Correct.

BEN BRIDGES: This is for new.

CARYN BENJAMIN: 8.4 hydrants. This section was stricken by the subcommittee. DHH's recommendation is to obtain input from the Office of State Fire Marshal. 8.4.3 hydrant leads.

SPEAKER: PIAL, right?

SIDNEY BECNEL: What is the committee's census to the PI, whatever, or the fire marshal? Do it or don't do it?

PATRICK KERR: I'm sorry, I don't think this is a health issue. This is a political issue to be solved by the political subdivisions with their fire departments, PIAL, that's who cares about fire ratings. We happen to be blessed with a class one rating in Baton Rouge and to maintain that we have to do certain things with fire hydrant spacing. Another system may very well be satisfied with a class 10, and many of our systems are class 10. In which case I don't understand why DHH would require fire hydrants. We leave that up to the folks who are responsible to do it. The water system doesn't answer to DHH on fire protection other than it's safely installed and maintained properly. I think the valve on a fire hydrant lead is something DHH should opine on because that keeps the system in tact if a fire hydrant breaks, other than that you shouldn't care about spacing. Materials might matter, but not spacing.

J.T. LANE: So this is covered in state law elsewhere?

PATRICK KERR: No, it's not. The Property Insurance Association of Louisiana inspects every system that provides fire protection and rates them and the insurance rates for the people in those communities are set by, among other things, the PIAL. Forty percent of that rating

is the water system's ability to fight fires. They go to the politicians and the city councils and parish councils and police juries are who decides whether they want fire protection at all or not. It's really a community by community decision. And it's not a health issue, it's a safety of life issue, but it's something that is not, I don't think, our battle with. It's the fire departments, and the PIAL, and the mayor, local ordinances. In Baton Rouge for example I can install no main smaller than 8 inches because they have an ordinance that says 8 inches for fire protection. In urban areas that's okay, you don't have a problem with water quality. In some urban areas it's an issue.

SPEAKER: I think you can do what the committee recommended and strike that.

SIDNEY BECNEL: Do you still have authority to flush out if we don't worry about hydrants with flush valves?

CARYN BENJAMIN: Flush valves are listed, dead ends somewhere else.

SIDNEY BECNEL: If you have a break in the line don't you normally flush through a hydrant?

PATRICK KERR: If you have them.

SIDNEY BECNEL: And if you don't?

PATRICK KERR: You flush it for hydrants and customer meters if that's the kind of system you have. Depends on how much water you need to flush. If it's a large line you need a hydrant or large flushing assembly. Two inch lines may very well be hydrants and customer meters and flowing water through it.

ROBERT BROU: Under 8.2.4 B we do have that dead end mains shall be equip with a means to provide adequate flushing. You do mandate that already.

J.T. LANE: All right.

CARYN BENJAMIN: 8.4.3 hydrant leads. The first part of the first sentence and the first part of the next sentence was deleted by the subcommittee. And the auxiliary valves shall be installed on all hydrant leads. This is where they left it. DHH of course feels that a lead size

needs to be included in code otherwise they could be installed on any size, hydrants can be installed on any size water line. Again, that can compromise water quality.

J.T. LANE: Comments?

ROBERT BROU: We did have for new construction.

J.T. LANE: Do y'all want to share?

DIRK BARRIOS: This is all for new construction?

J.T. LANE: Right.

DIRK BARRIOS: The argument you could have retroactively as long as, for my understanding, all for new construction where you're going to see your biggest argument if we would retroactively go back. And I think that's where grandfather should be coming anyway.

JIMMY GUIDRY: As I think about this if we feel strongly, if we all agree that something should be put new construction only rather trying to put in the grandfather clause we should just say that. We should put new construction only then we don't have to, cause we're not going to be able to put everything we want in the grandfather clause. It's going to look like we are exempting everything. If it's easier I think it's easier to put it as going forward, if we all agree to that, that for new construction you have to have that and we don't talk about old construction because it's pretty clear the code says for new construction. If y'all like that I prefer that.

ROBERT BROU: I would agree with you. We did have in there for the auxiliary valves new construction and replacement so if you go to replace a hydrant even if it did not have that valve you must put it in at that time. I would not want that same language for the minimum 6 inch hydrant lead because if I have a 4 inch hydrant I'm not putting a 6 inch lead cause I only have them coming off of a 4 inch line, I can't. That would be for new construction only, not for replacing or repairs.

RANDY HOLLIS: Why not simply say that hydrant leads shall match with the size of the hydrant

installed. Putting in a 2 inch flushing hydrant, put in 2 inch lead. Putting 6 inch it's a 5 1/2 inch, but you can say it shall match the size hydrant installed.

BEN BRIDGES: Existing.

RANDY HOLLIS: Existing or future. Putting a 4 inch hydrant put a 4 inch lead. The lead is technically designed very short length of pipe. Question I do have is on, and I'm not sure where in this section, but on flushing devices where is that covered and are we going to prohibit the installation of flushing devices below ground?

PATRICK KERR: Don't do it. I don't think we can do that. We have flushing devices in every system in this state that are below grade. We might want to double block them or something like that, which is very possible and doable, but we can't have 6, 12, 18, 24 inch risers on our mains. I think it's a public safety hazard. It's more of a hazard for people tampering with the water system than having below grade. I hope we don't do that. We have talked about it for years. I don't think we have seen any indication, I've never read a story about a flushing assembly causing, and I want to talk about this in the next section too about fire hydrant plugging, crank valve plugging causing contamination in the system. I think we're trying to fix something that ain't broken. Again, I think I would support say it needs to be done we can just add another valve in the space between them, have an air vent so it bleeds and throw water if you have a problem with one of the valves. Let's figure out a way to continue to put flushing assemblies below grade.

RANDY HOLLIS: The installation of a flushing assembly below grade even a thread plug is no different than a cross under the ground where you've installed a hydrant and a pipe and the other two parts of the cross plugged. We do plugs underground every day today. So as long as you put in the proper plug on the end of the device it can be removed and the valve opened. You got the same protection as anything else in the system.

PATRICK KERR: That's double block, you've got the valve and the plug and we could have, like I

said a tattletale that would exude water if the valve failed. Now a lot of folks out there that have open pipes in a box. I don't think that should be done going forward. Take people time to fix it, but to just mandate it to be above grade I think is a problem.

J.T. LANE: 13.

CARYN BENJAMIN: Section 8.4.4 hydrant drainage.

PATRICK KERR: These hydrants are designed by (inaudible) specks drains open if they are installed correctly. The reason for that is they're freeze proof fire hydrants. There is a valve installed in the foot of that fire hydrant as long as you maintain the 20 PSI in our system there can be no backflow through that. We maintain 20 PSI for a lot of reasons, one is so that if there are small imperfections in the system that would allow water to enter we give a notice to people they need to boil their water. We're talking about really in a fire hydrant barrel we may have some bacterial growth, things like that that could get into the system, but we're not going to return that line of service until it's testing and flushed. I think the valves, the drains serving a specific purpose I will tell you there might be one or two systems that claim they pump down fire hydrants after use, but I have never talked to anybody that has actually done it. I think we're going to cause a problem with factured fire hydrants that we will not know until they go to use them and then there's an nonworking fire hydrant and we have a life safety issue. I would ask that we consider not asked they be plugged. They should be installed correctly with a drain field correctly installed under them, but let's do it the way they are designed instead of changing the design. Again, if you have some specific instances of fire hydrant causing a problem there's so little risk of contamination in the valves if the drains are open. It's a far greater risk of having them plug, a freeze, the barrel contracts and now we get dirt and other organic material into the barrel. I would suggest we strike that language.

BEN BRIDGES: Does that address the wet barrel or dry barrel? Dry barrel weakness that drain

out and when you close them they flow out and it drains itself. It's on the wet barrel that you are talking about.

PATRICK KERR: I don't know anybody using wet barrels for the most part, Southern California stuff. They are talking about dry barrel hydrants plugging the drain on a dry barrel hydrant so they don't let stuff come up through the barrel. You get a barrel full of stagnant water cause they're not going to pump them down and the chance of pulling in a system is far greater than a dry barrel there's nothing to pull in. Now where a hydrant is installed and the water table is up above the drains now we have to start piling up risks. A hydrant could be flooded, plugging a drain isn't going to fix that. I hope you all reconsider that. I don't see there being a risk installing the way they are done.

BEN BRIDGES: If the hydrant is designed as dry barrel when you open it you have a foot valve, but you also have leather patches come up that actually will expel what's in there as it pressurizes the chamber so plugging make no sense at all.

PATRICK KERR: I agree. To DHH's point it would make sense in that we don't have a sub-ground hole into the system, but just as with flushing assembly we have a valve that's in tact, we have pressure on the system the hydrant should be leaking if there's a problem. If the valve is not seated properly then we should find it. Some unbelievable small chance of contamination I think is real, but the real chance is if we let that thing freeze and then they go to use it it's a big problem.

BEN BRIDGES: If it works properly then it will flush itself as you open it it blows out contamination and if it does leak go in and repair and put in new leather holds. We repair those over time. If it works properly flush out any potential contamination.

PATRICK KERR: So what is your rational for wanting plug, because it's been in there for a long time?

RANDY HOLLIS: I think the rational has been plug the small hydrants, but not the larger ones.

The smaller ones are supposed to be plugged, but you stand more of a chance of freezing a small than you do the larger hydrants. I think the damage with freezing we're creating more of a problem for the smaller ones because we're requiring those to be plugged.

PATRICK KERR: All.

RANDY HOLLIS: I thought even then larger hydrants could be open.

PATRICK KERR: 10 state standards.

RANDY HOLLIS: Well, it says for hydrant drains that are not plugged.

PATRICK KERR: The drains are plugged, okay, says should be plugged.

RANDY HOLLIS: B says when they are not plugged put gravel pockets around it. Caryn, am I right on this, on large hydrants we do allow plugs, it's the smaller diameter we're asking to be plugged? Large hydrants have gravel pockets.

CARYN BENJAMIN: I think our concern here was C and D as well.

RANDY HOLLIS: I don't know how we are going to beat D anywhere.

SIDNEY BECNEL: No problem with B, right? With the gravel pocket, anybody have a problem with B?

PATRICK KERR: I think it's fine.

JIMMY GUIDRY: So B and C.

ROBERT BROU: Storm drains and storm sewers talking about open ditches, no more of a danger than anywhere else in Louisiana.

J.T. LANE: Any other comments?

PATRICK KERR: As long as we strike D I'm fine with the others too.

RANDY HOLLIS: Strike the end of C storm sewers and storm drains.

CARYN BENJAMIN: I think we're on 8.5.1 air relief valves. This section was stricken by the subcommittee. And DHH is concerned with striking that as there is air release valves are used for relieving air pockets that are formed in the pipelines. Air pockets will form at the

high points of a fully pressurized pipeline. Air leak valves are necessary for pipeline efficiency and also for water hammer protection. Air in the water lines can cause many problems such as speeding up the process of corrosion, reduction of flow is also created by air that has been trapped at the bend, tees, and other fittings in the system. Flow can even stop due to an air lock in the water line. Usually happens in chemical feed lines at the water plant. If ARV's are not installed uncontrolled air release may occur causing pressure surges in the system which can increase the chances of hazard from cavitation. Also, if air is left in a water main it will eventually cause customer's meters to read improperly, overcharging could occur and so fourth.

DIRK BARRIOS: Wasn't that one your objections?

RANDY HOLLIS: My objections?

DIRK BARRIOS: I'm trying to remember. I remember being at the meeting Robby and I were trying to decide who was the one.

RANDY HOLLIS: If we can leave the provision in for manual air relief that's fine, but I don't think automatic in water system is warranted. It would have to be significant. Water mains are laid to the grade of the natural grain and when you say that high points in water mains someone could interpret that to mean every time it comes up it's every 50 feet run a valve. Nobody in this room, but somebody 20 years down the road interprets it wrong. The air when accumulates in the water system once you get down to the services is relieved through the services and all the systems that we have we don't have a significant problem with air coming out the systems as long as you have the proper pumping, proper surge protection, and everything. Automatic air release valves on sewer systems are mandatory because the generation of methane gas and degradation of the sewer. So automatic air relief valves in sewer systems is absolutely required. Water systems, we should not be getting any deterioration in methane gas and I think if you have proper air relief at your

pumping facility where it's going into the system then you are going to have air relief coming out of your tanks. I don't think we should mandate automatic air relief valves in the system. Manual at high points, crossings sure, but I wouldn't suggest air relief valve mandatory. We're fortunate we're in a very flat area down here.

CARYN BENJAMIN: Does specify high points, goes further and say elevated more than normal elevation, something I don't know. St. Francisville, definitely has some areas, Nachitoches.

RANDY HOLLIS: I don't think it uniformly applies throughout the state. Phrase this to make it where it's acceptable.

J.T. LANE: Any comments?

ROBERT BROU: My only other comment was under their rational it has this usually happens in chemical feed lines in water plants talking specifically about air relief in distribution.

PATRICK KERR: Instead of saying high points I wonder if we couldn't say something like at locations where significant air may accumulate or something like that. And then it could be dealt with in plan review. A conversation between the two engineers. That handles Randy's point. But the way DHH has written this manual air valves are allowed so just that you can't use automatic air relief in man holes they can mandate. I think that addresses your question too. We take care of it in plan review, most systems that need air relief use air relief because the first problem is in inefficiency and the horse power required to push past that air. That's kind of self releasing, but the rest of it is we lose through gaskets, tanks, customer meters, we're talking about a puff of air. If people are complaining about air in the water it usually looks milky, it's not that they're getting air spurts like when you turn your plumbing off in your house. The water gets milky that's a water quality issue we have to address. I don't know how many complaints you get like that. It's not a health issue. People actually get chlorine in the air pocket, it's probably pretty stable.

CARYN BENJAMIN: 8.5.2 area relief valve piping. A, B and the very beginning of C was stricken.

No rationale provided, however DHH did approve.

ROBERT BROU: Just a point of clarification, if used was being added so if used you meet those criteria.

CARYN BENJAMIN: It shows that on the other report, not really clear on the side by side, sorry. 8.5.2 section D. Connection to the storm drains, sewer system, or sanitary sewer air relief valve piping connection to that DHH feels this needs to remain in the code of course cause it's not really addressed in other sections.

ROBERT BROU: Yeah, we really felt it was probably in cross connection, or if it's not a lot of those type of things I feel should be in it, but there's cross connection aspects throughout this entire document. That would be a lot easier to read.

PATRICK KERR: Part 10.

CARYN BENJAMIN: 8.6 valve meter and blow off chambers. The subcommittee recommended deletion of this section and DHH agreed. 8.7.2 bedding. Subcommittee recommended to delete this section, DHH feels this is necessary to insure water distribution system piping is installed in a way that will minimize line breaks, ruptures, inefficiencies in flow, separation of pipe joints, etc. and needs to remain in the code to protect water quality and ensure sustainability of the water distribution system.

ROBERT BROU: The reason 8.7.2 7.3 and 7.4 were deleted because we actually recommended in 8.7.1 to specify standards for installation of materials that would cover all aspects bedding, cover, blocking, everything would be covered under those installations.

CARYN BENJAMIN: Rationale wasn't given so we weren't sure. And I'm not entirely sure the AWWA standards cover all of this so that needs to be looked into as well.

RANDY HOLLIS: You're talking about section 8.7.2 bedding? When we start trying to specify and say a continuous and uniform bedding shall be provided in the trench with duct liner pipe you don't have to do bedding, you don't even have to dredge the bottom of the trench

depending upon the loading conditions and the nature of it. So to stipulate that or even require that goes above and beyond what's required by the designers of the pipe and we should not be specifying.

CARYN BENJAMIN: Also this covers 8.7.3 cover and 8.7.4 blocking.

DIRK BARRIOS: Cover could be an issue also depending upon you got ground storage tanks, inlets and outlets. We quit making penetration through the floor, we make our penetration through the outer wall. You might have 20 foot of pipe exposed we have to insulate that's not going to freeze, South Louisiana?

CARYN BENJAMIN: I think this is for the distribution system where the public is going to be traversing over waterlines.

DIRK BARRIOS: You got crossings, going to have to insulate crossings?

CARYN BENJAMIN: Well, you need to protect it from damage.

DIRK BARRIOS: Well, that's not what it says.

CARYN BENJAMIN: We can revise it.

PATRICK KERR: What if it just said installation as required to prevent freezing and then we can demonstrate through velocity of the water and the size of main. We have overhead crossings that are steel, unprotected steel we've never had one freeze. There's water moving through them and the water here is warm. If you just added if required to prevent freezing I think that would be fine. The first 8.7.2 though we also do a lot of directional drilling and direct installation of pipe and we rely on our engineers to tell us what materials should be used. That's a design issue that I don't know that it matters to the health department whether we have uniform vetting, whether we fill and lift. Some developers don't want to pay for tamping and trenches and we don't tamp. They take care of it as it settles on the surface. The other problem is in rocky soils going out there and trying to rake that bed to get rocks out 6 inches deep you can't get there. Basically what you are saying we

have to put 6 inches of clean fill and that's over burdensome and it doesn't protect the pipe. Duct liner pipe basically designed to expand from bell to bell with no support. We do it all the time in overhead crossing.

BEN BRIDGES: This is talking PVC or whatever, and so I think she's got a valid point that may be there should be stipulation for the ones that don't do duct. Not every system, most systems don't, most small systems. So you would assume that people would have enough sense not to put a boulder in there, but if you don't say it sometimes they overlook that. If you're doing directional boring you don't have to worry about backfill anyway, not a trench. Just the ones where it could be a problem PVC pipe or AC. Hopefully they're not going back with AC, but at least if they happen to use it for whatever reason at least have it mentioned.

RANDY HOLLIS: What we're really saying is piping should be installed in accordance with the manufacture's recommendation. PVC, if it's ductile iron it's different. We can't specify every kind of pipe known to man. What we need to say needs to be installed in accordance with the manufacturer's recommendation.

PATRICK KERR: That also helps a lot with lateral displacement. A lot of bell to bell breaks tap a pipe because the contractor bent the pipe and put stress on it and you tap it on that stress and it splits bell to bell. What Randy is suggesting would help with not just sag, but with lateral deflection too.

RANDY HOLLIS: Would have to be bedding, cover, blocking everything.

PATRICK KERR: Installed the way it supposed to be.

ROBERT BROU: In 8.7.1 the wording we had chosen was specification shall incorporate the provisions of the AWWA standards and/or manufacturer's recommended installation.

CARYN BENJAMIN: We still don't know about cover and I don't know if the AWWA standards talks about blocking as well.

RANDY HOLLIS: Oh absolutely.

CARYN BENJAMIN: Does it specify cover?

RANDY HOLLIS: Oh yes. You specify the bedding and everything around the pipe based off the cover and the loading on top of it. I like the way it's phrased here. I think that would cover it all.

CARYN BENJAMIN: 8.7.7. disinfection. The first sentence was left in adding in disinfection, disinfecting water mains C651 and looks like the last two sentences were deleted per the subcommittee. And I think there was a comment last time regarding this. Disinfection procedures when cutting into or repairing existing mains.

PATRICK KERR: I did and I think you captured it here. Adequate flushing, disinfection, testing is fine and 651 says it's adequate to do it a certain way that's fine. Knowing the folks who serve on that committee I think that should be fine with us too. Captured it well here I think.

RANDY HOLLIS: I am concerned about the word flushing though because we can't provide enough water to flush a 36 inch transmission main.

PATRICK KERR: If it said adequate flushing if there's a work around for that, for example picking, that is adequate flushing in accordance with C651 and 0 may be adequate flushing if you have a controlled environment where you block the pipe, install a new fitting and drive on there's no flushing required, no disinfection required, no testing required so it's adequate according to C651. I think this language is spot on. It doesn't say you have to flush, it says you have to flush adequately.

RANDY HOLLIS: Should say adequate cleaning, disinfection, microbiological testing because in the first sentence it says new, cleaned, and repaired water mains. So the word cleaning could mean almost flushing because picking you're not demanding it to be flushed as much as just cleaned.

PATRICK KERR: What do you think about that Caryn? What we were talking about is whether it should say detailed procedures for cleaning, disinfection, and microbiological testing of all

water mains so for adequate cleaning disinfection instead of flushing because we may use a method other than flushing to clean it. I will tell you what I think the fear is, and I've talked to Jake about what 651 is contemplating. 651 is contemplating a matrix in which flushing, disinfection, and microbiological testing will only be required in certain situations and not all of them are required in every situation. For example, I have a planned change of a fire hydrant going to take that line down below 20 pounds between two valves, change the fire hydrant, install a valve on the lead so I never have to dewater again, but I'm going to dig that out, the hole is clean, the opening will never be exposed to ground water or any contamination. According to the new 651 I can place that into service by disinfecting the hydrant arm and no testing required for our customers, if it's approved finally. My argument would be this language would allow that because 651 allows it. Today I have to go out and issue a boil water advisory to those customers to take their water pressure down below 20 even though it's completely controlled, no way we're going to infiltrate it and I have to take back these samples. In the future if this changes I wouldn't have to do that because there's no threat to public health. I like the incorporation of 651 in the standard for the state and then if they change it in a way that doesn't protect public health the committee needs to fix it for the state.

SIDNEY BECNEL: What year are you looking at? What standard?

PATRICK KERR: 651 is being revised as we speak. They are talking about a revision right now. Pilot scale studies completed, a bunch of people working on the technical implications of changing it. I'm on the AWWA water utility council, also the national council, and we've been discussing this for a couple years.

SIDNEY BECNEL: Could you repeat what you said if it went below 20 PSI.

PATRICK KERR: If we had an absolutely controlled situation, and they're very clear about what that might be, I have a length of pipe I want to install replace a fire hydrant on that length of

pipe I'm going to shut the water off in two valves, both sides where I'm working, not going to break into the system till I've completely excavated it, dewatered it. When you cut that pipe you're looking at both ends of the pipe there's no way anything's getting in. What AWWA is recommending, and I think what we're going to end up we'll do sampling, but there's not a requirement for boil water advisory. There's no instance in which we can contaminate the pipe. We're going to have to talk about the length of pipe and things like that obviously, but in a controlled situation where I block the pipe or where I have water positive flow out of the pipe so pressure is below 20, but not 0 it's positive flow out of the pipe, a situation where a boil water advisory wouldn't be necessary.

SIDNEY BECNEL: If you have a hydrant between those two valves and a hydrant doesn't have a valve itself and you have leakage coming back.

PATRICK KERR: Not if you maintain positive pressure on the system, but I'm talking about replacing that hydrant so I dug it out before I did my work. It's going to be very specific and when it is finally publishing I think we need to sit down and talk about what the state wants to do. Cause right now it's the 2005 version and I think it's adequate when it changes this protects it.

CARYN BENJAMIN: I was going to comment on that. There are three methods for disinfecting by the AWWA C651, the three processes are tablet, continuous feed, and I think slug. Now currently the sanitary code requires that chlorine dose of 50 milligrams per liter be applied, sit in the system or main for at least three hours, and then samples taken to, residuals taken must be at least 5 milligrams per liter. There's a dosage, a duration, and end result for chlorine residuals. The three methods in AWWA doesn't all have that. And actually two of them only require 25 milligram per liter concentration chlorine, but it's a longer duration so it's 24 hours verses 3 that the sanitary code requires to which it may be sufficient, needs to be debated, but the tablet one does not have end result residuals. That one we don't allow

currently. It's a 25 milligram per liter concentration, 24 hour sit, but it doesn't have a residual at the end. Continuous feed and slug do have an end result. I have 10 milligram per liter is the end result after 24 hours. We prefer the slug which is start off with a 100 milligrams per liter concentration of chlorine, sits for 24 hours, can't be any less than 50 milligram per liter at any time and the end result is 10. That's the one we prefer. Now the continuous feed it specifies 24 hours, 25 milligram concentration and end result of 10. That one could be debated.

PATRICK KERR: A slug actually doesn't require contact time of 24 hours. We move the slug of highly chlorinated water through the line of velocity so it only contacts each section for a short period of time, but then we have residual requirement at the end. We move highly chlorinated water through the system, flush immediately, dechlorinate it, and then maintain a residual for a period of time. There's not enough flexibility on repairs and how long a boil water advisory, I can't maintain 10 milligrams per liter in the system and put people on AWWA I have to turn the water off. That's a problem. I think what you're discussing is new mains as opposed to repairs. Those requirements are nowhere in the code for repairs.

SIDNEY BECNEL: They are in the code. It says any new part of an existing system you have to comply with the 50 milligram requirement.

PATRICK KERR: I put a Band-Aid on a water main, I haven't installed a new part of a system.

SIDNEY BECNEL: Not under pressure, I'm talking about if you would depressurize, put a new part in.

PATRICK KERR: If we have a break in a line and we depressurize the line to repair it and we put a new piece of pipe in there's not a water system in the state that turns the water off for 24 hours and there's not a water system in the state that will allow customers to take water off their system at 25 milligrams per liter chlorine. So that's not what's happening.

SIDNEY BECNEL: I agree it's not happening, I'm just telling you what's in the code.

PATRICK KERR: I may misunderstand the code, but my understanding--

CARYN BENJAMIN: The code is 3 hours and chlorine dose of 50 and the end result and you would take a sample.

PATRICK KERR: That's not what's happening.

RANDY HOLLIS: The MCL for chlorine is four and you can't send it to the customer if it's greater than four.

CARYN BENJAMIN: No, no, no. This is during, see you wouldn't flush that. Disinfect, flush, sample.

PATRICK KERR: So what we're saying is the code requires a minimum three hours service interruption after the repair is made?

CARYN BENJAMIN: Yes. This one is longer.

RANDY HOLLIS: That means you're going to have to isolate every surface cause you don't know if those people are taking water or not. Shut every meter off.

SIDNEY BECNEL: That's right.

PATRICK KERR: That's not going on and I don't know of a system that I have ever dealt with that can afford to do that. C651 is what most of us follow, but yeah we've never interpreted that part of the code that new installation chlorination be applied to repairs. If we put what we've done historically if we put a 10 foot section of pipe to replace a split we swab that in accordance with C651 before we install it and then we flush it. We do not have three hours of contact time the entire pipeline for that, we just can't do it. And I don't know what the risk is, but I don't think it's caused a single issue that I know of. I think if you did an anonymous survey in the state you would find that is not how operators interpret that part of the code.

J.T. LANE: So we'll study that and come back with a recommendation.

SIDNEY BECNEL: Before we get off of that, Robert you said that y'all do collect and investigate

samples following y'all repairs?

ROBERT BROU: Yeah according to 4.7 of C651. We put it in service, but we grab a sample.

SIDNEY BECNEL: So where do you send that sample to?

ROBERT BROU: State certified lab.

CARYN BENJAMIN: Robert, you said y'all follow one of the disinfection methods, the continuous. The slug requires three hours so I was mistaken on that. That's just for disinfecting water mains.

ROBERT BROU: 4.7 disinfection procedures when cutting into or repairing existing mains and it does allow you without chlorinating to put a line back in service. There's certain specific requirements that you have to meet. Like Pat was saying earlier you have to have control of the situation. We have a hole and the pipe ruptures and slug of water comes through or pump stops and the hole we've lost it, definitely doing a boil notice for every customer downstream in that area. It could be a large portion of our system. Otherwise we just grab a sample and put it back into service and have a sample to prove what we did was affective.

J.T. LANE: The next three recommendations we concurred with. Unless there's any discussion go on to number 23 which is 8.8.2.

ROBERT BROU: I would just comment that with that one the only thing with the reason we were striking it we were not--

RANDY HOLLIS: For 8.8.2.

ROBERT BROU: For that one, crossings and the exceptions so the next four. We were deferring to what is currently in chapter 12. Six feet for parallel, six feet for crossings. There is already provisions in there that allow Dr. Guidry to make exceptions. And then the same thing for the force mains, separation of 6 feet. I personally feel the exceptions the way it's written in chapter 12 allowing him to visit it verses trying to get specific certain exceptions to meet would be preferable, but that's up to the committee.

CARYN BENJAMIN: Our concern was that we needed to have this code language in there so whether or not you revise this to specify 6 or use the part 12 language.

J.T. LANE: Use part 12 as recommendation. To 27 8.8.6.

CARYN BENJAMIN: I think for 8.8.6 sewer manholes. We just had in the past where based on how it's written in the code currently they didn't interpret the manhole to be included with the separation distance even though it specifies mains. We may need to add that to part 12 language.

PATRICK KERR: Is that just the sewer manhole or are you talking about storm drainage also? And I ask that because we do specifically put in conflict boxes with drainage. Normally, not normally, always there is a casing installed through the storm drain and that is a necessary method of de-conflicting a gravity storm drain system with a pressurized system. We also do it for sewer systems running through gravity storm drains. If you mean specifically sewer that's great. You should say sanitary sewer, I believe.

CARYN BENJAMIN: Okay. 8.8.7 separation. We agreed on that one, as well on the next one.

SIDNEY BECNEL: Discussed within the 10 feet part? In other words, good with the water main should be located at least 10 feet from sewer mains?

PATRICK KERR: You're saying it should be shall?

SIDNEY BECNEL: Should it be shall or should it be should?

CARYN BENJAMIN: Shall, 6 feet, right?

PATRICK KERR: This is another new construction issue.

CARYN BENJAMIN: The subcommittee recommended to delete this section above water crossings. Again, DHH feels this is necessary to insure sustainability of the water main to prevent disruption of service and contamination of the water supply. I have seen where a PVC water crossing did freeze and ruptured, may be a 4 inch, but it wasn't a 2 inch.

PATRICK KERR: Can I suggest that may be we should just say above grade piping here and take

out the stuff we were arguing about earlier? Just say above grade piping shall be supported protecting from vandalism and freezing. Covers aerial crossings, covers crossings of dry ditches. And then again I would put the word adequately protected in there if I can demonstrate line was sufficient velocity and freeze protected.

DIRK BARRIOS: Why would you use PVC?

CARYN BENJAMIN: This particular crossing was in the woods. It took the system probably three days to find the actual break. They had a big drop in water pressure and they went to a boil advisory and they lost water completely. It took them three days to even find it. I don't even know if they knew about it. They had some operator turn over.

PATRICK KERR: Can we say above grade piping and then adequate, is that cool? Go back to the other section later and take it out.

CARYN BENJAMIN: 8.9.2 underwater crossings. Stricken by the subcommittee with no rationale. DHH feels it's necessary to keep this in the code.

DIRK BARRIOS: I believe we took that out because you are going to cross a stream you have to adhere to permit requirements.

CARYN BENJAMIN: On all streams?

BEN BRIDGES: It doesn't address creek crossings.

RANDY HOLLIS: A couple issues here, one is the valve is required on both sides of the crossing. I think if we can refer back to the spacing of valves previously that's fine, but we don't need to start putting 36 inch valves on either side of an underwater crossing in South Louisiana. We'd be putting valves too frequently. Part C is so antiquated it's not even funny. To allow provisions for insertion of a small meter, if you have valves you simply put on pressure test. That's the most practical part of it. It needs to be reworded if you're going to leave it in there because parts of it are just antiquated.

DIRK BARRIOS: I'm not sure exactly how they do that in other parts of the state, but in most

cases in South Louisiana you're not going to get a permit to open dredge and lay a water line anymore, just won't allow it. I can't answer for above I10, but I believe below I10 if you're going to come to destroy any kind of marsh habit, anything like that, you're going to have to do some mitigation, so costly.

BEN BRIDGES: We do that a lot up in North Louisiana too. Ideal if you could do directional drilling, but sometimes the price of our last project was 15,000, we open cut it for 4.

DIRK BARRIOS: You don't have mitigation.

BEN BRIDGES: But you're covering small to large.

DIRK BARRIOS: If you destroy 1 acre of property, may be 8 or 10 you have to mitigate.

PATRICK KERR: And I have to ask, other than the valves, which I think we can talk about, how does it affect public health? Five foot cover, there's some instillations we do less than that especially if we're going to concrete line the ditch, about to put a line in and dewater it.

CARYN BENJAMIN: You need to be able to check for leaking and isolate it.

PATRICK KERR: Why do we need to be able to isolate it?

CARYN BENJAMIN: On a line that's downstream of a crossing that covers a large population you need to be able to isolate.

PATRICK KERR: How is it different than any other part of the line that's buried?

CARYN BENJAMIN: I would think it's subject to more stress. It's different than just laying it flat in the ground.

PATRICK KERR: It's not really in that much of our pipe is installed below the water table, especially approximate to water bodies. And so a couple of things, and it's funny because we had this discussion years ago, and I think you allowed us to put a transmission main in without a valve provided we didn't have customers between the valves. Which is perfect, the right answer. This wouldn't allow for that.

CARYN BENJAMIN: Revise it to, is what I was suggesting to insure that you can isolate without

causing...

PATRICK KERR: Valve spacing is critical whether it's underwater or underground. An underwater crossing is no different than any other piece of pipe we lay. It's no more apt to be contaminated, the water in South Louisiana especially.

SIDNEY BECNEL: What about the line going from Jefferson Parish to Grand Isle? If I was throwing an anchor out that's why they say 5 feet I would think.

PATRICK KERR: I agree and I wouldn't do what they used to do was just jet lines in across major waterlines and weighting them down. I don't think an engineer would stamp it today.

SIDNEY BECNEL: That wasn't that long ago.

PATRICK KERR: Well, that might be the right way to do it. I don't know.

RANDY HOLLIS: Most CORPS permits require 15 feet under.

DIRK BARRIOS: You have to realize a lot of the water bodies that are getting hit when it was installed it wasn't a water body it was land.

SIDNEY BECNEL: Probably not this line.

DIRK BARRIOS: I beg to differ.

SIDNEY BECNEL: You know more about it than me?

DIRK BARRIOS: Oh, I can assure you they called me many times. In most cases they would have I want to say a guard, some type of pile structure and it was beyond that because the boats pass the channel changes. Not all the time, I agree with you, not all the time. Or I'm not going to use the name of the company, this company brings in, launching an ice breaker and he had these barges and in excess of the channel depth. That's how he broke it, goes on and on. And I can tell you many, many instances where it happened at, but the line in question a lot of times is being broken because where it's being broken at didn't used to be a channel, not always, but a lot of times.

RANDY HOLLIS: One of the perfect examples here is this new technology. We just talked about

directional drilling, we're directional drilling underneath streams and those pipes are probably better protected from any vandalism or damage than anything else. We had a line hit on Essen Lane from people doing locates because of 3 feet of cover. The lines underneath the creeks are buried so far they are better protected than the ones just 3 feet of cover. I think this is, again, antiquated language of how they used to be built. We can suggest some language in here.

JOHN NELSON: Again, John Nelson, Desoto Water Works. I wish we lived in a perfect world, but we don't. And I'm hearing all this about valves on both sides of a creek in a half mile, I got a lot of 15 foot creeks up there. As operators we all know most of our leaks don't come from a straight line run of pipe. Most leaks come from valves. And so in trying to prevent some problems we're adding the possibility of problems every time we put a valve in. If you make me put a valve every mile, each side of a creek, you are introducing a possibility, a much greater possibility of a leak into my water system. Let me run a straight line pipe. Don't want to cause a problem by trying to solve one.

J.T. LANE: We'll exam that and come back with some language I think that should work for everybody.

CARYN BENJAMIN: 8.10.1 cross connections. Stricken by the subcommittee, DHH agreed.  
8.10.2 cooling water. Stricken by the subcommittee.

PATRICK KERR: We're going to address that in part 10.

CARYN BENJAMIN: 8.10.3 interconnections.

PATRICK KERR: Again part 10.

RANDY HOLLIS: Is that really part 10?

ROBERT BROU: Thought it was already covered in 12?

PATRICK KERR: Okay, I'm sorry. It is something to address, but may take it out of part 10.

CARYN BENJAMIN: It's also on 12 so we may recommend using language in 12. 8.10.3

interconnections between potable water supplies.

RANDY HOLLIS: Where is that in 12?

CARYN BENJAMIN: I think maybe Pat's section has it, connections to, no hang on. The code specifies that you can't connect to a non-potable source. You can't have a direct connection to a non-potable source. May not be actually directly covered in the code, but there could be...

PATRICK KERR: Code says equally supervised or equally something, approved.

CARYN BENJAMIN: But you still need to consider that if you're interconnecting with another system if you have different disinfectants, different types of source water, all that can cause some issues if you interconnect.

RANDY HOLLIS: Do we leave it, or put in Pat's section? What do we want to do?

PATRICK KERR: Connection to unsupervised system would be cross connection. It's in there I can take it out, or I don't care. I have addressed it. You can check when we get done.

CARYN BENJAMIN: 8.11.1 plumbing. The subcommittee deleted this section. There is no standard for service connections that water supplies would have to follow allowing materials to be utilized that would compromise water quality.

RANDY HOLLIS: The concern is we're putting 8 to 10 lead which is outdated, right?

ROBERT BROU: Definitely have to match it to the current.

RANDY HOLLIS: Do we want to try to revise it to match the current federal requirement?

CARYN BENJAMIN: Right.

PATRICK KERR: You might say lead free according to the federal requirements so that way if they change it again it's fixed.

CARYN BENJAMIN: 8.11.2 booster pumps. Committee deleted this section, DHH feels that should be included, but perhaps revised to specify certain conditions. Booster pumps can cause low or negative pressure conditions in a distribution system compromising water

quality.

RANDY HOLLIS: I think we should allow individual booster pumps provided they are installed properly to not suction on the system.

PATRICK KERR: Just like any other booster pump. We already have language about booster pumps in the code.

RANDY HOLLIS: This is specifically for individual.

PATRICK KERR: But doesn't the code already specify low suction cut offs or booster pumps on a distribution system? Could we use the same language for any pump?

RANDY HOLLIS: This is for individual residential service.

PATRICK KERR: But my point is the code addresses booster pumps, does it not? When you design do you have to meet code requirements for minimum suction?

RANDY HOLLIS: 10 state standards.

PATRICK KERR: The language should apply to all booster pumps and it shouldn't be that you can't use minimum suction pressure shall be maintained at 20 PSI. It should cover all booster pumps.

RANDY HOLLIS: Why don't we just say individual residential booster pumps shall meet the requirements of booster pumps specified here.

PATRICK KERR: Where are we specifying it?

RANDY HOLLIS: Well, this is specifically geared toward residential. This is simply saying you can't use individual residential booster pumps. We're saying as long as you meet the requirements of booster pumps in the standards.

DIRK BARRIOS: Just as an example in Grand Isle having a watering crisis years ago people used to put booster pumps in their camps and rob water from the system. And I am assuming, I didn't take care of Grand Isle, I imagine what it would do bring their operating pressure down really low. And what started happening trying to do that in Lafourche Parish years ago

and wasn't having the development we have. If you catch them the first thing we do is turn off the water meter. You're not bringing it down below even though you are not bringing our pressure down 15 PSI we won't allow it. If you want 80 pounds of pressure in your camp you need to devise a better system.

RANDY HOLLIS: Dirk, what this would do is this would require put in a low pressure shut off switch to the pump so if it drops to 20 it shuts off, that's standard booster pump.

DIRK BARRIOS: Yeah I can assure you they definitely make sure.

BEN BRIDGES: They'll bypass that.

J.T. LANE: All right. So we'll make some adjustments based on what y'all said. With that we have our last section 38 8.13.

CARYN BENJAMIN: 8.13 water loading stations. Very critical section, section was deleted by the subcommittee with no rationale. DHH feels this is very important to protect the water supply. May be Chris could think about adding it to part 12.

PATRICK KERR: It's already in 12.

CARYN BENJAMIN: Where it talks about acceptable loading stations?

ROBERT BROU: I was just looking at it. 373 page 221. This actually says portable, potable.

SIDNEY BECNEL: The title don't mean anything legally. The wording says portable. So I think this goes beyond. In 10 state standards talking more about you know how those guys fill up contractor trucks leaving an air gap. I think that's why we want to keep it in there.

PATRICK KERR: The C is a problem. They use a fire hose to connect to--

SIDNEY BECNEL: Wait a minute, I see it's covered under 373 A what he was just reading.

PATRICK KERR: That's a loading station, usually has an overhead fill and a pipe hanging down. That's what a loading station has, but where they fill on temporary connections, from a fire hydrant for example, they run a fire hose from a double check assembly to their truck and fill their truck through an air gap and that's how it's done.

SIDNEY BECNEL: Should be the standard.

PATRICK KERR: I think the better thing is to have a permanent loading station and have an arm, actually an air gap there's no connection at all and nothing on the ground. In a portable potable water fill station, like the hose hits the ground, but it doesn't matter because it doesn't hit the ground until after check assembly, but then put the suspenders on and fill through air gap too.

SIDNEY BECNEL: Right now don't say specifically in the code anywhere.

PATRICK KERR: We don't cause an air gap is protected. The reason we use the double check we know the hoses are going to touch before they get there. It's in compliance I think with what is written and intent of the regulation, but we need to address that. We can't say no hose touch the ground. We could say no hose between, we already defined the air gap, what an air gap is.

SIDNEY BECNEL: We already say no hose can touch the ground in 373. It doesn't say for loading station. It says portable. Under the caption potable water loading station, but the heading of the section legally doesn't count. So if you just look at the text it says portable hoses, P-O-R-T-A-B-L-E.

PATRICK KERR: We need to work on the language.

J.T. LANE: What is your primary concern?

PATRICK KERR: Hoses are used and they touch the ground.

SIDNEY BECNEL: I think we need to work on requiring at least double check valve or something if they are coming off the fire hydrant on to that truck.

CARYN BENJAMIN: Do you want to add that section?

PATRICK KERR: Yeah, I can do that.

CARYN BENJAMIN: That's 373.

J.T. LANE: Any other comments or questions? How did the layout work out for y'all? Worked

well. Any comments from anybody attending? Anything else y'all want to share?

ROBERT BROU: I know logistically it's very difficult, but if we could possibly get this information a few more days notice prior to the meeting. There's a lot of activity on our end, I know a lot on your end. Just give us a few more days. It's easier for me because I was somewhat familiar with it, but I still didn't have a lot of time to read through it.

J.T. LANE: Definitely, we were behind this time.

PATRICK KERR: We had a member of the committee resign and my intention was just to go back to AWC and find another representative and notify the chair and the members. I think that's the process we should use, correct?

J.T. LANE: We were going to contact them and get them to recommend somebody.

ROBERT BROU: I know it wasn't really spelled out in act 292, but it does specify this committee continues. I think as a committee eventually, we don't have to do it now, at least once this main bulk of the work is done we need to really set up terms of service for everybody and that you can continue to come back, but it needs to be a staggered term, not everybody leave at once just for continuity. A third of the thing every year, or a quarter every year and that way you have some continuity, allows people to come and go.

J.T. LANE: I agree, good thought. All right. Anything else?

SHEREE TAILLON: At this point with subcommittees I don't have any continuing meetings going on, but I still have some reports that I need so I don't know if y'all are working on those reports and don't need to meet anymore or meeting, what your situation is. I'm waiting on reports from one through five and ten. Do y'all need more meeting time, what do you need?

PATRICK KERR: I will share with you what we have, but making changes during these things and then we'll finalize.

SHEREE TAILLON: For those reports going forward as you saw in the side by side if you can put a rationale as to why. It helps us to look it up before hand to come back with it is mentioned

in part 12 blah, blah, blah so that we have an idea of why you scratched it.

BEN BRIDGES: For treatment we met last week, the 6th, and Chris is compiling that. His daughter is graduating; I think that's why he's not here today. We went through the whole process and finished up on May 6th.

J.T. LANE: Do I have a motion to adjourn? See moved, any objections? Thank you.