STATE OF MISSOURI

PUBLIC SERVICE COMMISSION

TRANSCRIPT OF PROCEEDINGS

Hearing

March 2, 2006
Jefferson City, Missouri
Volume 7

Cathy J. Orler, Complainant,	)	
v.	)	Case No. WC-2006-0082 et al.
Folsom Ridge, LLC, Owning and Controlling the Big Island Homeowners Association, Respondent.	)	
In the Matter of the Application of Folsom Ridge, LLC, and Big Island Homeowners Water and Sewer Association, Inc. For an Order Authorizing the Transfer and Assignment of Certain Water and Sewer Assets to Big Island Water Company and Big Island Sewer Company, and in Connection Therewith Certain Other Related Transactions.	)	Case No. WO-2007-0277

HAROLD STEARLEY, Presiding,
REGULATORY LAW JUDGE.

STEVE GAW,
LINWARD "LIN" APPLING,
COMMISSIONERS.

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P R O C E E D I N G S

JUDGE STEARLEY: Good morning. We are back on the record. Today is March the 2nd, 2007, and we are in the third day of our hearing in Case Nos. WC-2006-0082 and Case No. WO-2007-0277. I have, I believe as we were carrying over from yesterday on my witness list for today, we're going to begin with Mr. John MacEachen from the DNR, followed by readings of excerpts from the deposition from Mr. Comley, then Gail Schneider and Phil Hiley. Does that match everyone else's time line?

MR. MILLS: Your Honor, which depositions are we going to have readings from?

JUDGE STEARLEY: The depositions will be from John MacEachen and from a Mr. -- I can't remember his first name, Finn.

MR. MILLS: Clinton Finn.

JUDGE STEARLEY: Clinton Finn, that's correct.

MR. MILLS: Well, Mr. MacEachen is clearly available. Is Mr. Finn not available?

JUDGE STEARLEY: Mr. Finn, I'm not sure if he would have been available, but he was not subpoenaed by the Commission to be here nor provided by any other party. And yesterday we set out, Mr. Comley will read excerpts from the deposition only to the extent that Mr. MacEachen

has not provided live testimony, so that we don't have any type of duplication there.

MR. MILLS: Just for fair warning, I may object to that use of depositions. I don't believe it's consistent with practice.

MR. COMLEY: The rule no longer requires that availability of witness is important. The deposition can be used for any purpose at trial.

JUDGE STEARLEY: That is my reading of the rule as well, but you can renew any specific objections you may have at that time, Mr. Mills.

So at this time I would call Mr. John MacEachen to the stand.

MS. HEINTZ: I'm sorry, your Honor. Before we begin Mr. MacEachen's testimony, I had one little housekeeping matter.

JUDGE STEARLEY: Please proceed.

MS. HEINTZ: Yesterday I raised a relevance objection to any testimony, and I believe it was in response to a question about DNR's choosing to regulate or not the service lines that go into homes, and I would like the record to reflect that my objection is continuing on relevance grounds.

JUDGE STEARLEY: And I believe I sustained that objection yesterday, so as that objection is

continuing, my sustaining of that objection will also be continuing.

COMMISSIONER GAW: Well, now, Judge, I'm going to have an issue with that if we get too far into this, because we had discussion last night in regard to questions of service lines running together and that was clearly -- is clearly in the record now. So I think whatever sustaining of objections might have been done before needs to be -- any new objections need to be taken in light of the fact that we now have evidence in the record concerning how these service lines are together and running together, and I want to inquire further about that topic that I was inquiring on last night.

JUDGE STEARLEY: My understanding was the objection related to DNR's jurisdiction.

MS. HEINTZ: That's correct.

COMMISSIONER GAW: Well, I may need to ask some questions about that, because I'm not clear about what that jurisdiction is at this point, and I need to have some information about where that demarcation is so I can understand what this Commission's role should be in filling in the gaps. And it's important from my standpoint that I be able to do that.

JUDGE STEARLEY: I certainly don't know that -- if you're asking about jurisdiction, if that is

going to cross into Staff's objection or not. I suppose at this point we can wait and see what Commissioner Gaw's questions are and see if they're crossing into that same territory and proceed from that point.

COMMISSIONER GAW: I'll tell you, Judge, it's very unusual for a Commissioner's questions to be ruled upon as being objectionable unless they are way out of territory.

JUDGE STEARLEY: I understand.

MS. HEINTZ: The question I objected to was a question by Complainant on relevance grounds.

COMMISSIONER GAW: And I haven't had time to review that, so I don't know what we're dealing with at this point.

MR. MILLS: And, your Honor, just for purposes of clarity of the record, I have a little trouble understanding how an objection to a topic this broad could be continuing and the ruling of sustaining that objection could be continuing without making specific objections to specific questions.

We've come close to the service line areas in a lot of ways, and I'm not sure that I would understand from what you just said when a question would stray into the area for which you have sustained a continuing objection. So I think I would prefer, if it's okay with

the Bench, that objections to that area need to be made to particular questions so that we all clearly understand where we are and where we're not.

JUDGE STEARLEY: And as I said, I think due to the fact that I'm not sure at this point from our discussions if that objection will stray into that territory or not, we will take them up individually.

COMMISSIONER APPLING: Judge, everybody's talking here. Can I get a --

JUDGE STEARLEY: By all means, please join in.

COMMISSIONER APPLING: Commissioner Gaw, would you do one thing for me on the beginning of your questions this morning? I've been sitting here kind of under the impression somebody will clear me up with the service lines that was put in the same trench has been corrected, and if they haven't been, I still have a need to make sure that that is clear to me this morning so that I can track what's going on. If they're still together, then that means something else to me, and if they're not together that means another thing. So would you clear that up?

COMMISSIONER GAW: That's one of the things I'm interested in, too, Commissioner. I appreciate that.

COMMISSIONER APPLING: Thank you, sir.

JUDGE STEARLEY: All right. Mr. MacEachen, would you please come forward. You can have a seat here at our witness stand.

(Witness sworn.)

JUDGE STEARLEY: You may be seated. And, Commissioner Gaw, I believe you can start.

COMMISSIONER GAW: Thank you, Judge.

JOHN MacEACHEN testified as follows:

QUESTIONS BY COMMISSIONER GAW:

Q. Would you state your name, please, for the record.

A. My name is John Douglas MacEachen.

Q. What do you do, Mr. MacEachen? Is it Mister or Doctor?

A. No, it's just Mister.

Q. All right.

A. Yes. I am the enforcement unit chief for the public drinking water branch of the Missouri Department of Natural Resources.

Q. What do your duties generally entail?

A. My duties entail assuring compliance with the regulatory requirements as put in the Safe Drinking Water Act and the regulations, the Code of State Regulations pertaining to water systems.

Q. Okay. Tell me how long you've worked for

DNR.

A. 14 years, sir.

Q. And how long have you had your current position, approximately?

A. Approximately 7 years.

Q. And what did you do in DNR prior to that?

A. I was the enforcement coordinator for the Department -- well, for the drinking water program at that time.

Q. All right. And your education?

A. I have a bachelor of science in biology from Heidleberg College in Tiffen, Ohio.

Q. Okay. Your general duties in regard to your current -- your current position, do they involve drinking water and sewage?

A. No, they do not. They're relegated to drinking water only.

Q. All right. Who handles the sewage side of the DNR?

A. That is handled by the water pollution control program. I'm sorry. Water pollution control branch, a sister branch to us under the water protection program.

Q. When those two -- when those two areas cross one another, when you have a drinking water and a

sewer water issue, how is that handled at DNR on those, on cross communications?

A. Generally that's handled by inter-program or inter-branch communication and cooperative effort.

Q. Okay. Who is in charge of that area?

A. For the water pollution side?

Q. Yes. Thank you.

A. Kevin Mohammadi is the section chief for the water pollution control branch.

Q. Are you familiar with Big Island?

A. Yes, sir, I am.

Q. Tell me how you became familiar with it, generally what your knowledge is about it, just very generally at this point.

A. I first gained knowledge of the potential problems at Big Island in the latter part of 2003, when it was reported to us that there was a potential interference between the water and sewer mains that were laid in the project.

Q. Okay. Did you check the records at the time you were notified of this incident with DNR to see if there had been any prior matters concerning this --

A. Yes.

Q. -- Big Island?

A. Yes, I did.

Q. What did you find?

A. I found that in 1998, they had -- Big Island -- actually, Mr. Golden's company had begun construction of water and sewer mains without prior approval for the drinking water requirements.

Q. Okay. What was the consequence of that, according to the records?

A. We asked them to suspend further construction until we could examine the situation, make a determination of how extensive and require them to come back into compliance with a submitted application for a construction permit, plans, specifications, detailed drawings, that type of thing.

Q. Were there any fines or other consequences other than those that you mentioned at the time?

A. There were not.

Q. Okay. So now we're going to jump forward then from -- was it 1999?

A. 1998.

Q. 1998 to the time frame when you said you were first made aware, which was again what year?

A. In 2003.

Q. All right. And did you do an investigation based upon the notification of a potential issue?

A. I did not personally make an investigation,

but one of my staff members began to become involved in the direct observations and investigations.

Q. And were you -- did he report to you in regard to that investigation?

A. Yes, he did.

Q. All right. And can you tell me what the Department discovered as a result of the investigation?

A. We asked that the developer do excavation pits for examination of the placement of water and sewer mains. We did actually find that water and sewer mains were placed in the same trench, in some cases side by side. In other cases, the separation -- there was a vertical, an appropriate vertical separation between the water and sewer mains with the water mains being above, but there were also locations where the water main had been placed underneath the sewer main.

Q. All right. Now, those things that you are describing to me, first of all, I want you to tell me whether or not those are violations of any laws or regulations in Missouri or under any other codes that would be applicable.

A. They are not violations of the regulation or the law. We do not have specific stipulation in the regulations or law regarding construction. We operate from a design guide, which is not law and not regulation,

but it is a standard to which we hold all water systems who are constructing facilities.

Q. And how do you hold them to that standard? What's your authority to do that?

A. Generally we -- if we find a violation, we ask them to repair and correct, and those violations may range in nature from failure to obtain a construction permit prior to construction, in which case we ask we require them to cease construction until the situation can be corrected. I do not recall that we have ever placed a fine on anyone for violation of the construction standards. We have generally received cooperation in repairing those systems.

Q. Okay. So in this case in 2003, again, how many -- how many things -- or if you would, just go through the list of things that you -- that DNR found to be violations of the design requirements that DNR has for these water/sewer systems.

A. Our principal finding was that the waterlines were inappropriately installed, that they did, in fact, either run parallel to and at the same level of the sewer mains or, as I said earlier, in some cases below the sewer mains. And when we requested that that -- that those situations be corrected, the developer did, in fact, begin action to correct those deficiencies.

Q. Okay. And were they corrected at some point?

A. Yes, they were.

Q. All right. And do you know when that finally had occurred?

A. We did an excavation pit examination at several locations within the system on January 12th, 2004, I believe. Made note of it in a format report to the developer with recommendations. The developer then began a relocation, a complete relocation of the water lines -- or the water mains to a distance of ten feet of horizontal separation in most cases where it was appropriate and possible from construction -- on-site construction requirements. I believe that we were -- as memory serves, we were assured or felt assured by the end of 2004 that the corrections had been made.

Q. All right. So you did spot checks with excavations to see whether or not the appropriate changes had been made to bring the system in compliance?

A. Yes, sir.

Q. Now, I want you to explain to me why the issues that you initially found in 2003 in regard to the proximity of lines together is a problem. Why is it that the design that DNR has calls for separation of those lines and something regarding other things such as which

line is on top of the other, et cetera. Explain that for me, if you would.

A. The principal reason for a physical separation between the water and sewer mains is to prevent a possible contamination of the water lines by leaking sewer lines. That's the guiding principle under which we operate. It is conceivable and it is possible and also approvable that water and sewer mains can be installed in the same trench, but there has to be a vertical separation between the water mains and the sewer mains, and the water mains being placed above -- this is by our design guide -- the water mains must be placed above the sewer mains on a natural soil shelf for isolation and to prevent sinking of the water mains.

The principal reason for doing that is, in the event that a sewer main were to leak, they are not sealed as completely as water mains and are usually impacted by shifts in ground from freeze/thaw cycles. We generally find that the separations of the water main or the location of the water main above the sewers will be a barrier to a possible contamination source.

Q. So as long as it's set up in the fashion that you just described, DNR will approve that kind of setup?

A. That is correct.

Q. What can happen if there's cross contamination? That may seem obvious, but I would like for you to explain that, please.

A. The result of a cross contamination would, of course, be the contamination of a potable water supply with a wide range of bacterial and viral contaminants from the wastewater system, obviously reducing the quality of the water, of the potable water and placing people in jeopardy in regards to their public health.

Q. Now, when you're doing these checks and designs on systems, how -- how far can you go in inspecting the systems in regard to what's under your particular oversight?

A. Historically, we have asked for the cooperation of the person constructing -- responsible for the construction. We don't have specific regulatory authority to require them to open a specific number of feet of line. But if we identify a potential source or a potential site where there may be contaminant, it is not unusual in our practice to require a further excavation on either side of that original excavation pit.

It also leads to us looking possibly further at other areas to confirm that the situation is the same in other areas, or that it may be different in other areas.

Q. Who were you dealing with in 2003-2004 with the Big Island issues?

A. Principally for the developer, Mr. Reggie Golden, his engineer Jim Jackson of Lake Engineering. We had discussions with some of the homeowners, in particular Ms. Cathy Orler, Mr. Ben Pugh. I have seen a name in correspondence, Mr. Benjamin Wier, but I do not believe I've ever had any direct contact with him.

Q. Okay. Did you -- now, when you were looking at these systems and the design of them, you were talking about mains earlier?

A. Yes, sir.

Q. Is there a limit on how far into the system that DNR will examine the design as far as whether it stops at the mains? Does it go into other areas?

A. We do not have any regulatory authority once you depart from the main, from the water or sewer main. In other words --

Q. Go ahead.

A. -- we do not have regulatory authority over service lines running from the supply mains to the facilities being served.

Q. Can you explain what that authority derives from, first of all, in regard to looking at the mains. Where does that come from? Is it statutory?

A. No, it comes from our design guide.

Q. And how is the design guide adopted?

A. The design guide is based on a document known as the Ten-State Standards, which is a document created by the participation of ten states, Missouri being one of those states, in developing a set of guidance materials or guidance criteria for the construction of systems that would be used to supply potable water and take away wastewater.

Those -- that design guide has never been developed into regulation certainly here in Missouri, and I do not believe that any other state has ever formally put it into -- put the design guide into regulation. That's a -- I cannot state specifically that that's true, but I don't know of any other states that have formally adopted the design guide.

Q. So if it's just a guide, how do you enforce it?

A. That's a very good question. We enforce it, we rely on cooperative efforts between the person responsible for the construction and the Department. If they -- if the design guide is not followed, at some point in time it is certainly possible that violations of water quality standards will take place. We at that point in time would have a firm basis on which to levy fines and

penalties because there are actual violations of water quality standards. But with regard to the design guide itself, it is not a regulation.

Q. Do you have to issue permits for construction?

A. Yes, we do.

Q. For these systems like Big Island?

A. Yes, we do.

Q. Do you review a design before issuing that --

A. Yes, we do.

Q. -- license?

If the design does not meet your standards, will that cause you not to issue a license?

A. That is correct.

Q. So in essence, you do have some ability, then, to control the design through that mechanism, do you not?

A. I would say yes.

Q. If -- in the case of Big Island, was this application done for the construction?

A. It was not done prior to the commencement of construction.

Q. Was that a violation of DNR regulations?

A. That was a violation, and suitable for

issuance of a Notice of Violation. At that point of issuance of Notice of Violation, we asked them to suspend operation.

Q. When was that?

A. 1999, I believe.

Q. That was the earlier time frame?

A. That's correct, yes.

Q. Now, finish your answer, then I want to ask you something else.

A. Okay. Where was I?

Q. I may have caused you to have a problem. Sorry.

A. They did not apply for a construction permit prior to commencing the actual construction. We became aware that they were constructing water mains, asked that they cease and submit appropriate construction documents and a formal permit application, which they did. And they delayed the recommencement of construction 'til such time as the construction permit had been issued.

Q. Okay. Explain to me why the -- you were finding a system during the construction phase in 2003 or maybe it's already been constructed in 2003, that violated your design principles. I'm struggling a little bit trying to understand that if they -- during sometime during '99 or post '99 they had submitted plans that were

approved?

A. Yes.

Q. Can you reconcile that for me?

A. I'm not sure what you're asking.

Q. All right. Let me start out this way: Subsequent to '99, when it was discovered that the construction was being done on Big Island without a proper permit from DNR --

A. Correct.

Q. -- I assume that there was a submission of an application and an approval of that?

A. Prior to 1999?

Q. No. Subsequent.

A. Subsequent to, that's correct.

Q. When was that? Do you know?

A. I do not know right off the top of my head when that construction permit was issued.

Q. Is it possible for you to look at records and find out?

A. Yes. Yes.

Q. Do you have those?

A. I believe those records were introduced into the hearing yesterday by our custodian of records. If I might consult them, I can.

COMMISSIONER GAW: That would be helpful,

if that's easy, Judge, to accomplish. Do you know where those are?

MR. COMLEY: Your Honor, I have them and we have distributed them to the parties. They have not been officially offered. We were trying to get the copying done.

COMMISSIONER GAW: We can come back to that. It's not that critical. I'm just trying to get a timeline here.

MR. COMLEY: Unless the other parties object, I don't mind giving those to Mr. MacEachen for his review, if he needs to have them to refresh his memory about things.

COMMISSIONER GAW: That would be the easiest thing. Just whatever works for you-all. You've got somebody wanting to be recognized, Judge.

JUDGE STEARLEY: Mr. Pugh?

MR. PUGH: Mr. Gaw, are you talking about the original construction permit, what date? January 5th of 1999.

COMMISSIONER GAW: Thank you. We'll have to get testimony from the witness, though, Mr. Pugh. Thanks.

THE WITNESS: The Big Island developer applied for a permit on or about -- we received his

application for a formal construction permit on or about October 13th, 1998.

BY COMMISSIONER GAW:

Q. Now, you are currently looking at something in front of you, correct?

A. Yes, I'm looking at --

Q. You're refreshing your memory about when this application occurred?

A. Yes, sir.

Q. What is that that you're looking at?

A. I am looking at a November -- a packet dated November 22nd, 1998 from Lake Professional Engineering to Mr. Breck Summerford, who is the chief of our permits section in the drinking water branch, and has attachments. He -- the engineering company has attached a copy of their construction permit application and a response letter from Mr. Summerford acknowledging receipt of that construction application, plans, specifications, detailed drawings.

MR. COMLEY: If I may, Mr. MacEachen, there should be an exhibit number affixed by our court reporter.

THE WITNESS: Exhibit No. 78.

COMMISSIONER GAW: Thank you. Thank you, Mr. Comley.

BY COMMISSIONER GAW:

Q. Now, does that -- does that correspond with your earlier testimony about being notified that they were proceeding with the construction without a permit?

A. I believe that that postdates our notification of them constructing.

Q. Tell me what you mean by that.

A. In other words, they had already constructed prior to the date of this correspondence.

Q. Okay.

A. Or had begun construction prior to the date of this correspondence.

Q. Do the records indicate when there was actually a permit issued by DNR?

A. If you'll give me just a moment to review this.

Q. Absolutely.

A. This particular document does not indicate a date of approval of the construction permit. Exhibit No. 80, which is a correspondence from, once again, Mr. Summerford to Mr. David Lees, president of the Big Island Homeowners Association, also Big Island West subdivision dated March 7th, 2000, indicates an approval of the submitted plans and specifications and a permit to construct.

Q. Okay. Now, do you have the ability to tell

whether or not the design that was submitted, that was approved according to what you believe you're seeing in those records, that that design was the same or different than what DNR discovered to exist in 2003?

A. I believe that it does not -- what was permitted under this permit number does not conform with what was found in the excavation pits.

Q. So that would -- in other words, the design that was submitted did comply?

A. Yes, sir.

Q. But what actually was done was different and did not?

A. Yes, sir.

Q. Okay. What occurs -- is there an enforcement mechanism for DNR when the actual construction of a water/sewer system is different than what was submitted in the design and approved?

A. There are times when it is because of unknown, unforeseen construction problems. It is certainly permissible to change the actual construction, but usually that is done with an appendage or an appendix to the original construction issuance. In this case, no such issuance was made.

Q. Okay. What's the consequence or potential consequences of that?

A. We ask that -- we ask for voluntary cooperation first. If the party elects not to cooperate, then we withdraw the construction permit, the permit approval. We inform them that they will not be able to dispense water under a routinely issued permit to dispense. If they continue to resist, then we will file a case in the circuit court for dispensing without a permit and for construction because of -- I guess I should say because of construction deficiencies and unapproved construction.

Q. Okay. It seems rather indirect, but is there a -- there a direct mechanism that you can utilize to fine individuals or penalize entities if they do not construct according to the design that was approved?

A. Well, we do not have a direct mechanism in the regulations.

Q. So that's a regulation issue?

A. Yes.

Q. Is it a statutory issue as well?

A. It is a statutory issue. The statute provides the authority to regulate construction and require plans and specifications, but it does not specifically provide language under which we can file a case, if you will. It is a -- it is a gap in the regulation and statute.

Q. Yes, sir. Okay. Now I want to get back to this issue of what design you are actually -- DNR is actually approving and how far it goes. I believe you testified earlier that you do not get to the service line issue?

A. That is correct.

Q. Are the service lines even a part of the design that's submitted or required to be?

A. Generally, the limits of what is submitted with the project drawings and specifications is a plan of what the materials will consist of, what the burial depths will be, where shutoffs will be located, where water provision for water meter installation will be located, where the whole facility will -- where the whole service line will lay with regard to property lines and the service mains, distance from the sewer mains to the property lines, that type of thing.

We review those and make recommendation on them, but we do not have control. If they do not -- if they do not install appropriately, we do not have any regulatory authority in that area.

Q. If they don't design appropriately, do you have any regulatory authority over them?

A. We do not, other than to note -- note this as a potential problem. We cannot deny an application

for -- solely on service line issues.

Q. Okay. Is that an -- if you could, and you feel comfortable doing it, what is it that causes that to be the point of demarcation? Is there something statutory about that or is it a regulation issue?

A. No. No, it is not. It is a practice issue. Well, I guess I could say yes, there is some -- there is some regulation in that we have the authority through the regulations to require construction standards or -- yeah, construction standards on water mains, but not sewer main -- not water service lines. It is not covered in the design guide. It's just not there.

Q. Okay.

A. I guess the philosophy behind that is that we have regulatory authority over that portion of the system that serves the general public, the user public. We do not have authority to regulate what happens with the private aspect of the water system, and a service line, being as how it only serves one household, if you will, that is considered a private portion of a distribution system, and responsible -- either covered -- the responsibility for that is either covered by local ordinance or by private ownership.

Q. What happens if the service lines or a portion of the service lines are not owned by the

homeowner, the entity, but owned by the company itself?

A. Generally, there isn't -- generally there isn't a major problem, as far as we're concerned, with that division of ownership between the entity and the private homeowner. That is something that's under local control and not under state control.

Q. Okay. Do you know in regard to Big Island if there are local ordinances regarding service lines?

A. I know that there are covenants and restrictions relative to the subdivision, but I do not know if those -- I do not recall ever seeing anything in those covenants and restrictions or operating bylaws if they exist pertaining to private service lines. L

JUDGE STEARLEY: Mr. MacEachen, I'm going to pass the court reporter my copy of Exhibit 63 for you to refer to, but I would like it back.

BY COMMISSIONER GAW:

Q. Do you have that in front of you?

A. Yes, sir, I do.

Q. Let's look at the -- let's look at the first page of Exhibit 63, if you would. And without any verification of whether what's on this page is true or false or not, what I'm looking for here is some understanding of and your expertise in regard to proximity of lines and lines over one another, et cetera, that you

were discussing earlier in regard to mains.

First of all, on that first page, those appear to be service lines. Can you tell from looking at the picture?

A. The lines running -- the lines running to the right of the picture?

Q. Yes.

A. And running underneath the larger diameter lines?

Q. Yes.

A. Are sewer -- are service lines.

Q. Okay.

A. Which is water and which is sewer is not readily apparent in this picture, as are the two larger pipes shown in the picture. It's hard to determine from this picture which is which. I would say in my experience that the line, the larger diameter line on the left-hand side of the picture with what appears to be a strap around it --

Q. Yes.

A. -- that may be a sewer line. That looks like a device -- that strapping looks like a device that's typically used for installation of service lines, sewer service lines into water mains. That would leave the line on the right, the larger diameter line on the right to be

a water main.

Q. Okay.

A. But can I absolutely tell for sure? No, I cannot.

Q. If we assume that what you believe to be true is true, first of all, can you tell me in regard to the mains, if those two lines were running in that proximity to one another and/or if a design were submitted to DNR where they were running in that proximity, would that be problematic for DNR to approve?

A. This would be unapprovable. This absolutely would be unapprovable. The two mains are entirely too close together, either horizontally or vertically.

Q. All right. And now I realize you've already said that you don't look at design issues on service lines. If service lines of water and sewer were in that proximity to one another, would the same kind of issues exist in regard to their proximity from a health and safety standpoint?

A. Potentially, yes. I can't rule it out.

Q. If you were looking at the placement of service lines, water and sewer, based upon your knowledge of the potential problems or health and safety that come from proximity, would you recommend putting service lines

in in this fashion?

A. No, I would not.

Q. And why would that be?

A. Because of the proximity and the potential for contamination should the -- should both of those lines break at the same time, and it's certainly a possibility. You can't rule it out.

Q. Okay. I'm venturing into territory that I'm not very familiar with when we turn this page, but if you would look at the second page. There is a representation there about a fitting over a four-inch sewer main and no protective sleeving over a one-inch service line. If we assume that is accurate, is that a problem from DNR's perspective?

A. It certainly has the potential to be problematic, yes.

Q. And explain to me why that would be.

A. There are two points of problem that I see. First of all, the connection that you see at the end of the blue line on the right-hand side of the picture --

Q. Yes.

A. -- that, if that -- if that connection were not absolutely tight, it does represent a potential site for infiltration of sewer -- sewer effluent into the water main. If, in fact, this -- and it's marked on the picture

that this blue line appears to be a water service to the water main. This certainly represents a potential site for a problem if a -- if certain conditions occur. First and foremost would be that if the system had a loss of pressure and went, what we call went negative --

Q. Yes.

A. -- actually developed a vacuum --

Q. Does that occur sometimes?

A. It does occur, yes.

Q. Okay.

A. Yes.

Q. Proceed. Go ahead.

A. If the system goes negative and a vacuum develops within any portion of the sewer, of the water system, there's certainly a risk for infiltration of wastewater effluent into the line by virtue of the vacuum. That's one of the reasons for requiring water -- sewer mains to be placed below.

The principles between water and sewer mains and separation of water and sewer mains applies equally in theory to service lines, but we just -- we don't have the regulatory authority to work or to regulate those service lines. We've never been given that authority.

Q. I understand. Part of the reason I'm

inquiring here is to understand where the line is for you-all.

In the second picture on that second page, there is a representation that there's a four-inch sewer main at a 00 higher on the road and a water main that is represented to be below it. If you assume those facts to be true, if we assume that to be true, is that problematic?

A. Without --

Q. Can you tell?

A. The specific location of the water and sewer mains in this picture are not definitively pointed to, and there is no scale.

Q. Yes.

A. I would -- looking at the picture and making certain assumptions that I might not possibly make, I would require a scale and a specific location.

Q. Yes.

A. The separation of the sewer main and the water main, even though the water main is higher, appears to be something in the neighborhood of ten feet. Once again, it's hard to determine without a scale to the picture, but it appears to be ten feet. That would meet the requirements of the design guide, even though it's stated in the picture water main is actually lower than

the sewer main. You have the ten-foot horizontal separation. Most often that horizontal separation has undisturbed material between, and that undisturbed material acts as barrier to the migration of any wastewater to the potable water supply system.

Q. But regardless of whether that existed or not, the question would be from your standpoint whether or not there was ten feet separation?

A. That's correct.

Q. So the question in regard to whether this picture is problematic or not can't be solved by looking at the picture, you would have to be onsite to see?

A. Yes.

Q. All right. Let's go to -- actually, let's skip the third page. It appears to me to be a larger version of the other picture we saw. I'm not sure if that's accurate or not, but let's just skip it for the time being.

Look at page 4, if you would, and if we assume that the representations on that page in regards to the water service line connection directly above -- let's see. Looks to me like it says reinstall water main at lower road level. Do you see that?

A. Yes, I do.

Q. Can you tell me whether or not you see

anything on that picture that if those representations were true would be problematic from DNR's standpoint?

A. As I've discussed with several people at -- several homeowners --

Q. Yes.

A. -- I would not make this installation.

Q. Okay. And why not?

A. For several reasons. First of all, the piping, the blue piping --

Q. Yes?

A. -- running from the water main up over the sewer main and connecting to the service line to the house, I would be very hesitant to trust that type of pipe. I do not believe that it is what we refer to as 160-pound burst rated pipe. It appears to be a flexible pipe and is probably -- I'm going to -- this is an assumption on my part, but I would say that it is probably an 80-pound rated burst pressure pipe.

Buried in the kind of condition that it's buried in with the amount of rubble and rock that's illustrated in the picture, it certainly represents a potential for rub through and premature failure of that type of pipe.

Q. All right. And if it's true that there's a water main at the lower road level as represented in that

picture, does that add to the concern or not?

A. Once again, as I stated previously, without a scale of reference, I'm -- it's impossible to answer your question. From -- my initial reaction to the picture is that I do not -- I do not believe that there would be a high degree of likelihood that any leakage from the sewer main would infiltrate through the soil profile and reach the water main. The reason that I say that is that most often sewer mains are laid with a gravel, on a gravel base, a fine gravel base or even I've seen it done on sand base, too.

If there is a leakage from the sewer main, it is going -- and this holds true for water mains, too -- it will follow the trench line rather than migrate through an undisturbed portion of soil. Water will always take the path of least resistance, just like electricity. Looking at this picture, from my own practical experience in the water and sewer field, I would say that the likelihood of migration of any leaked sewer effluent to the water main is not very great.

Q. So your main concern here is what appears to be pipe that you would not recommend using?

A. That's correct.

Q. All right. Now, let's turn to the next page. You see there at the top of the page I think it

says 1536 Big Island Drive. Do you see that?

A. Yes, sir.

Q. Let's look at -- and I think if you would assume for me that the second picture is a picture of what lies underneath that plate in the first picture. Could you assume that for me?

A. I can make that assumption.

Q. All right. First of all, looking at the second picture, what is it that you see there?

A. Well, certainly there are two distinct separate pipelines, both of which have valves on them. The pipe on the bottom of the picture, I'm not sure what it is connected to. It's hard to -- it's hard to determine from the picture what that pipe is running into. It's my understanding that most of the homes, most of the residential sites that are connected to the common sewers all have grinder pumps on them and they are pumped from the site of grinding to the sewer main.

What I see in the picture in the bottom picture, the lower pipe, I'm not sure that that's a grinder pipe -- grinder pump. It looks too small, from my experience, to be a grinder pump. So I really can't tell you what that's running into.

Q. Okay.

A. But it may be -- it may be a cast-iron

fitting to make a transition from glue joints, although following that pipe further to the left, it appears that there are other glued joints beyond this point of connection. So I just really don't know what it is.

Q. But you believe that line on the bottom of that second picture is a sewer line?

A. I would conclude that simply because I don't see anything on the top pipe that would indicate that it's anything but a water line. There are no -- there are no appurtenances, if you will, between the valve and the left-hand side of the picture. So I believe it's a straight run of pipe, left to right on the top pipe, but the bottom pipe, there is something there, whether it's a grinder pump or maybe a -- I don't know what it is.

Q. If we assume that one of these lines is a water line and the other one is sewer line, do you see anything about that photograph that would concern you?

A. The top or bottom or both?

Q. Let's talk about the bottom one.

A. Okay. The bottom, certainly the -- once again, the separation between the two pipelines is somewhat a concern. Second concern, and this is probably more major than the separation of, is that these pipes are glued together. They are probably -- in my estimation and experience, they are probably Schedule 80 pipe.

Q. What does that mean?

A. Schedule 80 is a rating system on pipe for pressure, rigidity, wall thickness. Sched -- as we call it Sched 80, Sched 80 is fine for a distance usually about ten feet outside the foundation wall of the house, but Sched 80 should never -- glued piping should never be placed underground, simply because where you have a glued joint, the ground is never steady. It's constantly moving up and down, and particularly in cold weather with the freeze/thaw cycle.

A glued joint in pipe does not flex. The white portion of the piping may flex to accommodate that ground movement, but a glued joint will not flex. So you end up getting a break there that's referred to as a bean break. It's a specific point of breakage. You don't blow out the side or the top or the bottom of the pipe. It breaks at that joint, and we do see that happen quite often. So this does represent a potential for a source of contamination.

Now, I would go further to say that so long as the water system was maintaining 20 or more pounds of pressure per square inch, even if there was a pool of sewage that this line were sitting in and the water mains were made or the water system was maintaining 20 pounds or more, you would not see infiltration into the water line.

Q. Yes.

A. The water would be flowing out and prevent any infiltration of either groundwater -- contaminated groundwater or sewage effluent. Our chief concern is that when systems go below 20 pounds, that's when the problem -- that's when there's a potential for problem.

Q. And again, going below 20 pounds is something that would not be terribly unusual, would it? Let me rephrase that. Is that something that would be foreseeable?

A. It's certainly something that would be foreseeable, yes.

Q. Anything more you want to say about either of those two pictures, including the one at the top?

A. Well, certainly the top, the top picture, if the bottom picture is representative of what's inside, this is what's -- the top picture is what's referred to as a valve box.

Q. Okay.

A. I'm sorry. Not a valve box but a meter box, meter pit type thing. This is marked sewer.

Q. Yes.

A. It may -- there may be a sewer line, there may be a sewer service line down there, but there's also a water service line. And it just -- the labeling in itself

could be a problem.

Q. Why?

A. Because someone unfamiliar with the system could access that, it says sewer, there's two lines down there, they must be sewer. Unfortunately, we -- and I use the word we because I have about 18 years of sewer, water and sewer operation experience.

Q. Yes.

A. We tend to presume what is on the lid is correct unless we find some condition otherwise.

Q. Yes.

A. Looking at this, looking at both pictures from the standpoint of a water and sewer operator, I would pull that -- I would pull that cap in the top picture and replace it with something else, with another form that did not denote a particular type of water system.

Q. All right. If someone worked on the lines or whatever's under this cap that says sewer on it as though both lines were sewer lines, what are the -- what kind of potential problems might occur?

A. Well, first of all, if they were doing any work on what they presumed was a sewer line, they would get a quick education when they cut into that water service line. It's not sewer and they're going to get a face full of potable water, not to mention an upset to the

system, a potential drainage problem, contamination problem. But if a person were working on those two lines and made the assumption they were both sewer, then you could end up with a cross connection. It's undoubtable.

Q. Okay.

A. However, if I may, I will go on to say that most people working in the water and sewer field coming on a situation like this would do a little more investigation before they started arbitrarily cutting into the lines.

Q. Yes.

A. They would want to know exactly what was down there, because it says there's only supposed to be sewer here, and one line certainly could be identified as a possible sewer service. The other one would be real questionable. If I were walking up on this situation and I saw two lines in that meter pit, I would do a little further excavation -- or exploration before I started putting a hacksaw to anything.

Q. And that would be you based with 18 years of experience, correct?

A. Right.

Q. Someone who might be working for one of these entities for the first time might not have that same degree of knowledge?

A. First time, yes.

Q. And that would be part of your concern about even the cross connections occurring?

A. Absolutely.

Q. That would mean the water was flowing into the sewage line and the sewage line was flowing into the water line; am I correct?

A. That is correct.

MR. MILLS: Judge, I don't know if Commissioner Gaw is aware that -- this witness has expressed some difficulty understanding what some of the things are in these pictures. I'm not sure Commissioner Gaw is aware that Ben Pugh, who is a sworn witness in this case, took those pictures and is available here today and could perhaps more fully explain exactly what's depicted there, if that would help in this questioning. Thank you.

COMMISSIONER GAW: And I am not totally aware -- my concern would be whether or not that has -- there's sufficient testimony in the record that identifies those things in these pictures to the level that you've just described.

MR. MILLS: And there is some, but of course, Mr. MacEachen hasn't had the opportunity to hear that, so as he is trying to answer, he doesn't know what's been identified, what hasn't been identified. That's why I brought that point up.

COMMISSIONER GAW: I appreciate it. I'm going to rely on the parties here to properly authenticate and identify these things, because I wouldn't expect Mr. MacEachen to be able to do that. I'm asking him questions as assumptions, hoping that there is sufficient evidence from others that do take care of the authentication issue with the pictures, and that is an important point. So hopefully that's already been done or will be done.

BY COMMISSIONER GAW:

Q. Let's go to the next page of the exhibit. I believe this is the final page of the exhibit. Do you see that?

A. Yes, sir.

Q. There are two pictures on that page. Do you see that?

A. Yes.

Q. Both of them refer to either a Don Bracken property or Bracken property. Do you see that on there?

A. Yes, sir.

Q. Can you tell me what those pictures appear to be, if you know from looking at them?

A. Not with absolute certainty.

Q. Okay. Well, if we -- if we were to assume that those are -- those lines in those two trenches there

are water and sewer service lines, can you make that assumption for me?

A. Yes. Well, they are lines in the ground. Whether or not they're service lines, I can't make that assumption.

Q. Could they be mains?

A. They look a little small. Particularly the lower ones definitely look too small to be water mains or sewer mains, even sewer mains with grinder pumps on them.

Q. All right. So if they were water and sewer lines of some sort, do you see anything in those pictures that causes you concern?

A. Assuming that -- let's talk about the picture on the left first.

Q. That would be great. Thank you.

A. The one marked Don Bracken property, if we make the assumption that the larger diameter line is, in fact, the sewage service line, once again, I see glued joints, which certainly represents a potential for leakage and possible contamination of soil. The lines directly under that larger line I would assume is a water service line and, once again, we have glued joints, what appear to be glued joints, which represent a potential site for infiltration of sewage into the water system.

As I stated earlier, so long as there was a

positive pressure of 20 pounds or more, it would not be a contamination concern, but if for any reason the water system lost pressure or dropped below the 20 pounds, then yes, there certainly is a potential for cross contamination of potable water supply with the sewer supply, sewer waste lines.

Another thing that I observe here is that, once again, it's hard to -- it's hard to delineate what the material is bedded in. I know this is not immediately associated with the pipes themselves, but bedding becomes a very important, almost a critical matter for the long-term expected life of pipe and the prevention of leaks, leak sites where infiltration or cross connection can occur.

I would assume that what I'm seeing here is gravel as a base. Well, gravel might be fine for sewer, but I wouldn't bury water lines, particularly glued joint plastic lines in gravel. I just wouldn't do it.

Q. And why not again? I know this is obvious to you.

A. The gravel represents an abrasion point for the water lines. You have two forces working. You have the abrasion on the outside of the pipe, you have the pressure on the inside of the pipe. At some point the abrasive nature of gravel, which is greater than sand,

which is what I -- if I were putting this job in, I would bury both lines in sand because it's much better and gives a much longer life. The gravel -- with the pressure coming from the inside, the gravel abrading on the outside, at some point, at some time, probably prematurely, the water line is going to break. Then, of course, as I mentioned, glued joints and the unbendingness of the glued joints, it's not best installation. I'll readily admit that.

Q. In fact, would you say this is not -- this is not installation that should be done?

A. I would agree with that, yes.

Q. All right.

A. Yes.

Q. Do you want to go to the second picture yet?

A. The picture on the right?

Q. Yes.

A. I see several problems similar to the previous picture. It's a little hard to tell, are they -- are they both the same area looking from different directions?

Q. It's very difficult for me to tell you that. Perhaps someone on cross-examination will be able to enlighten us in some fashion.

A. Irregardless -- irregardless, I see several problems. Once again, the gravel issue for the bedding material. The second problem I see is the evidence -- the apparent evidence of some glued joints, which is a distinct problem and certainly a source of premature failure. I'm also a little concerned on the larger diameter line about a little over halfway up the photograph from bottom to top, there's a bend in that pipe, and it does not appear to be a glued joint bend; in other words, using a 45 degree angle. It appears somebody just bent the pipe, heated it up and bent it to conform to where the -- the direction they needed it to go.

Q. Is that a problem?

A. That is definitely a problem because of stress factors on the pipe.

Q. What could happen as a result?

A. Blow out. When you stress plastic pipe, you weaken the structural integrity of the plastic and that serves to produce a wonderful point for leakage.

Q. Okay. Wonderful being used very loosely?

A. Very loosely.

Q. Anything else in that picture that you see that's problematic that you want to note?

A. I think the only thing I would note is that I would never put this type of -- I would never put lines

in like this. It's just begging for problems. It's cheap.

COMMISSIONER GAW: Thank you, sir. I think that's all I have right now.

JUDGE STEARLEY: Commissioner Appling, do you have any questions?

QUESTIONS BY COMMISSIONER APPLING:

Q. Good morning, sir.

A. Good morning, sir.

Q. One question.

A. Sir.

Q. Is there anything in the files at DNR at the present time that is still outstanding against Big Island that you-all have?

A. We have not -- we have not performed a final inspection, and -- at this point in time and identified that everything is correct for those portions of the system that we have regulatory authority over. That has yet to be done. And I'm not sure why that has not been done, partially because the engineer -- we have two ways of certifying a project. Either we do it by direct observation by Department staff or we also allow the engineer, the entities, the owner's engineer to submit certification that the system was installed according to the approved plans and specifications covered by the

construction permit.

I do not believe that the engineering firm has done that, and we are still awaiting the -- in part the resolution of this issue to know who to issue the reports to and deem the project complete.

Q. You mentioned this morning that you would not put glued pipes underground?

A. That is correct.

Q. What is the correct way of doing that, a better way than gluing?

A. Well, certainly the best way is to -- if they're going to use small diameter pipe, we would generally recommend, as I mentioned earlier, the 160-pound burst rated pipe that usually comes in fairly long rolls. Therefore, you would connect the pipe to the service connection or to the main, to the water main, and then roll a continuous length of pipe to the point where a shutoff would be installed or on into the house, if there was to be no shutoff installed.

The other way to install pipe would be to use what we call compression joints, compression joint fixtures. For instance, the water shutoff valves to cease or to shut the supply to the house of potable water off, have a mechanical joint -- threaded joints on either end of the fitting that when you tighten those joints, they

compress a ring, a rubber gasketing material against the pipe and establish an almost 100 percent seal that is protected by the fitting itself and the compression couplings that are used to tighten that joint in. It's a much more reliable means of connection of valves.

They also make a connection or a device that uses the same principles to connect two pieces of pipe together. But you just don't put glued pipe in the joint. It's begging for a problem.

COMMISSIONER APPLING: Thank you very much, sir. Thank you very much for volunteering to come over today.

THE WITNESS: Yeah. I was going do say, I'm not sure about the level of volunteering, but --

JUDGE STEARLEY: At this point, Mr. MacEachen, I would open you up for cross-examination based upon the questions from the Bench.

Since Mr. MacEachen is a new witness, we hadn't set an order for that. I will direct the order to be cross-examination by Complainants first, followed by OPC, followed by Staff, followed by 393 companies and finally Folsom Ridge and the Association.

So we will begin with Complainants, Ms. Orler?

MR. MILLS: Your Honor, before you go down

that procedure, if it is going to be your ruling that Mr. Comley will be allowed to read from Mr. MacEachen's deposition, even though he's sitting here in the courtroom with us, I would request that that be done first so that we can hear what Mr. Comley wants to use sort of in lieu of direct examination before we do our cross-examination of this witness.

MR. COMLEY: I would prefer to just talk to Mr. MacEachen and see if he says the same things the other time I had the chance to talk to him.

JUDGE STEARLEY: And that would still reserve your rights as far as entry of excerpts from the testimony of Mr. Finn.

MR. COMLEY: I'll do my best to ask the same questions, and I suspect Mr. MacEachen will do his best to give the same answers.

MR. MILLS: So it's my understanding Mr. Comley is not planning to read from Mr. MacEachen's deposition?

MR. COMLEY: I will in the event if it's for the purposes of impeachment.

MR. MILLS: I have no problem with that.

JUDGE STEARLEY: All right. We will add a round of recross if the parties wish to recross, but we will go in that same procedural order. And we will now

begin with cross-examination by Complainants, beginning with Ms. Orler.

CROSS-EXAMINATION BY MS. ORLER:

Q. Good morning, Mr. MacEachen.

A. Good morning.

Q. Do you recall a series of meetings that were scheduled between myself and Mr. Pugh and there may have been some other residents, between yourself and other members of your department on Big Island at Mr. Pugh's home?

A. I do recall that we have had meetings, yes.

Q. And can you tell me the nature of probably the last two or three meetings that were held?

A. No, I cannot, regrettably.

Q. I'll try to phrase my question to maybe help you. Would the purpose of those meetings have been to bring to the attention of the DNR personnel that attended those meetings that formal complaints had been filed with the Public Service Commission?

A. Yes.

Q. Okay.

A. Yes.

Q. And now that maybe you're recalling some of that, can you remember some of the topics that were discussed in those meetings?

A. I believe that we covered a wide range of topics, primarily focused around the installation of the systems, both water and sewer. I believe we had discussions about the governance of the -- or rather the ownership, potential ownership of the water and sewer systems and the concerns that the -- that you and the other folks that were at the meeting had in the method to provide us with information about what your concerns were and what you had witnessed.

Q. That's -- that's very accurate. Were there also some concerns expressed that construction permits had been issued? And this is a document that was just referenced and entered into evidence.

MS. HEINTZ: Excuse me, your Honor. I don't mean to interrupt, but could we have her comment that Mr. MacEachen's answer was very accurate stricken from the record? I believe that is testimony.

JUDGE STEARLEY: That is testimony and it shall so be stricken.

MS. ORLER: I apologize.

BY MS. ORLER:

Q. Referenced earlier was the Big Island West construction permit issued in 2000, and I didn't get the exhibit number on that.

A. When you say Big Island West, was that the

off-island portion?

Q. No. It was issued in the year 2000, the Big Island West expansion, construction permit to expand the sewer system?

A. You may have -- you may have brought that to our attention. I do not remember specifics of any conversation on that.

Q. Was one of the concerns regarding the issuance of that permit to expand the Big Island West sewer portion a concern that that permit had been issued without the expansion to the current 80-bed sand filter system being completed?

MS. HEINTZ: Excuse me. I'm going to object to that question as well. Mr. MacEachen has testified he doesn't remember the permit process for the extensions.

JUDGE STEARLEY: I shall sustain that objection.

THE WITNESS: I know we had discussions.

JUDGE STEARLEY: Mr. MacEachen?

THE WITNESS: Yes, sir.

JUDGE STEARLEY: I sustained the objection. You are not to answer.

THE WITNESS: I'm sorry.

BY MS. ORLER:

Q. Did we bring to your attention that that issue, that that application might have been issued without the proper expansion being added to the sand filter bed system?

MS. HEINTZ: Your Honor, I'm going to object on the same grounds as my previous objection.

JUDGE STEARLEY: I believe that is correct. It's already been testified to, and I shall sustain that objection.

BY MS. ORLER:

Q. Was the question brought up during these meetings that, by the authority vested with the DNR to issue permits, did DNR not have the same authority to also revoke those permits if those requirements were not being met?

A. I do -- I seem to recall, yes, that we did have some discussion on that.

Q. And can you tell me what DNR's position was on that?

A. I believe that we informed you that, as we have the right to revoke, we also have the right to suspend.

Q. So you're recalling that DNR did say that they had the authority to revoke?

A. I believe I -- I believe that was the gist

of the conversation.

Q. Okay. Now, referring to the settlement agreement that you referred to earlier, is that what you referred to when you said that nothing had been formally signed off on?

A. What I was referring to was any penalties or -- not penalties, I'm sorry, Notices of Violation, formal Notices of Violation from the drinking water branch. I believe that the settlement agreement, while it did contain information -- contain reference and criteria relative to a drinking water system, penalties were primarily -- any penalties were primarily controlled by the water pollution control branch. Drinking water did not seek penalties. I believe water pollution control did.

Q. Would you be notified of those penalties?

A. Yes.

Q. Is there any correlation between the departments?

A. We would -- as part of the settlement, a copy of the settlement agreement to us, we would certainly see that that was a portion of the settlement agreement.

Q. Were you aware that any fines associated with the settlement agreement were paid?

A. I believe that there's a document in the

files indicating that the penalty had been paid.

Q. Are you aware of any negotiations done on behalf of Folsom Ridge to pay a lesser amount?

MS. HEINTZ: Your Honor, I lodged an objection to this line of questioning yesterday on relevance grounds, and I believe that objection was sustained. I renew the objection now.

JUDGE STEARLEY: That objection shall be sustained. I don't see how negotiations over settlement amounts are relevant.

MS. ORLER: Okay. I apologize.

BY MS. ORLER:

Q. Mr. MacEachen, can you tell me prior to the construction of the central utility -- prior to the construction of central utility on Big Island, was there any other central utility system prior to the construction of the present utility system by Folsom Ridge?

A. I'm not -- I'm not aware that there was. There may have been at some point in time, but not to the extent that there currently is a system, simply because if there was a system prior to the existing system, we did not know -- drinking water branch did not know about it, it may not have met the definition of a public water supply, or we might not -- we may not have found the facility.

Q. So would it be fair to assume, then -- and I'll probably get an objection because I'm going to make a reference to service lines -- that the service lines that are in question today, that there were no other service lines in existence prior to the ones in question today?

MS. HEINTZ: And I will object. This is not relevant again.

JUDGE STEARLEY: Mr. Comley?

MR. COMLEY: Also misstates the record. The record has already indicated by direct testimony of a witness that those service lines were in existence.

JUDGE STEARLEY: I shall sustain.

BY MS. ORLER:

Q. If there was not a central utility in existence prior to the utility that Folsom Ridge constructed, would there be pre-existing service lines that had both water and sewer installed correctly or incorrectly in a trench?

A. If there were, I have no knowledge of that fact.

Q. Okay. Now, as a part of your answer, you indicated earlier that part of the determination for ownership of service lines is referenced in the amended and restated covenants and conditions?

A. I'm assuming that there would be, since

that's typically where I have seen such reference in other subdivisions, not just Big Island.

MS. ORLER: Okay. I'm still learning at this process. I know this was entered into evidence yesterday by the Respondents. It's a copy of the amended and restated declarations of the covenants and conditions, but I don't know the exhibit number.

May I show this to Mr. MacEachen?

JUDGE STEARLEY: No. We need to identify the exhibit, and it appears your exhibit has markings on it and I need a clean copy of that exhibit.

MR. COMLEY: Your Honor, it's on the back of Ms. Brunk's direct testimony and I have no objection to reference to that, if she can find it. It's, I think, Mrs. Brunk's Schedule 4.

JUDGE STEARLEY: If we can find a clean copy of that.

MS. ORLER: May I take this to Mr. MacEachen?

JUDGE STEARLEY: If you will bring it to me first. All right. Yes, you may.

BY MS. ORLER:

Q. Mr. MacEachen, can you please read Article 1, Section 1 with regards to access easements, please?

A. Access easements shall mean and refer to those access easements upon the property or lots necessary to perform the duties and functions of the association, so as to permit it to operate the water system and sewer system. Also such rights, privileges and easements shall be nonexclusive easements over and across the lots for purpose of permitting the operation of water system and sewer system.

Q. Thank you. Now, could you please turn to, this will be page 4 of BB Schedule --

A. I have it.

Q. Okay. Can you familiarize yourself with Section 2, please?

A. All right.

Q. Thank you. I know this is rather lengthy. There's several sentences and -- just a couple of very lengthy sentences, but could you read beginning with Section 2 and finishing the first two sentences that end just prior to the word damage, please.

MR. COMLEY: Your Honor, I'll object to the use of this document and having the witness read from it. It has already been admitted into the record and it speaks for itself. Mr. MacEachen does not need to read it any further.

JUDGE STEARLEY: I will agree and sustain

that objection.

Ms. Orler, you may ask questions regarding what is there, but the document is in evidence and we don't need to have a separate rendition of that entire passage.

MS. ORLER: Thank you. I apologize.

BY MS. ORLER:

Q. Does Section 2 indicate that the Association shall have the right to access each lot for any maintenance or repairs that the Association is either obligated to or likes to perform?

MR. COMLEY: Your Honor, I'm going to object again. I think that the terms of the document speak for themselves, and having Mr. MacEachen interpret them is really beyond his experience and expertise in connection with this case.

JUDGE STEARLEY: I would agree. I believe that's calling for a legal conclusion, and I will sustain that objection.

BY MS. ORLER:

Q. Let's move to Section 3, and could you please familiarize yourself with that paragraph, please?

A. All right.

Q. Thank you. If an owner has the responsibility for their service lines, has the

responsibility for service lines that are lying within the interior of their lot but there is a portion of service lines outside that lot area, would it then be the company's responsibility?

MR. COMLEY: I'll object on grounds that this is asking the witness for an interpretation of a restricted document on record at Camden County. I don't think the witness is qualified to make that interpretation, and again, I think the Court is correct, legal conclusions are being sought from this witness.

MR. MILLS: Your Honor, Commissioner Gaw asked the very same type of question with respect to whether DNR would be concerned if a portion of a service line was in the responsibility of the company. I think this is a fairly similar question, and there certainly was no objection to Commissioner Gaw asking it, and I think to the extent it was relevant then, it's relevant now.

MR. COMLEY: If it's been asked and answered, there's no need to ask it again.

MR. MILLS: It's not the exact same question.

JUDGE STEARLEY: I think that's the exact issue, Mr. Mills. It's not the exact same question. The concerns of Mr. MacEachen from the DNR's perspective are not the same as interpreting a legal contract and asking

for a legal opinion. I will sustain the objection.

MS. ORLER: May I ask a question, your Honor?

JUDGE STEARLEY: Of whom?

MS. ORLER: Of you.

Mr. MacEachen earlier testified to the fact that if there was a portion of the service line that -- the question that Commissioner Gaw asked Mr. MacEachen was with regards to whose responsibility these services lines were, and Mr. MacEachen's answer was it would be dependant upon the reading of covenants and conditions to make that determination. So I'm trying to find out from Mr. MacEachen, according to this, what DNR's responsibility is.

JUDGE STEARLEY: Mr. MacEachen has already testified as to what DNR's responsibility is with regards to the service lines.

MS. ORLER: Is that not determined by this (indicating)?

JUDGE STEARLEY: That's determined by DNR. He's already testified to that fact.

MS. ORLER: All right. Thank you.

BY MS. ORLER:

Q. That's all concerning this document.

I think this question could be similar to

what Commissioner Gaw had asked. If a design is submitted to you and approved, but then upon construction is not followed, how are you made aware of that?

A. Generally we are made aware of that by inspection by field staff, periodic inspection by field staff of the level of construction, the point at which construction has progressed. As an alternative, the company's engineer, a certified professional engineer, can also make that same finding and report it to the Department of Natural Resources.

Q. Is that an independent engineer?

A. He works for the company, but he is a licensed professional engineer and he has -- as part of his licensing, he has an obligation -- he will be certifying, it will be his name on the signoff sheet. He will be attesting to the fact that the project was constructed as approved. If he does not follow his professional ethic, then he may have issues with the licensing board.

I would assume that irregardless of who the engineer works for, as a professional, he would provide factual information that would be consistent with his ethical and legal requirements as a certified -- as a registered engineer.

Q. Thank you. Now, with regards to the

periodic checks, field checks that DNR does, what frequency is periodic?

A. We don't establish after so many days typically. There is an -- because of -- because of staffing constraints, because of the number of projects assigned to a particular regional office to oversee, there may not be an established schedule of frequency.

Q. Thank you. So with regards to the DNR violations that have been associated with the system on Big Island, can you tell me how DNR has been made aware of those violations? Has it been through these routine periodic field checks? Has the majority of those violations been made to DNR by residents or homeowners?

A. I would say the majority of the reports -- and I hesitate to use the word reports because report implies that it was an official communication, Department-sanctioned communication. I would say that the residents have done the substantial portion of the reporting of concerns --

Q. Very good.

A. -- to the Department. And in light of those concerns, we certainly have, to the best of my knowledge, as quickly as possible provided a staff engineer or a field representative to go out and examine the facts of the case or the facts of the issue reported.

Q. Thank you. You discussed pressure on the system following -- you discussed the pressure of the system falling below 20 pounds of pressure. And you are made aware of this pressure loss through reporting mechanisms; is that correct?

A. Yes.

Q. And from whom do you receive these reports?

A. We generally receive those from either the owner of the system or from the certified operator who is operating the system. We -- because of staff limitations and the number of systems being regulated, we have to rely on -- we have to rely on systems self-reporting when problems arise.

If, on the other hand, we received a complaint from a resident or a person occupying a service connection or using a service connection, we, of course, will follow up on that complaint, do a complaint investigation, make recommendations, determine what the problems are, make recommendations to the owner or responsible party on the system.

Q. Now, with regards to the reports that you receive either from the company or from the person or contractor in charge of that, what would you say the lag time is between the time that the report is generated and the time that it's received by DNR and reviewed?

A. I don't know that I can put so many hours, so many days. It depends. It depends on several factors, chief of which is how many other complaints are -- not necessarily associated with the Complainants' system, but how many complaints we're receiving, how many other problems we're having with other systems.

Generally we try to get to complaints as quickly as we can. Of course, we have to establish a hierarchy of importance, if you will. Certainly an identified, fully recognized and established exceedance of a maximum contaminant level for bacteriological quality is going to take a higher priority than a leaking service line, to use two examples. We try to get to all complaints as quickly as possible, but we don't have a set number of days, hours, as policy.

Q. Just hypothetically as a ballpark, are we talking about a week? Would we be talking about 30 days, 60 days?

A. Hopefully it would not be more than a week, and in most cases it is less than several days, two days or less. But a lot of it depends on what the conditions are at the time for the regional office staff, the field staff and what problems they're already encountering and dealing with. We like to believe that we're always there within hours, but the reality of the situation is there's

not enough of us to be there within hours in all occasions.

Q. All right. Thank you. Now, can you tell me what would be an alerting factor or what would trigger, then, after having received so many reports of low water pressure that would prompt DNR then to do something further with regard to correcting that issue?

A. Are you asking how many times --

Q. Either --

A. -- complaints would have to be lodged?

Q. Yes. If you're receiving reports regularly and monitoring or reviewing these reports regularly, what about these reporting mechanisms might trigger further action by DNR?

A. I don't think we -- I don't think we set a, well, you've got to have five reports before you go out.

Q. Thank you.

A. We try as much as possible to respond to each report of a concern in a manner and a time frame as quickly and as fully as we can.

Q. And then when you go out, as you say, are you contacting then either the contractor or the company to meet you there and discuss the nature of your visit in going out?

A. Our first -- our first contact would be the

person making the complaint to identify exactly what the complaint was, what the situation was. We would follow up on the areas of complaints as expressed, and then go to the owner or the contractor with the concerns, with our concerns as well as the residents' concerns.

There may be times when we do not do that immediately because of other situations, and because it may not be as important as, for instance, a system-wide fecal coliform contamination. I'm sorry, but we're going to drop your complaint. We won't forget it, but we will drop your complaint if we have to rush to a site where a community is in danger of microbi-- complete microbiological contamination.

Q. Is the Lake area somewhat unusual in that there are heavy usage periods, let's say, for example, on holiday weekends versus through the week? Is that something you can address?

A. Well, I would have to -- I would have to say that there certainly is a greater potential on weekends at Lake of the Ozarks, but that potential also exists at Lake Taneycomo, Lake Pomme de Terre. Anywhere there's a recreational -- where recreation is the focus of activity, yes, weekends are going to have higher levels of usage. Will that higher level of usage produce higher potential for problems? In some cases, yes. In some

cases, no.

Q. And would that also equate to maybe a little bit more lengthy lag time in the reporting simply because it's holidays, weekends --

MS. HEINTZ: Your Honor, I'm going to object to this line of questioning. I don't see the relevance of the lag time of the DNR responding to its complaints and whether or not the area that it's responding to is recreational is relevant to the issues to be decided by the Commission.

JUDGE STEARLEY: Ms. Orler, your response?

MS. ORLER: I think it is very relevant, your Honor, and I made that comment in my opening remarks, that for us living in areas that are recreational areas, this is a given. And I can tell you from living where I live that you can almost expect --

MS. HEINTZ: Your Honor, this is testimony. This is not responding to the relevancy issue.

JUDGE STEARLEY: I would agree, and perhaps I can help. The adopted issues list in this case involves determining the Public Service Commission's jurisdiction, if there needed to be a certificate of need and necessity issued, and with regards to the transfer of the utility. An in-depth exploration DNR's response times to calls I don't see how relates to the issues that are before the

Commission.

MS. ORLER: I think I can rephrase my question.

JUDGE STEARLEY: All right. You may rephrase.

BY MS. ORLER:

Q. Based on your answer, if you do see an increase during weekend summer hours, would that then be a responsibility going back to the company and the contractor responsible for the loss of water pressure to put some type of protocol in place to be proactive to this situation?

MS. HEINTZ: Again, your Honor, I don't see the relevance of this questioning to the issues being decided by the Commission.

JUDGE STEARLEY: I don't either, and I'm not sure Mr. MacEachen could answer that question. I will sustain it.

BY MS. ORLER:

Q. You mentioned shutoffs also earlier. Can you tell me the purpose of shutoffs within our utility system that we have on Big Island?

A. My previous reference to shutoffs was a mechanical device by which you can restrict or cancel the flow, stop the flow of water from the public system into a

privately owned -- a privately owned facility.

Q. And under what conditions might that be necessary?

MS. HEINTZ: Your Honor, I'm going to put in another relevance objection here.

JUDGE STEARLEY: Before I rule on that objection, would you please repeat the question for me, Ms. Orler?

MS. ORLER: I can. Under what conditions might it be necessary to utilize a shutoff valve?

May I tell you the reason why I'm asking about shutoff valves?

JUDGE STEARLEY: Give me an idea of where you're going with this line of questioning

MS. ORLER: Engineering staff have already determined that we are lacking in shutoff valves with our system.

JUDGE STEARLEY: I don't believe that is evidence in record. I'm going to sustain the objection.

MS. ORLER: It's been provided in testimony.

JUDGE STEARLEY: Whose testimony is this provided in?

MS. ORLER: Martin Hummel's.

JUDGE STEARLEY: Martin Hummel did not

offer testimony in this case.

MS. ORLER: It was part of Jim Merciel's testimony.

JUDGE STEARLEY: I don't believe what's attached to Mr. Merciel's testimony is additional testimony. I believe there's an investigative report.

MS. HEINTZ: And at this point Mr. Merciel's testimony has not been offered or received into evidence.

JUDGE STEARLEY: That's correct. And you also have the opportunity to cross-examine Mr. Merciel.

MS. ORLER: All right. I apologize. I would like to try to ask one more question.

BY MS. HEINTZ:

Q. With regards to shutoff valves, if they are buried, does that have an effect on their capability?

MS. HEINTZ: Your Honor, I again will raise a relevance objection to this question.

JUDGE STEARLEY: Ms. Orler?

MR. MILLS: Your Honor, I assume that Ms. Heintz is prepared to and will be offering testimony in this case that talks about shutoff valves. For her to object to its relevance when she's going to be offering Mr. Merciel's testimony that has a report attached to it that talks about a deficiency in shutoff valves to me is

somewhat disingenuous, unless she's not planning to offer that portion of the testimony.

MS. HEINTZ: Your Honor, we are being asked to -- the Commission is being asked to decide whether, A, it has jurisdiction over Folsom Ridge and, B, whether or not the transfer of assets to the 393 companies is appropriate and in the public interest.

Shutoff valves have nothing to do with either one of those issues.

MS. ORLER: May I respond?

JUDGE STEARLEY: Yes, Ms. Orler.

MS. ORLER: Mr. McDuffey testified yesterday to questions asked of him by Commissioner Gaw with regards to shutoff valves and the Stoyer Springs leak.

MR. COMLEY: That's a mischaracterization of his testimony. I think the testimony was that there are shutoff valves for each and every residence connected to the system.

JUDGE STEARLEY: That was the testimony. I'm going to sustain the objection.

MS. ORLER: Then that's all I have. Thank you.

JUDGE STEARLEY: Thank you.

At this point in time we've been going

approximately two hours, but I am going to take a short intermission at this time.

(A BREAK WAS TAKEN.)

JUDGE STEARLEY: All right. We are back on the record, and I believe we just concluded with Ms. Orler's cross. We're continuing with the cross-examination of Mr. MacEachen from the Department of Natural Resources. Mr. Pugh, it is your opportunity to cross-examine.

CROSS-EXAMINATION BY MR. PUGH:

Q. Mr. MacEachen, we meet again.

A. Good morning.

Q. Commissioner Gaw covered pretty much everything I intended to ask you today. I do have a few questions that I don't think have been covered.

In your testimony with Commissioner Gaw, you are -- you made it real aware that you're knowledgeable about the initial start of the sewer and water lines on Big Island without a permit back in late 1998?

A. Yes, I'm familiar with it.

Q. The question I want to ask you is in reference to that. Do you have any idea how many -- well, do you have any idea how many feet that they got before they were stopped by Mr. Summerford?

A. No, I do not know the number of feet specifically.

Q. Would 4,600 feet surprise you?

A. It would not surprise me. It would not surprise me. I know that there was a substantial amount of pipe laid. I don't believe I ever heard 4,600 lineal feet, but I know there was substantial pipe laid.

Q. Is that -- in my opinion -- can't do that.

Is -- does it seem odd to you that they could get 4,600 foot of pipe laid in without the DNR inspection catching that?

MS. HEINTZ: Your Honor, could I raise a relevance objection to this line of questioning? I don't see how this is relevant to the issues being decided by the Commission.

JUDGE STEARLEY: And I'm not sure that 4,600 feet are facts in evidence at this time.

MR. PUGH: Yes, sir, they are.

JUDGE STEARLEY: In what portion of the admitted evidence?

MR. PUGH: It's in my evidence on Schedule 2, which I don't have mine marked with your numbers, but it's my second schedule. I think it's in a letter from Mr. Jim Jackson.

JUDGE STEARLEY: All right.

MR. PUGH: About two pages back on Schedule 2.

JUDGE STEARLEY: I do believe Schedule 2 was admitted. I have that marked as Exhibit 60.

MS. HEINTZ: Yes. And I believe this was all admitted except for the technical drawing.

MR. PUGH: That is correct.

JUDGE STEARLEY: Okay. Very well. That is facts in evidence. As far as its relevancy, though, if you would please repeat your relevancy objection, Ms. Heintz.

MS. HEINTZ: Yes. I don't see how many feet of pipe got laid before DNR stopped the proceedings, which apparently is what's being alleged here, is relevant to the issues that are being decided by the Commission.

JUDGE STEARLEY: And I will sustain that objection. The testimony has already been provided with regard to DNR stopping the process and getting an operating permit in, and the amount of pipe is not relevant. So I will sustain.

BY MR. PUGH:

Q. In reference to one of two major sewer leaks we had on Big Island, would you consider 76 days a long time for -- a long time lapse before a repair?

MS. HEINTZ: Your Honor, I believe this

question assumes facts that are not in evidence.

MR. COMLEY: There's been no establishment that there were sewer leaks.

JUDGE STEARLEY: I will sustain.

MR. PUGH: Your Honor I'm referring to the Stoyer Springs leak from the filter bed. That's what I'm basically referring to. Now, that has been in evidence.

JUDGE STEARLEY: If you'd like to ask a specific question with regard to that, you may. It will still be subject to any appropriate objections from the other parties.

BY MR. PUGH:

Q. Referring to the Stoyer Springs leak, which was a sewer leak --

MS. HEINTZ: Your Honor, I think that's testimony. I object to that statement.

MR. COMLEY: Again, it's mischaracterizing the testimony. It's his conclusion about what the testimony was. It's argumentative.

JUDGE STEARLEY: Could you rephrase, Mr. Pugh?

BY MR. PUGH:

Q. Are you aware that it took 76 days to repair what is referred to as Stoyer Springs leak?

A. No, I am not.

Q. Would that be an excessive time for repair, I mean, before -- a lapse between the time it was reported to the time it was repaired?

A. I would say -- I would say that that is excessive. I would have to know more about the situation. It is a long time to respond.

Q. Thank you. That's all I was trying to find out. In your testimony with Commissioner Gaw, you referred to this bunch of pictures with the blue lines; is that correct?

A. Yes.

JUDGE STEARLEY: Will Mr. MacEachen need the pictures before him for your questions? If so, I've got a copy right here.

MR. PUGH: Thank you. I appreciate that.

BY MR. PUGH:

Q. I felt that Commissioner Gaw went over this pretty thoroughly, but I do have a couple of questions. Let's go to the picture of the -- I think it's page 2 of Big Island causeway, the view of the two roads.

A. I have it.

Q. If you as an engineer was installing this sewer and water -- let me rephrase that.

If you as an engineer were reinstalling the lines for separation, would you have put the water line

below the sewer line?

MR. COMLEY: I'll object to the question on the ground there's no foundation for this witness as an engineer.

JUDGE STEARLEY: I will sustain. And I also believe Commissioner Gaw asked a similar question which Mr. MacEachen responded to regarding the placement of these lines based on what he could interpret from the pictures.

BY MR. PUGH:

Q. Would you go to the next picture please, the complete blue line going down the lower road?

A. Is this the picture you're referring to?

Q. Yeah. That's it.

A. Okay.

Q. Sorry about that. In your testimony with Commissioner Gaw, you mentioned that an ideal situation is for there to be virgin soil between the sewer and water lines, or you didn't use the word virgin, compacted soil or undisturbed soil, I guess is what you used; is that correct?

A. What I used was undisturbed soil.

Q. That's right.

A. Yes.

Q. You mentioned undisturbed soil between the

sewer and water is much better than disturbed soil; is that correct?

A. That is correct, yes.

Q. Okay. Are you aware that on the island -- the causeway -- I'm sorry -- on the causeway where these blue lines are running down from -- or are running down from the top road down to the lower road, that there's probably -- I can't give you the exact amount -- there's probably five lines which have disturbed soil?

MR. COMLEY: I'm going to object to the question on grounds that it does assume that these facts are true, and on that ground, I would object to the question.

JUDGE STEARLEY: Mr. Pugh, would you like to respond to Mr. Comley's objection?

MR. PUGH: I believe it's very pertinent to the reason why we're here.

JUDGE STEARLEY: I believe Mr. Comley's objection was it was assuming facts not in evidence. Am I correct in that, Mr. Comley?

MR. COMLEY: My recollection is there has been no testimony in the Complainants' case or I think in any other testimony that establishes the number of areas he's talked about in his question and where undisturbed or disturbed soil might be in the causeway.

JUDGE STEARLEY: Mr. Pugh, I'm going to sustain the objection. You can ask a question with specificity to this picture that you're having the witness examine.

BY MR. PUGH:

Q. This picture with the line running from the top road down to the bottom road, when they file this -- when they fill over this blue line, is that a good place for water or any liquid to travel, if there was -- there was water in the upper -- in the upper road or sewage, would that disturbed dirt make a good path to get down into the water, the water line?

A. There's -- it's difficult to answer your question based on what I have before me, the picture that I have before me.

Q. Yes.

A. I do -- I don't know whether the soil underneath that blue length of pipe going up what appears to be a grade is undisturbed or it's been disturbed in the past. Was this a trench that was dug down to a certain level to place the blue line? I don't know. So I can't -- I can't answer your question based on what I have to work with here.

Q. Are you aware that there was no cutouts before this reinstallation process?

MR. COMLEY: I'm going to object on the same grounds. I don't know exactly what Mr. Pugh is referring to as cutouts, and I don't know if there has been any testimony that there are cutouts in the systems.

JUDGE STEARLEY: I will sustain.

BY MR. PUGH:

Q. Does disturbed soil make an easier path for water or sewer water?

A. Yes. It has the potential to more readily accommodate flow through the soil profile, very definitely.

Q. Thank you, sir, finally.

JUDGE STEARLEY: Mr. MacEachen, is your microphone turned on?

THE WITNESS: I think it is.

JUDGE STEARLEY: Okay. I was having a little trouble hearing that response. I apologize.

THE WITNESS: Would you like me to repeat my answer?

JUDGE STEARLEY: No, I've got it.

BY MR. PUGH:

Q. Mr. MacEachen, has the settlement agreement been finalized?

A. Yes. As far as finalized, the settlement agreement has been signed by all the parties. That would

be what I would define as finalized. Now, are you meaning that or are you meaning has it been completed, all the tenets or all the provisions of the settlement agreement fulfilled?

Q. Why would you sign a settlement agreement before all these tenets were fulfilled?

MR. COMLEY: Objection. It's argumentative, and I don't think that -- I'm confused by the question myself.

JUDGE STEARLEY: Could you rephrase, Mr. Pugh?

BY MR. PUGH:

Q. You just stated that the settlement agreement had been finalized with signatures, and I've got the -- I got the impression from your answer that there was other work to be done; is that correct?

A. If I understand your question correctly, the settlement agreement is signed before any work is done, because it lists -- if you will, it's a road map to what must be done with key points at which items are to be completed. So all parties have to sign and acknowledge that they accept the terms of that settlement agreement before anything commences, any work commences.

Q. Thank you, sir. That clears up for my own knowledge. Thank you.

What would be your definition of a professional installer?

A. A professional installer would be a person who has demonstrated a knowledge of construction technique and has performed construction in a manner consistent with appropriate construction -- those appropriate construction techniques. I would have to say that a person fulfilling that would also be bondable and would carry some level of insurance for work done.

He would -- we do not in the state of Missouri, we do not have a licensing or registering method for contractors. So in the true sense of the word, there would not be a certified installer. That portion of the -- of water and sewer work installation work is not regulated by anyone, but you certainly wouldn't as an installer, you certainly wouldn't go into a situation in which you had question as to whether you had the equipment or the capability to deal with rock and rubble. You just wouldn't do that and expect to come out with a profit.

Q. Thank you. Would you -- would you consider the crew that installed the first Phase 1 installation, would you consider them professionals?

MR. COMLEY: Objection, there's no foundation for that question.

JUDGE STEARLEY: Mr. Pugh, do you have a

response to Mr. Comley's objection?

MR. PUGH: Yes, I do, your Honor. In some of the testimony by I believe it was Mr. McDuffey, he referred to the Big Island installation being done by professionals, professional installers. I believe he made some mention about professional installers would not have any problem with manhole covers that weren't marked properly and that is the relationship. That is what I'm referring to.

JUDGE STEARLEY: All right. Ms. Feddersen, could you please read back Mr. Pugh' questions.

(THE REQUESTED TESTIMONY WAS READ BY THE REPORTER.)

JUDGE STEARLEY: I don't believe that that prior testimony lays a proper foundation for that type of question, and I'm going to sustain the objection.

MR. PUGH: Very good. I believe that's it.

JUDGE STEARLEY: Thank you, Mr. Pugh. Cross-examination, Ms. Fortney?

CROSS-EXAMINATION BY MS. FORTNEY:

Q. I have just a couple questions for you. Has the settlement agreement been fulfilled?

A. I don't believe that there has been a final inspection as required by the settlement agreement, by DNR engineers at this time.

Q. Is that the only remaining task?

A. So far as I know at this time, yes.

Q. Okay. Do you know when or about that might be done?

A. I do not. I'm not aware that there has been a scheduling established for that inspection.

Q. Earlier you were talking about the pipes that were glued together and with water pressure loss that there's a potential that over time there could be leaks. Is there a way that you could detect those leaks before it gets too far? Because it seems like those leaks might be small until a certain amount of time and then, before you know it, you wouldn't know it for a long time before the problem is there. And if there's a lot of times like that, is there a way to detect the water leak?

A. Before I answer, I need to ask a question of you. Are you referring to water pipe or are you referring to sewer pipe?

Q. Water.

A. All right. Water pipe there are methods by which you can detect and locate -- or rather locate, pinpoint and schedule repair of metallic pipe. Metallic pipe will resonate a sound through the ground at the leak point that can be picked up with earphones and what we call a geoscope.

With plastic pipe such as this, it's not easy to detect those leaks. Therefore, the only real way on the majority of plastic line leakage to find the location of a pipe leak, unless you've got a really good leak locater and detector, is to wait for it to surface, and some of those leaks may never surface until you have a full rupture of the pipe and a massive quantity of water coming out.

Q. So that's the only way that you would be able to detect it?

A. In this particular case, I would say that's true. If, on the other hand, the service lines and the mains were metallic, cast-iron water mains, copper service lines as I said, they will resonate a sound that can be picked up by geophones, geoscopes, and a trained leak detection specialist can pinpoint those types of leaks pretty quickly.

Q. Would water meters help?

A. Water meters would definitely help, yes. Water meters become a very critical issue in the management of a water system, primarily because if you -- you should have a water meter at the well, at the source that measures so many gallons or cubic feet in a given period of time. Then you can compare that with the number of gallons or cubic feet billed for in that same period of

time. If, for instance, you pump a million gallons of water out of the ground to the system and you're only billing for 500,000 gallons, then you've got a leak and it's a pretty substantial leak.

MS. FORTNEY: Okay. Thank you.

JUDGE STEARLEY: Thank you, Ms. Fortney. Cross-examination, Office of Public Counsel?

MR. MILLS: Just a few.

CROSS-EXAMINATION BY MR. MILLS:

Q. Good morning, Mr. MacEachen.

A. Good morning.

Q. Do you still have the pictures we were discussing earlier?

A. Yes, I do.

Q. I'm talking in particular the one full page picture that shows some blue pipe in it. Had you seen that picture before today?

A. I have, yes.

Q. Is that a picture you discussed during your deposition, do you recall?

A. I believe we -- I believe we touched on that during deposition, yes.

Q. And when you were just responding to questions by Mr. Pugh, did you say that you could not tell what material that was buried in?

A. I can't -- I can't determine whether that is under -- or is undisturbed soil or whether it may be compacted soil. From what's available here in this picture, I can't make that determination.

Q. Now, in your deposition you said, with respect to what I believe is this picture, I would not bury it in rock and rubble as you see here. Is that the same picture you're talking about.

Q. That is the same picture, yes.

Q. And so it's your testimony that that pipe is buried in rock and rubble?

A. There's certainly rock and rubble potentially around or at the sides and ultimately at the sides and above the pipe. What is below, there's certainly rock below. You can see several outcroppings, minor outcroppings of rock. Whether the soil underneath that pipe is undisturbed its entire profile, I don't know, but what I see in this picture for material to potentially be put back over that pipe for burial, yes, I would define that as rock and rubble.

Q. Now, with respect to construction of water and sewer mains, would part of the permitting process, would the applicant have to state what sort of backfill that the construction process would use?

A. I do not believe that our permitting

process requires the owner or engineer to specify what type of material is going to be used to fill the trench back in. I believe that's -- we rely on their own professional judgment as to the suitability of the material.

Q. I believe you testified earlier -- and I may be paraphrasing -- that you believe best practices would be to use sand for both water and sewer; is that fair?

A. Sand for that portion immediately under. Ideally both water and sewer -- well, I wouldn't say ideally. In my professional experience as a water and sewer superintendent, my requirement, my own personal requirements for the systems I managed was at least six inches of sand under either water or sewer mains, followed by another application up the side wall and at least six inches of covering of sand, and then -- and then go ahead and pull material excavated previously to form the trench to be placed back over the sand.

There is no written requirement for that in the design guide, in the drinking water design guide. I don't believe there's a similar requirement in guidance from water pollution.

Q. Is that -- the process that you just described, is that the process that is typically used in

the state of Missouri?

A. I don't know that I would say it's typically used. I would say the better operated companies do that, such as Missouri-American, larger companies. Missouri-American to name one, municipalities, a number of municipalities follow that process. But is it typical? I guess I would -- I don't feel competent to answer that.

Q. Commonly used, but not necessarily used in the majority of instances; is that how you would categorize it?

A. I would agree with that, yes.

Q. Now, with respect to the blue pipe that's on a number of those pictures, can you tell from your experience and simply by looking at the pipe and its color tell what kind of pipe that is?

A. Well, the one thing I can state without -- or with a high degree of certainty is that it is plastic pipe.

Q. Okay.

A. All right. I would further state that I believe it to be what we call rolled flexible plastic pipe. As to the burst rate, the rated burst pressure, there's nothing in the pictures to indicate what that -- what that rating is. As I testified previously, they're usually 80 pounds, 80 or 84 pounds pressure burst rated,

and 160 pound pressure bust rated pipes. And all those really are is related to the wall thickness of the pipe, which I can't tell from this picture.

Q. If that pipe -- you can't tell from the pictures that it's more flexible than typical polyvinylchloride pipe; is that correct?

A. Oh, it is definitely more flexible than typical PVC. PVC tends to be rigid. This is a -- this is not true PVC. It is probably a -- what we call an HDPE, high-density polyethylene or it could be an HPCL. I can't tell you what the HPCL stands for off the top of my head. It is definitely a much more flexible pipe than PVC is. PVC is a term that's loosely used as a catchall phrase to apply to a lot of different pipe which may not be PVC.

Q. Now, assume for me that that pipe is, in fact, a burst strength of roughly 80 PSI. What specifica-- what burst strength specification does DNR require for water mains on a system such as the one on Big Island?

A. We actually for the mains, for larger diameter mains, we use a whole different rating structure. It's based on what's called an SDR categorization. SDR relates to the relationship between the thickness of the side wall of the pipe as opposed to its diameter. That gives a certain -- that gives a certain quality to the

pipe in terms of the amount of pressure that it can bear before it will fail. It also relates to the amount of overburden that can be put over the pipe without fear of either collapsing it or ovaling it.

Most often in our reviews, we look for an SDR 21. It's hard to explain that ratio to you, how they devise that ratio. I'm not even sure I could define for you how that 21 nomenclature is come to, but it's -- it's generally a much thicker-walled pipe than any service line pipe, simply because it has to carry a wide range of pressures and pressure fluctuations, and it usually has to maintain not only a soil overburden, but also a pavement overburden and the traffic traveling over it because, quite frequently, most water mains water and sewer mains are buried within the limits of a roadway or certainly within the limits of the right of way associated with that road.

So it has to have a different pressure rating category or process than service mains, which typically run outside the limits of pavement and do not carry the load weight that a paved surface would.

Q. Okay. Now -- and you may have misspoken, but you used the phrase at the very end of that answer service main.

A. I'm sorry. Yes, I did misspeak. Service

lines.

Q. Service lines?

A. Yes.

Q. And for the record, does SDR stand for strength diameter ratio?

A. Yes.

Q. Okay. Now, without getting too deep into this, would it be fair to say that for the size of mains that are typical on the Big Island system, that the SDR would -- that the pipes that complied with that SDR would have a burst rating considerably in excess of 80 PSI?

A. Absolutely. Well, if I may, should have a rating much higher than 80 PSI.

Q. Okay. And assume -- let's go back to where I was going before. Assume for the purposes of this question that the blue pipe that you see connected to the mains in some of those pictures has a burst rating of roughly 80 PSI. From DNR's perspective, is there any violation or anything you would take action on if pipes of a much lower burst rating such as 80 PSI are connected at regular common intervals to the main?

A. I don't believe we ever have, once again, because our guidance is just that, on material specifications, guidance only. We do not have the authority to write a formal Notice of Violation or take

formal action for use of less than recommended materials used once you depart away from the mains.

Q. From your perspective as a superintendent of water systems, can you see potential problems of putting in a strong main and then regularly piercing it and connecting low burst strength pipe to it?

A. Absolutely. Absolutely.

Q. Now, in terms of definitions, is the line from a home to a single user septic tank called a service line? If you have a home that has its own individual septic tank, the line that comes from the home to the septic, is that called a service line?

A. That could be referred to as a service line, yes.

Q. Is it usually referred to as a service line, in your experience?

A. I'm not that familiar with sewer facilities, but I believe it's quite frequently referred to as a service line.

Q. Okay. And with respect to a water line, is the line from a home to a private single user well, is that called a service line?

A. I'm sorry. State your question in particular about the private consumer well.

Q. Okay. A home that -- a homeowner that has

drilled his own well that serves only that home, is the line that connects that well to that home, is that called a service line?

A. That would certainly be my interpre-- that would be my label for it. We do not -- certainly do not define it in the public drinking water regulations.

Q. Now, in a different situation, and here I'm speaking about a community water system and community sewer system, is the line that connects a home to the sewer main in a community system, is that called a service line?

A. Generally, I would say that's correct.

Q. Okay. And the same for a water line?

A. Yes. Generally, once again, I would say.

Q. Is there anything within the industry day-to-day, the way you talk, the nomenclature and documents that would distinguish a service line that connects a home to a private well as opposed to a service line that connects a home to a community water main?

A. If there is -- if there is a difference, I'm not aware. Once again, I can only tell you what I know to be defined for public water supplies and how the terms I usually use in discussion with other people, both in the field and outside the field. I typically refer to the line, irregardless of whether it's a municipal system,

a subdivision or a private home, the line running from a point of connection in the private home case with that well, I don't know what else you'd call it but a service line.

MR. MILLS: Okay. Thank you. And that's all the questions I have.

JUDGE STEARLEY: Thank you, Mr. Mills. Cross-examination by Staff?

MS. HEINTZ: I have no questions. Thank you, your Honor.

JUDGE STEARLEY: Cross-examination by the 393 companies, Ms. Holstead?

MS. HOLSTEAD: No questions, your Honor.

JUDGE STEARLEY: Mr. Comley, before we pick up with your cross, and I know you'd intended originally to offer excerpts from your deposition, I'm not sure how lengthy your cross will be, and so I was just going to ask if people wanted to complete Mr. MacEachen's testimony prior to lunch or if they wanted to take a break for lunch first?

MR. COMLEY: Your Honor, I have no objection to going on right now. I have a feeling it could be 40, 45 minutes with Mr. MacEachen, and I don't know his schedule. I want to be solicitous of the witness, but I'm prepared to go forward right now.

JUDGE STEARLEY: Okay. Then why don't we go ahead and try and complete his testimony. We will be having a change in court reporters this afternoon, as Ms. Feddersen has an appointment to attend to, but I think that should time out quite well with the way our testimony's going.

CROSS-EXAMINATION BY MR. COMLEY:

Q. Mr. MacEachen, I know that you and I have visited before. We had a deposition scheduled for the Department of Natural Resources on January 30th, and you attended in that respect, did you not?

A. I did, yes.

Q. And you also reappeared, I think it was Tuesday of this week and we completed that?

A. That is correct.

Q. Because you were here, I am not going to read excerpts of your deposition, but I thought maybe we could go through some things that may sound familiar to you in advance. First, can you tell me the exact position you hold with the Department of Natural Resources?

A. I am the enforcement unit coord-- I'm sorry. I'm the enforcement unit chief for the drinking water branch of the water protection program of the Department of Natural Resources.

Q. Do you consider yourself an engineer?

A. No, I do not.
Q. Do you consider yourself an environmental specialist?
A. Yes, I do.
Q. All right. Did you ever obtain any master's degree?
A. I did not.
Q. But you have had experience with wastewater and water systems; is that correct?
A. Yes, I have.
Q. Could you explain your experience in the wastewater and water system operation business?
A. Certainly. For approximately 18 years I was a chief operator at a wastewater -- at several wastewater plants throughout the state of New Hampshire. I also performed duties in at least three of those communities as water and sewer superintendent in which I had oversight of water and sewer operations, both treatment and process, as I like to call it in the streets, to ensure that the systems were capable of meeting demands placed upon them and that they were -- that the systems were in compliance with federal and state regulations at the time.
Q. And the number of customers on those systems varied, as I remember?

A. That's correct.

Q. Can you give us the range of customers that were served through the facilities that you were in charge of?

A. The smallest system I managed had a population of 2,600 people; the largest I had was 37,000.

Q. There were questions to you about a construction permit that was issued to Folsom Ridge or the developer in this case following a Notice of Violation for starting construction previous to obtaining the permit. Let me ask you this: From your perspective, is it uncommon for developers to commence construction while permits are pending or before they have been obtained?

A. It's -- we have a number -- we have a lot of cases where, yes, they start before they've even applied for a permit, and at points in time, we have had varying responses to our orders to stop construction because there was no permit from the best possible they immediately stopped to responses, you go get a court order and restraining order and then I'll stop. So we go get a restraining order.

Q. In this case did you have to get a restraining order?

A. No, we did not.

Q. In fact, with respect to Folsom Ridge

generally, has Folsom Ridge been resistant to the requests of DNR in connection with rectifying situations you've discovered?

A. I don't recall any particular instant where they were resistant to what we were asking. There may have been -- there may have been one or two times in which they asked for further clarification or explanation of why we were asking for, but once we supplied the information that they requested, they worked with us.

Q. You had mentioned about requiring cooperation from developers. Would Folsom Ridge be one of the cooperative developers you work with?

A. From the Department's standpoint, I would have to say yes.

Q. I have a few questions about DNR policies. That was a subject we took up with your deposition.

A. Uh-huh.

Q. And first, would the Big Island wastewater system and its central -- rather its water distribution system be referred to as centralized systems?

A. Yes, they would.

Q. With respect to the wastewater system, does the Department have a policy with respect to preferences for a centralized sewer and wastewater systems?

A. Preferences as to type of treatment or --

Q. Over individualized systems.

A. I'm hesitant to answer your question because I don't work that closely in the wastewater side of it, but I would certainly say that, yes, the Department favors centralized collection and treatment systems for wastewater over individual, particularly in areas such as that served by Big Island Water and Sewer.

Q. Could you explain in your words your understanding of the benefits of having centralized wastewater collection and treatment?

MR. MILLS: Your Honor, I'm going to object. I don't think there's any issue in this case with respect to whether a centralized system is a good idea or not. It's a question of who ends up with it. I don't disagree with any of this, but I think we're taking a lot of time to establish something that nobody disputes. I'll object that it's irrelevant and repetitious.

MR. COMLEY: I'll shorten it.

BY MR. COMLEY:

Q. Would you dispute there are benefits from DNR's perspective for centralized wastewater systems?

A. I'm sorry. Would you --

Q. Do you dispute there are benefits to -- from your department's perspective, do you dispute that there are benefits from having centralized wastewater

facilities to Missouri residents?

A. No. There is no dispute on that.

Q. The next question would be, if a resident does have individualized septic systems that discharge from the tank directly into a watershed, can you explain the risks?

A. There are a number of risks. First and foremost is the system functioning properly. Is it sized correctly to handle the volume of sewage that it may, in fact, have to serve? Secondly, is it being properly operated? Is it properly installed?

We have far too many -- even at this late date, we have far too many systems around Lake of the Ozarks, throughout the state of Missouri, that are by strict definition failed systems. They are not producing a quality effluent that would be appropriate for discharge either to a receiving treatment or subsurface.

Q. What conditions do individualized septic systems suffer from in connection with producing appropriate effluent?

A. First condition is that people do not realize that septic systems are no different than any other mechanical device, they require periodic maintenance. First line of that maintenance is frequent or a regularly scheduled pumping of the solids contained

within the septic tank.

Q. Do you have a recommendation on when pumping should take place?

A. Three to five years.

Q. What about soil?

A. Soils are classified for permeability. We do find situations where soil -- types of soil are not conducive to the -- naturally existing soils, I should say, are not conducive to an individual septic system because they will not allow the effluent from the septic tank and leach field to percolate properly. In other words, they will just pool, and it may be underground, subsurface. They will pool, but the first time that the soil profile becomes saturated, it's going to come to the surface.

Q. What kind of microbiological life is produced in the event a septic tank is improperly maintained?

A. Well, first and foremost, the microbiology of the human intestine certainly is the microbiology of the septic system.

Q. Are these pathogenic?

A. Some are pathogenic; some are non-pathogenic. Our biggest concern is certainly for the pathogenic forms of bacteria and viruses.

Q. Let me direct you to the lake of the Ozarks, and is there something about that area, that geography or soil types that is more of a factor concerning proper wastewater treatment?

A. Well, certainly the soil types are not -- in all areas are not absolutely conducive to the installation of individual systems because of the permeability issues, percolation rates are not appropriate. And then there are some of those areas, the water, the wastewater is not fully treated before it migrates through the soil profile and ends up in the lake.

Q. Is there -- how would you refer to the geological profile at the lake of the Ozarks?

A. It is -- it is -- it's a very complex system. I can't use --

MS. HEINTZ: Your Honor, I will raise a relevance objection to this line of questions. I think, again, we're straying into areas that are not pertinent to the Commission's decision in this case and the issues that are before it.

JUDGE STEARLEY: Mr. Comley, would you please explain the relevance?

MR. COMLEY: I think that we're talking about the public interest and having a centralized sewer system and I want to make sure we understand from DNR's

perspective the merits of this system and why it's important for the lake of the Ozarks.

I was wanting to know what kind of -- what topography, I would like to know that. I think it also gets into the questions I'm going to have about the flexible pipe that's been referred to in Exhibit 63.

JUDGE STEARLEY: Do you have very many more questions regarding this line?

MR. COMLEY: No. I could ask one more question.

JUDGE STEARLEY: All right. You may proceed.

BY MR. COMLEY:

Q. Can you tell me what kind of topography is represented by the lake of the Ozarks?

A. It's a mixed -- it's a mixed topography ranging from steep rocky precipitous downgrades to flat surface areas, although the flat surface areas are fewer. They're very few and far between.

Q. What is karst topography?

A. Karst topography, actually it's more a geologic feature than it is a topographical feature. Karst topography refers to a subsurface condition in which the ground is, if you will, like a piece of Swiss cheese. It's permeated by voids, conduits, underground channels

that are created by flowing water, and they may form typical sink holes that everyone knows about. Sink holes are actually collapses within the karst topography of underground -- small underground caves. In some cases, those caves can be quite substantial. Grand Gulf in southern Missouri is the result of a collapse of a karst topography feature.

Q. Is that common in the lake of the Ozarks?

A. In certain areas, yes. Yes. We've had reports of well drillers attempting to drill wells in the area that have punctured through the roof of a cave that nobody knew was there and have actually drilled down through the cave without knowing it. They don't know it until they bring the concrete trucks to pour protective grout and they pour truckload after truckload and there's no end to it. So, yeah, there are areas of Lake Ozarks that would be karst in nature.

MR. MILLS: Your Honor, as a geologist I find this fascinating, but we have other things to address today, and I would -- I believe Mr. Comley promised you one question. I think we've gone beyond that.

MR. COMLEY: I think I promised about an hour, I think.

MR. MILLS: I hope we get back to the relevant issues.

THE WITNESS: You can go on --

JUDGE STEARLEY: I believe we're getting to the blue pipe and I hope we're getting --

MR. COMLEY: I'll try.

BY MR. COMLEY:

Q. Do individualized septic tanks pose a risk to individualized private wells?

A. They certainly can, yes.

Q. Can you explain briefly why that is?

A. Individual private wells and what's referred to as a domestic well in Division of Geology and Land Surveys regulations is generally a shallow well less than 300 feet. It has very little casing pipe in it. It has no grout seal, so there's no protection either from surface water runoff nor from subsurface water migration, and we do find that a considerable number of private wells are contaminated with various types of bacteria, both pathogenic and non-pathogenic.

Q. There are a number of homes on Big Island that are still using individualized septic tanks and wells. I think you know that.

A. Yes.

Q. Assuming that the wastewater treatment facility constructed on Big Island is being operated correctly and is complying with DNR regulations, when the

septic system for an existing home comes to the point that it needs to be replaced, what would your recommendation or, for that matter, even DNR's recommendation be to that homeowner?

A. We would -- we would certainly recommend that they connect to the centralized system.

Q. And why is that?

A. For protection of the public health, for maintenance of water quality, both that's intended for potable source supply and that may find its way to the lake.

There is another question arises in my mind. If a system, if a septic system, a private septic system has failed, the homeowner may not be given a permit to construct a new system by the local health organization, the county health department.

Q. Let me ask you this: Do you happen to know how many drinking water permits in the state that you know about have been free of Notices of Violation or unsatisfactory features?

A. In total?

Q. As far as you can tell me.

A. I'd say less than 50 percent of the public drinking water systems in the state have never had a violation. In fact, I may even go further to say less

than 20 percent of the public drinking water systems have had absolutely no violations in a given time period.

Q. Do you know of a particularly well-performing system that you could give us an example of that has had Notices of Violation? I'll mention City Utilities of Springfield.

A. City Utilities of Springfield is a very well-run system. They have a very good operational crew. They have a very good management structure to oversee.

MS. HEINTZ: Your Honor --

THE WITNESS: But they have problems.

MS. HEINTZ: I'm delighted for the City of Springfield and its great drinking water, but as far as the question about the blue pipe, are we going to get there soon?

MR. COMLEY: These are -- if we can't go through this, I'm going to have to make an offer of proof of all this, and I'll do that if we have this objection sustained. These are matters addressed in the Department's deposition, and I think they're important and critical to the issues in this case.

JUDGE STEARLEY: Since the issues were raised as to the safety of the current system as it exists out there, I will allow Mr. Comley some latitude in this line of questioning. However, I hope that we can get

through this rather quickly.
BY MR. COMLEY:
Q. Did you finish your answer?
A. I believe so.
Q. Can you recall what recently may have afflicted City of Springfield Utilities in terms of violation?
A. They lost -- they've had situations where they've lost their source water pumps. They transmit from considerable distance away in Stockton Lake. They have not been able to meet the demand placed upon the system at all times and have had to implement or go to groundwater usage.
Q. Have there been any low pressure readings on the system?
A. I believe there have been, yes.
Q. Let me ask you some questions specifically about the enforcement action that has been taken against Folsom Ridge and the outcome of that. From your earlier testimony -- and I'll rephrase, I'll see if it's correct. My understanding is that you understand all fines have been paid by Folsom Ridge in connection with any Notice of Violation or any kind of unsatisfactory feature and particularly the settlement agreement. Would that be a fair statement?

A. That is my understanding, yes.

Q. Do you know of any pending enforcement action that has been considered by the Department or any other Notice of Violation at this time?

A. I'm not aware of any at this time.

Q. I think in response to Commissioner Appling's testimony, you said that final inspection may still be outstanding on this facility; is that correct?

A. Yes. I believe that's still correct, yes.

Q. Let me show you what's been previously marked as Exhibit 93, and you may have that with you in front of you.

JUDGE STEARLEY: I don't believe I have a copy of this one yet, Mr. Comley.

Thank you.

THE WITNESS: Yes, I have the exhibit.

BY MR. COMLEY:

Q. Do you have that? Can you review it for me, please?

A. Okay. I have reviewed it.

Q. Can you describe that document for the Commission, please?

A. This is a -- as referenced in the cover letter and the heading, a final inspection of the subdivision water line replacement and extension project

in Camden County relative to Folsom Ridge. It was addressed to Mr. Reggie Golden, Folsom Ridge and relative to Big Island subdivision.

Q. Based upon your knowledge, does this deal with the water line replacement project pursuant to the settlement agreement?

A. It appears to be, yes. It appears to be the water mains that are in most need of attention here.

Q. Would it be fair to say, then, that final approval of that project has been given by DNR?

A. I am not aware that final approval has been given, although -- well, let me rephrase that. We may have -- we may have given final approval of the actual physical work, but we still have the issue of a permit to dispense water which really cannot be finalized until the ownership is determined, who's going to -- who's going to be the responsible party.

Q. Have you been advised that by Mr. Collins, who holds the permit request?

A. Mr. Collins? I'm not --

Q. Charles Collins?

A. No, I have not.

Q. I'm noticing on the first page that final approval part of that paragraph. But you're saying that that does not constitute final approval?

A. I was under the impression or have been under the impression that we have not completely and finally deemed the water system to be in 100 percent conformance. To be perfectly honest with you, I could be wrong. There may be documentation subsequent to this on the permit, but I was under the impression that we had not finalized.

Q. Regarding compliance with monitoring reports, contaminant requirements and maximum contaminant level requirements, do you know whether Big Island is out of compliance with any of those?

A. At this time, they are not.

Q. How would you -- do you have a way of rating the company at this time?

A. They certainly -- they have been on time with all of the required monitoring for the various contaminants. They're monitoring -- every system is required to submit at least one sample a month for microbiological quality. I believe they are -- they are in compliance with that.

There may have been a couple of instances where they were not in -- they had not submitted samples. It does seem to me that there are a couple -- two periods when those samples came back positive for bacteria, but the system did take appropriate action, so I would -- my

personal rating of the system, as far as compliance, I would consider them to be a very good system in terms of meeting those regulatory requirements.

Q. I neglected to ask you to review another exhibit. It's 92, Exhibit 92.

A. Yes.

Q. Can you identify that for the Commission, please?

A. That is a memorandum from Joseph B. Bindbeutel, environmental division chief of the Attorney General's Office, to Elena Seon, who is an environmental specialist in the water pollution control branch. He is advising her that the penalty, the $8,000 penalty agreed to in the settlement agreement has been paid, that he is closing -- that the settlement agreement's been finalized, he's closing his files at this point, but also putting us on notice that should future violations warrant, he will recall the files from the archive and reopen the case as necessary.

Q. Have you been advised by Mr. Bindbeutel directly or any of his assistants that they are reopening the file for other violations?

A. Not at this time.

Q. It may sound repetitive, but let me ask you this: Do you know of any unsatisfactory feature that has

been pointed out by DNR to the operator of the wastewater or water distribution system on Big Island that the permitees have failed to correct?

A. I can certainly speak with authority for the drinking water side. I'm not aware of any situation which they have not responded to and worked with us to correct the deficiencies. The wastewater side, I'm going to go out on a limb a little bit and say that I think the same holds true on the wastewater side.

Q. Very well. Now, I have some questions concerning cross-examination or rather examination by Mr. Gaw and the other parties. Regarding the investigation that started with your first knowledge of Big Island, which I think you said you started in 2003; is that correct?

A. That's when I became involved, yes.

Q. And you had meetings with local homeowners about complaints that they raised with you about installation of the lines in the same trench; is that correct?

A. That is correct, yes.

Q. Isn't it true, though, that the design guide for DNR does permit construction of water and sewer lines in the same trench?

A. Yes, it does.

Q. And the issue before you is whether or not the lines have been installed in the same trench with sufficient separation. Would that have been the case?

A. That was the case.

Q. And the separation had to be done by a particular kind of I'll call it a geographical feature of a shelf?

A. Yes.

Q. Would that be correct?

A. If I may, a shelf of undisturbed material, undisturbed material meaning material that had neither been excavated and recompacted or in any way moved. It was as --

Q. As is?

A. As is, yes.

Q. And as I understand it, upon discovery, after the test pits were dug, it was concluded that the undisturbed soil was not part of the shelf?

A. That's correct.

Q. Okay.

A. Yeah.

Q. The water line replacement project that ensued following that with the settlement agreement, can you tell me who was involved in deciding upon how the water line would be replaced to make it comply with the

plans and specifications?

A. The first proposal submitted by Folsom Ridge in the realignment was unacceptable to the Department because -- for a lot of reasons, the method by which it was constructed, the potential problems for breakage, leakage later on.

When we brought their attention to the fact that we could not approve that design, they redesigned and arranged for the water lines to be excavated and removed from the proximity of the sewer lines and displaced to achieve the ten-foot horizontal placement as is recommended in the design guide.

Q. And at that point, the design that was proposed was approved by DNR?

A. Yes.

Q. And it's my understanding now with respect to the construction of the relocated lines, they -- based upon the report that we have identified as Exhibit 93, they do comply with the DNR's regulations?

A. It does appear so, yes.

Q. Regarding the investigation, who was it that did the test excavations?

A. I believe the test excavations were conducted by a contractor working for Folsom Ridge.

Q. And that was not at DNR's expense?

A. That was not at DNR's expense. I believe there were representatives from Folsom Ridge. I'm not sure who those representatives were at this point in time. I can't give you their names. But from DNR, Clinton Finn from the southwest regional office was present. Mike Tharp, one of my staff members was present. I believe there were several -- there may have been several of the homeowners present.

As far as the decision of where the pits were to be, Folsom Ridge agreed that we, DNR, could stipulate where we wanted the pits dug and, you know, if I remember correctly, it was a random decision or a random location for each of the test pits without prior notification to Folsom Ridge.

Q. And Folsom Ridge agreed to do that?

A. That's correct.

Q. Were you there when the test excavations were examined?

A. I was not.

Q. Mr. Finn was?

A. Mr. Finn was and my staff member, Mr. Tharp was.

Q. Do you recall the photographs of the scene?

A. Yes. Yes.

MR. COMLEY: May I approach the witness?

JUDGE STEARLEY: Yes, you may.

BY MR. COMLEY:

Q. Mr. MacEachen, I'm going to direct you to a series of exhibits that were part of your deposition on January 30th, particularly Exhibit 62 that was marked in that deposition exhibit, but the rear of that exhibit. Would you look and see if there's a series of photographs?

A. Yes, there are.

Q. And are these the photographs that you reviewed in connection with the examination of the test pits?

A. Yes, they are.

Q. Can you explain to the Commission what is depicted in those pictures?

A. There are cross-sectional profiles of -- or photographs of cross-sectional profile trenches to determine the location of the water mains and sewer mains in those areas that we determined that we wanted pits dug.

Q. For example, could you tell me what Mr. Finn identified in each of those pits?

A. Mr. Finn identified both the type of -- the type of pipe, in other words, whether it was water or sewer, and took direct measurements using an engineer's Foley rule to determine the distance, the spacings of those piping systems. He really did not look at soil --

soil types, anything like that. We were primarily interested in how the mains were placed.

Q. Were there any other pipes involved in the trenching?

A. There were. There were electric utility and telephone utility.

Q. Were they marked on the photographs?

A. Not directly on the photographs, but they may be marked in the comments associated with those individual comments.

Q. Can you review the comments?

A. Most of those comments are the excavation pit number, the location, the direction of view, and then a comment on --

Q. Is there reference to telephone lines and electric utilities?

A. One photograph, the next to the last photograph certainly indicates Mr. Finn's comments, telephone conduit at bottom of photo, so yes, he did identify those.

Q. It was following your examination of the photographs from Mr. Finn's inspection that there was a decision made to seek enforcement?

A. Yes.

Q. I think in some of the questions you

mentioned that you had discussions or were in discussions with the project engineer. I think you mentioned it may have been Mr. Jackson, but regarding the location of the water line, did you have discussions with Mr. David Krehbiel?

A. Not personally, but Mr. Summerford, the section chief for the permit section, did have conversations with him about things that were in question, that he had -- that we, his review, Mr. Summerford's review staff had identified areas that weren't clear and needed further explanation. I believe Mr. Krehbiel responded to him, both verbally and through written communication, and made the changes requested to the plans.

Q. Was Mr. Krehbiel at that point the professional engineer that was in charge of certifying the relocation project?

A. I believe he was.

Q. You had questions about the jurisdiction of DNR, the power of DNR over service lines from water and sewer mains?

A. Yes.

Q. Let me ask you this: Does DNR want to have regulatory control over customer service lines from water sewer mains?

A. No.

Q. Can you tell me why?

A. First of all, the amount, the staff load or the time that it would take to adequately regulate those service lines, we just don't have staff to do. It would be a substantial impact on the programs -- the branch's ability to function and perform.

MS. HEINTZ: Your Honor, at this time I would renew my relevance objections. The DNR regulations or non-regulations over service lines are not relevant to the issues in this case, and you sustained my objection on those same grounds yesterday.

JUDGE STEARLEY: I realize that, but Commissioner Gaw opened these questions, and I do need to allow Folsom Ridge the opportunity to cross-examine based on Commissioner Gaw's questioning.

MR. COMLEY: My position would have been that Mr. Gaw raises a policy issue, and I think we need to flesh it out a little bit.

BY MR. COMLEY:

Q. With respect to the number of facilities that you have right now in regulation, can you explain the number that are in compliance or out of compliance?

A. Currently we have approximately 2,800 regulated water systems throughout the state of Missouri.

Less than 1 percent of them are out of compliance at any given point in time. We have a -- we're in a period of new regulatory effort on the part of the federal government, and we're spending a lot more time on a lot more difficult regulations. I anticipate that that less than 1 percent will go up.

Q. So the new regulations are generating more Notices of Violation to the permitees?

A. Very much so.

Q. There were questions to you, I think from Ms. Orler and perhaps from Commissioner Gaw, about local codes that may apply to service lines. Do you know if Camden County has adopted a code with respect to specifications for service lines from wastewater or water mains?

A. I do not know. I do not know.

Q. Do you know if any municipality within Camden County has adopted any code, national or otherwise, respecting the specifications and material requirements for service lines from water and sewer mains?

A. I'd have to say I honestly do not know.

Q. Do you still have a copy of Exhibit 63? That would be the series of photographs.

A. Yes.

Q. Let me take you to the first page and the

picture that's depicted on the top of there.

A. Okay. It appears to be a backhoe and a number of people standing to the right of the backhoe.

Q. I'm sorry. I'm looking at Exhibit 63. You're looking at Exhibit 62 from the deposition. I'm sorry. It would be this exhibit (indicating), the one that I think you and Mr. Pugh have reviewed several times.

A. I'm getting too many papers on the witness desk here.

Q. We'll try to make it easier for you.

A. Okay. I have it.

Q. The photo I have represents that it was apparently taken on June 6, 2000. I think your testimony about this was that the lines to the right may have been service lines?

A. That's correct.

Q. Can you tell whether they were service lines or will they be conduit for either electric or telephone?

A. I can't -- they appear to be service lines for water and sewer. I can't rule out the possibility that they could -- because of the angle of the photograph, it is possible that they could be conduit for other utilities, although they do appear to be a little small for other utilities.

Q. But there were conduits for telephone in the same trench as these two lines?

A. Yes.

Q. And June 6, 2000, that would have preceded your test excavations in January of 2004?

A. Yes. That's correct.

Q. Let's go to the next page. There are two pictures on that, one dated June 14, 2005, the causeway service line. First I want to ask you, can you tell from that picture whether or not this has a burst capacity in excess of 160?

A. There's nothing to indicate in the picture what the rated burst capacity is.

Q. Your assumption or presumption that it's 80 is just simply an assumption of yours?

A. That is correct, yes.

Q. This pipe does come in varying degrees of burst capacity or variability; is that correct?

A. This particular pipe in the photograph (indicating)?

Q. This particular kind of flexible pipe.

A. I'm not sure that I could -- I'm not comfortable saying yes. There may be more than just two ratings that I'm not aware of. I'm aware of the usual.

Q. Just two?

A. 80 and 160 burst.

Q. You're saying -- let me ask you this: Have you participated in the field in design of anything like service lines in the last five years?

A. No, not directly.

Q. I think you talked about the joint that is represented here between the flexible line and what appears to be the service main to the house. We'll say that.

A. Uh-huh.

Q. Can you tell whether or not that is a compression joint?

A. It appears to be a compression joint.

Q. If it is a compression joint, can you tell me the benefits of the compression joints?

A. A compression joint locks two pieces of pipe together much better than a glue joint and still allows a certain amount of flex to the pipe to accommodate for heaving as a result of freeze/thaw cycle. But this is definitely a mechanical joint connection of some type, and I would say that inside of the metal parts immediately attached to the blue section there is what we call a rubber grommet that fits around the blue pipe.

Q. Yes.

A. And as you tighten the nut, the larger

octagonal fixture on the white pipe side of the connection, that compresses that gusset and that --

Q. The grommet?

A. -- that grommet tightly around the blue pipe to do two things, No. 1, create a watertight seal and, No. 2, to act as an anchor to prevent that blue pipe -- well, to prevent one pipe from blowing out of another.

Q. If this system maintains the appropriate measure, can you tell me the likelihood of cross contamination caused by this flexible pipe?

A. The likelihood is dependent on the material that -- it's principally on the material it's embedded in. Typically, in a system like Big Island, I don't believe you would see an instantaneous rise of pressure up to 160 pounds, which is where that pressure burst rating -- what that pressure burst rating applies to. Pipe like this blue pipe is more prone or more at risk from being abraded through than it is being blown apart.

Q. Let's assume that this flexible pipe is burst rated at 200.

A. Okay.

Q. If it's rated at 200, is there any significant change in its likelihood of possibility of cross contamination if there is a pressure loss?

A. I would say that there's neither more or less potential for contamination.

Q. If there is a burst rating of 200, the thickness of the flexible pipe would be greater; is that correct?

A. Yes.

Q. In that case, would it also be more durable?

A. Oh, yes. Yes.

Q. Do you know when the system was activated?

A. Not specifically. I'm going to say that some portions of it have probably been in operation since about 2000.

Q. Assuming this blue flexible pipe has been in use for service line connections from its beginning to now, do you have an opinion as to whether or not the durability of this pipe has been compromised?

A. I have concerns about -- once again, about the material that it's buried in, but as to the structural integrity of the pipe itself, I just really don't -- I'm not comfortable rendering an opinion on it because there's so many factors that come into play.

Q. Have there been any kind of reports to your office on pressurization loss on this system since it was activated?

A. I don't remember any. I would have to say I don't recall seeing any boil orders or boil advisories being issued for the system. I'm not aware of any at this time.

Q. Have you received any reports that service lines made of flexible PVC pipe or this blue pipe have burst?

A. I have not seen any reports of that, no.

Q. Have you heard any complaints from the landowners there that their service has been interrupted because of their service line connection?

A. I don't recall hearing anything.

Q. You had questions about the soil profile.

A. Uh-huh.

Q. And just to clarify, if a sewer main is installed above a water main in conformity with your design specifications and the sewer main loses pressure or somehow leaks, describe for me, where would that leak eventually wind up.

A. The leak would generally follow the trench in which the sewer main is laid. There might be some lateral seepage, some migration, depending on what the soil -- the actual soil components were, where it moved outward from the trench. Generally, though, to move beyond ten feet is not very commonly found, and that's why

we stipulate a ten-foot separation, once again, of undisturbed soil between the two surface types.

Q. And again, engineers regularly design this kind of configuration for sewer and water pipes in topography and features like we have seen in Exhibit 63?

A. Oh, yes. Yes.

Q. It is not an uncommon design?

A. No.

Q. And it is not uncommon for DNR to approve it?

A. No.

Q. The next picture I'm looking at is the one that has the more telescopic -- less telescopic view of the line I think we're referring to.

A. Uh-huh.

Q. And let me confirm. You have no way of knowing what kind of fill was used to cover this installation; is that correct?

A. That is correct.

Q. Your assumption that it may have been used with rock or other kind of debris that was there is just based upon the photograph?

A. It's not based on the photograph because there's nothing to indicate. There's no piles of material slated for the recovering.

Q. You have never inspected this yourself and do not know whether the covering is contrary to what you would prefer?

A. No. That's correct.

Q. Let's go to the next page. There is a sewer cover on there. Would you agree with me that any unqualified person could be a risk to this system if they started to tamper with it?

A. This system or any other system, yes.

Q. Would it be safe to say that a qualified plumber could be able to discern, based upon his experience, his education, which of the lines in this particular pit would be water and sewer?

A. I would say he would look -- he would -- if he was not just by visual observation able to discern that, if he's a properly certified, he would -- he would look further to ensure which one was the water and which one was the sewer.

Q. With respect to that, another question would be, even though the manhole says -- the manhole cover says sewer and the qualified person would look in there and see what's in the photograph below it, would that necessarily mean the qualified person would think it's just sewer?

A. Well, my own response would be when I

looked in there, if that said sewer on it, I would know there's something in there besides sewer.

Q. All right.

A. And I think most any other person who's worked with water and sewer would have the same opinion.

Q. You don't know whether or not this -- well, you won't know this either. If this has been corrected, would your concerns about confusing any operator or any person, would that have been solved?

A. Partially. I think the better solution would be to put in a new cap that didn't say anything on it at all.

Q. All right. I see. It wouldn't be sewer and water, it would just be blank?

A. Right. I think they're $5 a piece, $6 a piece.

Q. With respect to the photograph below that manhole cover, can you tell from your own experience which line is the sewer line?

A. Not with absolute certainty.

Q. Do you know what a corporation valve is?

A. Very definitely.

Q. Can you see one in this picture (indicating)?

A. No, I don't.

Q. Isn't it the one at the bottom?

A. No. Well, I can't be sure. It's hard to determine what this is at the bottom. A corporation valve, a corporation stop is the appurtenance that is attached to the water line.

Q. Okay. All right.

A. And from the corporation stop, which also has a shutoff on it, from the corporation stop, the service line runs onto private property and through a service, a service shutoff and on into the house. This certainly is not a corporation stop.

Q. All right.

A. And I don't think it's a water shutoff valve either. If you look on the pipe at the bottom --

Q. Yes.

A. -- you're talking about that darker ring around --

Q. Yes, but I see a handle to the right. It looks like a handle to me.

A. Yes. Yes, it does.

Q. So I'm thinking there's a shutoff valve on each line?

A. Uh-huh.

Q. And that other stop it seems to me that -- well, anyway --

A. The top pipe?
Q. Yes.
A. Based on my -- based on my experience, I would say the top pipe is a water pipe, is a water service line and the valve is a water service shutoff.
Q. All right.
A. The bottom line, as I said in earlier testimony, as I understand it, the sewer service lines are all I believe inch and a half and go -- before they go through the service line they go through a grinder pump. If they didn't go through a grinder pump --
Q. Right.
A. If they didn't get through a grinder pump, they couldn't get through an inch and a half line. I don't know what this darker ring half in the middle of that run of pipe in the lower -- on the lower pipe is. It's not a grinder pump, I don't believe. But it does raise the question or it raises a question in my mind because it does seem to be a valve to the right. I agree with you.
Q. All right.
A. And if it -- if that is, in fact, a grinder, you would want a valve as we call it upstream from the grinder so that you could shut off any flow from coming from the house or the holding tank, so that if you

had to replace the grinder pump or work on it, you wouldn't be constantly flowing water -- wastewater from the house into the work area.

Q. Can you tell from this photograph how deep the pit is?

A. No, I can't. I have no reference.

Q. Let's say the pit were 24 to 36 inches deep. Would there be an objection then to using joint adhesives rather than compression joints?

A. As I stated earlier, I would not put a jointed -- a glued joint pipe underground.

Q. When you say underground, are you talking about under the manhole cover? This is not to be buried.

A. I'm including those -- those facilities in manholes. I wouldn't do it.

Q. So you'd use compression joints at every stage?

A. Yes.

Q. Again, have you heard any reports about these joints failing at Big Island?

A. I don't recall. I don't recall hearing any reports.

Q. Regarding the proximity of these two lines, would you agree with me that there are situations where having these lines this close together is almost

unavoidable, particularly in the lake of the Ozarks area, when we're dealing with existing homeowners?

A. Unfortunately, I would not agree with you.

Q. Wouldn't there also be a degree of cost involved in trying to separate those lines?

A. Yes.

Q. And isn't the cost -- well, presuming this would be a cost borne by the homeowner, doesn't customer preference or homeowner preference become a factor?

A. It certainly becomes a factor, sure.

Q. If -- presuming that this pit were within about five feet of the foundation of a home, would your opinion change about any likelihood of -- strike that.

If you were to learn that this was within maybe three feet of the foundation of the home that's served by this, and assuming that there was rock all the way around it, would your opinion change about the requirements for the separation?

MR. MILLS: Your Honor, hypothetical questions are fine, but if there is absolutely no basis in reality for them coming true, I think it's an improper question. If it's even remotely possible that this is within three feet, then I think it's an appropriate question, but if not, then I think it's an improper hypothetical.

MR. COMLEY: I think it tests his opinion and whether or not they're changeable based upon changing conditions of topography.

JUDGE STEARLEY: I agree with Mr. Comley. As I said, Commissioner Gaw raised these issues with regard to the placement spacing of these pipes and I'm going to allow the question.

MR. MILLS: And my objection -- I'm sorry. I wasn't talking about relevance. I was talking about the structure of the hypothetical, which asks him to assume facts that -- okay.

JUDGE STEARLEY: As do all.

MR. MILLS: It wasn't a relevance objection. It was a structure of the question objection.

JUDGE STEARLEY: All right. I will allow the question.

THE WITNESS: It wouldn't -- would not change my personal opinion. I don't agree with BOCA code. I do not believe that any glued joint pipe should be placed in the ground. Fortunately, DNR has no authority in that area. So I don't have to exercise my -- I don't -- I'm not placed in a position of exercising my own personal belief in what should be and should not be.

BY MR. COMLEY:

Q. I'll go the extra step and say, isn't it

fair to say that using joint adhesives in this kind of configuration, even if the lines are separated by more than two feet or three feet, is not uncommon?

A. It's not uncommon, no.

Q. With regard to the blue pipe again, would you happen to know the manufacturer of this pipe?

A. No, I don't. There's no indications on this pipe to designate a manufacturer.

Q. Do you know what the manufacturer's warranties are on this kind of piping, whoever manufactures it?

A. No, I do not.

Q. With respect to this kind of pipe, would your recommendation be to replace it with a more solid pipe, like copper?

A. My -- my recommendation would be, that would be the process I would follow if I were the contractor or the developer.

Q. Would be copper?

A. Yes.

Q. It would be rigid.

A. But I'm also a ductal iron man for mains, and I don't go along with plastic at all. I don't think it has the durability.

Q. With respect to the erosive qualities of

soil in Lake of the Ozarks region on copper, would that be a consideration in the choice of service line connections?

A. For -- yeah, for some people it might be.

Q. What about the quality of the well water, would acid or acidic or pH value in the water tend to have corrosive effects of the copper?

A. Oh, absolutely.

Q. That has to be taken into account, doesn't it?

A. However, I don't believe -- I don't believe that generally the water in New Hampshire is corrosive enough in nature anywhere in the state to -- with maybe one or two exceptions to actually attack and degrade copper pipe or iron pipe over a given period of time. I come from a state or I managed in states where the water would eat pinholes through the copper line in weeks, and this water here is nowhere near corrosive enough to do that.

Q. But there are occasions when copper pipe would not be --

JUDGE STEARLEY: Pardon me, Mr. Comley. I don't mean to interrupt. Mr. MacEachen, you said which state?

THE WITNESS: New Hampshire.

JUDGE STEARLEY: I just wanted to make sure

we weren't talking about Missouri and you just misstated what you were --

THE WITNESS: No, I'm not. In New Hampshire we had water strong enough to eat right through copper.

BY MR. COMLEY:

Q. As I recall, New Hampshire was where you did have a post with the water and sewer system?

A. Yes. Here in Missouri, with a few exceptions, it's not corrosive enough for that to be a major concern.

JUDGE STEARLEY: Thank you for the clarification.

BY MR. COMLEY:

Q. Do you know if flexible piping is less expensive to repair when damaged than copper or ductal iron?

A. I would have to say that, yes, it probably is a little less expensive than copper pipe to repair.

Q. Are you familiar with the engineering standards for the use of copper versus PVC pipe in the kind of soil conditions of the lake of the Ozarks?

A. I'm not specifically familiar, no. I don't have knowledge of those specifications.

Q. Besides ductal piping, would you recommend

polyethylene piping?

A. It would -- would not be my first choice.

Q. It's a possibility?

A. It's certainly a possibility, yes.

Q. Would there be any -- do you know if there would be any benefits to galvanized steel service?

A. There would be nothing but detriment using galvanized steel.

Q. Let's -- the last page of Exhibit 63, just so the record is clear, the photographs that are on that page, can you identify where they are located?

A. Aside from the labels at the top and sides of each of the photographs, no, I can't identify the location.

Q. Do you -- have you ever seen photographs like this in connection with your inspection of the water line relocation initiative under the settlement agreement?

A. I do not remember seeing these specific photographs.

Q. Has anyone asked you to personally inspect this?

A. I don't believe so, no.

Q. Have you been advised by anyone that this still is the situation? You and Mr. Pugh have talked quite a bit.

A. Uh-huh.

Q. Has Mr. Pugh told you that this is still the situation?

A. I do not recall that he has identified this specific location or taken any recent photos. I really don't know.

Q. I think there were questions about bedding material. Can you tell whether the bedding material has been taken out or whether it's getting ready to be put in?

A. I can't tell from this -- from this picture, no. I don't see anything along the sides of the trenches that would lead me to believe that anything's about to be put in.

Q. But you cannot tell?

A. But I cannot tell, correct.

Q. Why does DNR certify the operators of water systems?

A. We certify operators for water systems primarily to ensure that those who are in responsible charge have a background and understanding and an education commensurate with the requirements to provide safe potable water at all times. And they are certified through examination now.

When we began the operator certification process, we did provide -- we did make provision for what

we call grandfathered operators. If a system had a person who was operating, had been operating the system for some period of time, he would be given a grandfather license and allowed to continue to operate that system, but he could not use that license in any other system.

The whole purpose behind operator certification is to raise the level of operational efficiency and compliance with existing regulations for drinking water operators.

Q. Can actions be taken by DNR if a certified operator fails to conform to certificate requirements?

A. Yes.

Q. What are those? What can be done?

A. We can -- we can suspend a license. We can -- actually, I said a license. I should say certification. We can suspend his certification. We can revoke his certification.

Q. In those instances, then, a person with certification can operate a wastewater facility system, one that's not certificated can't; is that correct? These are jobs for these people?

A. Right. Right. Yes, a person -- a person can work at a plant irregardless to whether it's water or wastewater, he can work at a plant and not have a certificate, but there has to be a responsible person in

charge who has a certificate of appropriate level based on the facilities contained within that plant who will be the designated person of responsibility, and people under him can still work for him under his direction and not necessarily have a license.

Q. Once a person loses that certification, that means that that person can no longer be in a position of supervision over other operators?

A. That's correct.

Q. Just a second.

Is it true you have not -- DNR has not had any kind of issues with the contract operator for the wastewater and system and water system at Big Island?

A. I don't believe we have.

Q. Are you familiar with Mr. McDuffey?

A. Yes. Well, I know -- I know him. I do not know him intimately, closely.

Q. I didn't expect that.

A. I do that to you every now and then, don't I?

Q. But you find him a very jovial fellow. Again, at this -- at this stage, DNR has no objection to the way in which the facilities have been constructed under your jurisdiction?

A. No.

MR. COMLEY: That's all I have. I'm five minutes past my time. Excuse me.

JUDGE STEARLEY: Thank you very much. We're going to do a round of recross here, but at this point I think I'm going to go ahead and allow a switching of our court reporters because Ms. Feddersen has a matter she needs to attend to and I don't want to start that round prior to switching.

So we will take a brief intermission and allow them to switch places and we will resume.

(A BREAK WAS TAKEN.)

(THE REMAINDER OF THE PROCEEDINGS WERE REPORTED BY PAMELA FICK.)