

STATE OF MISSOURI  
PUBLIC SERVICE COMMISSION  
TRANSCRIPT OF PROCEEDINGS

Hearing  
October 29, 2007  
Jefferson City, Missouri  
Volume 2

Greater Jefferson City                    )  
Construction Company, Inc.,            )  
and Edward P. Storey,                    )  
Complainants.                            )  
v.    ) Case No. WC-2007-0303  
Aqua Missouri, Inc.,                    )  
Respondent.                                )

KENNARD L. JONES, Presiding,  
SENIOR REGULATORY LAW JUDGE  
LINWARD "LIN" APPLING,  
ROBERT M. CLAYTON, III  
COMMISSIONERS

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1 P R O C E E D I N G S

2 JUDGE JONES: We are on the record with  
3 Case No. WC-2007-0303, Greater Jefferson City  
4 Construction Company, Incorporated, and Edward P.  
5 Storey, Complainants, versus Aqua Missouri,  
6 Incorporated, Respondent.

7 At this time we'll take entries of  
8 appearance, beginning with the Complainants.

9 MR. LUDWIG: Mark Ludwig for the  
10 Complainants.

11 JUDGE JONES: And Respondent.

12 MR. ELLINGER: Marc Ellinger with  
13 Blitz, Bardgett & Deutsch, 308 East High,  
14 Suite 301, Jefferson City, Missouri 65101.

15 JUDGE JONES: And Staff of the  
16 Commission.

17 MR. KRUEGER: Keith Krueger for the  
18 Staff of the Missouri Public Service Commission. My  
19 address is P. O. Box 360, Jefferson City, Missouri  
20 65102.

21 JUDGE JONES: And it doesn't appear  
22 anyone is here from the Office of Public Counsel,  
23 and I'll note that for the record.

24 Okay. Let's start with opening  
25 statements, beginning with Complainants.

1                   MR. LUDWIG: May it please the  
2 Commission.

3                   As I said, I'm Mark Ludwig. I  
4 represent Ed Storey and Greater Jefferson City  
5 Construction Company.

6                   This has to do with the wastewater  
7 facility at the Quail Valley development just  
8 outside of Jefferson City, Missouri.

9                   In 1983 Ed Storey had a dream to form  
10 Quail Valley Lake, Quail Valley Subdivision. In  
11 1983 the area was completely platted. There were  
12 several areas on the plat that were not subdivided.  
13 Those were finished in 1988 and 2001, but the entire  
14 subdivision was in that original plat.

15                  When he began building the first -- the  
16 way -- there were 100 plus lots on the plat, and the  
17 agreement was that he would build 40 homes with  
18 septic tanks before the wastewater facility would be  
19 installed, mostly because he needed to get money  
20 from the sale and building of those lots in order to  
21 afford it.

22                  After 40, the sewer system and the  
23 plant was built by Mr. Storey. This was completed  
24 in 1993 at significant costs to Mr. Storey. At that  
25 point it was given, turned over to Capital

1 Utilities, the predecessor of Aqua Missouri, Inc.

2           The president of Capital Utilities  
3 wrote a letter to Mr. Storey in 1993 that says the  
4 wastewater facility is designed to accommodate the  
5 wastewater loading generated by the complete  
6 development of your subdivision.

7           This system at Quail Valley is what  
8 Mr. Haug, our engineer, will say is an innovative  
9 system. It does not have the typical loading that a  
10 wastewater -- municipal wastewater plant would have  
11 because you have septic tanks pretreating the waste.  
12 Every home out there has a septic tank, even those  
13 built since the original 40 went in.

14           For instance, the typical load of a  
15 municipal wastewater plant in biochemical oxygen,  
16 BOD it's called, is about 200 to 220, and I'll let  
17 the engineers explain what that means. Our loading  
18 is about 83.

19           The typical loading at a wastewater  
20 treatment plant for TSS, which is total suspended  
21 solids, and I think we can figure out what that is,  
22 is about 250. And the loading at the Quail Valley  
23 plant is about 30.

24           This plant has never had a problem  
25 staying within the permit levels for the effluent.

1 That is what is tested when it leaves the plant.  
2 That is what is regulated by DNR. On average  
3 they're running about 25 to 30 percent of the permit  
4 levels.

5 In 2002 Mr. Storey had sold enough lots  
6 that 80 hookups were committed. Some of those lots  
7 hadn't been built on yet, but when you sell somebody  
8 a lot, you have to be able to promise that they  
9 would have sewer hookups, and he had done that.

10 In that year he had a contract to  
11 sell seven lots, and part of that contract was to  
12 provide the utilities for those lots. He went to  
13 Aqua Missouri, and he was told 80 hookups is all you  
14 get.

15 Now, you will see that some  
16 applications have been completed for sewer service  
17 since then, but those were lots that were already  
18 sold or committed prior to 2002.

19 So shortly thereafter Mr. Storey began  
20 investigating expanding the plant. He hired an  
21 engineer by the name of Mr. Krogstad, and he did  
22 some studies as to what it would cost, the various  
23 options to expand the sewer treatment plant.

24 And by chance, Mr. Storey, who was  
25 leasing a building to Greg Haug, began speaking with

1 Mr. Haug, and he agreed to analyze the capacity of  
2 our plant. He's a professional engineer with a  
3 focus on sanitary sewer systems.

4 Mr. Haug obtained data from Aqua  
5 Missouri regarding the flow, the effluent data,  
6 going back for a year, and gathered other  
7 information.

8 We met with DNR, and they had concerns  
9 about the number of people that were at Quail  
10 Valley, the water usage and septic, whether or not  
11 the septics were actually removing the load before  
12 it was reaching the plant.

13 In response to answer their concerns,  
14 we did a census at Quail Valley, and it turns out  
15 that in the 77 homes that are connected, there are  
16 229 people living there, which comes out to  
17 2.97 people per household. I'm not sure how you get  
18 fractions of people in a household, but you can do  
19 it.

20 Now, DNR for their design criteria  
21 assumes 3.7 people per household, and you will hear  
22 as we come along why that is important.

23 We gathered water usage records from  
24 the water company for the month of January, and it  
25 came out to 183 gallons per day per household. Now,

1 DNR in their design criteria assumes about 275 to  
2 370 gallons per day per household.

3 Also, to alleviate any concerns DNR had  
4 about the septic tanks, Quail Valley Homeowner's  
5 Association passed a bylaw -- it's registered  
6 with -- recorded with Cole County -- that says the  
7 septs will be pumped every three years and the  
8 association takes care of it at association expense.  
9 So the individual homeowners don't have any say in  
10 that.

11 That was arrived at because DNR  
12 recommends pumping your tanks every three to five  
13 years, and so we went on the conservative side of  
14 that.

15 During the spring and summer of 2006 we  
16 continued to communicate with Aqua Missouri, and it  
17 was apparent from our dealings with them that they  
18 weren't receptive to us hooking up additional homes  
19 to this plant, because they wanted us to build them  
20 an expanded plant.

21 Mr. Haug's final analysis, when running  
22 all of his figures and numbers, is that the plant  
23 could handle 120 homes and not be beyond capacity.  
24 We had only 112 lots.

25 So you go back to that letter. The



1 president of Capital Utilities in 1993 was quite  
2 prescient that it could, in fact, handle the entire  
3 development of Quail Valley Subdivision.

4               Mr. Haug on behalf of Mr. Storey sent a  
5 letter to Aqua Missouri on September 14th, 2006. At  
6 that time that letter requested that they grant us  
7 ten hookups at that time, with the ability to add  
8 more later.

9               You might ask, why do we only ask for  
10 ten if we had thirty-two lots? Well, we had a  
11 pretty good feeling they weren't going to give us  
12 anything we asked for. We knew they had absolutely  
13 no reasonable basis to refuse ten.

14              And as a practical matter, you're not  
15 going to sell all of the lots and you're not going  
16 to build on all of the lots at once anyway. And so  
17 asking for ten now, allowing it to be monitored, and  
18 we would then move on from there.

19              What followed after that letter,  
20 frankly, was a runaround. We got responses back  
21 that seemed to indicate that we had never talked to  
22 them, and eventually resulted in an offer that  
23 Mr. Storey could connect one lot at a time, and when  
24 it was built on, they would continue to monitor it.

25              I'd like the record to reflect that

1 Mr. Storey does have hair, but it's very, very gray.  
2 And if we were to try to sell these lots one at a  
3 time, I'm afraid Mr. Storey wouldn't be around for  
4 the end of that.

5 Eventually they suggested we could have  
6 ten lots but no more without a development  
7 agreement. Well, why would Mr. Storey sign that  
8 when we've got a study that says this can handle  
9 40 additional homes?

10 So in February we filed our complaint  
11 here in the Commission.

12 The evidence will show that there is  
13 absolutely no objective data that contradicts  
14 anything that Mr. Haug will testify to. There  
15 wasn't in September of 2006 when we made the request  
16 and there is no data now.

17 They raised questions. They questioned  
18 their own flow data. They questioned some other  
19 things, but there is just simply no data, no studies  
20 have been done whatsoever to contradict anything  
21 Mr. Haug says.

22 In addition, the evidence will show  
23 that Aqua Missouri did not consult with an outside  
24 engineer until July of 2007 after the prehearing  
25 conference here and months after this complaint was

1 filed with the Commission. That's Mr. Clarkson.

2 He agrees that the ten we asked for in  
3 September was reasonable and it would be reasonable  
4 to connect those.

5 Now, he is going to question some of  
6 the flow. He is going to question whether there is  
7 infiltration and inflow, which is water that can get  
8 into the system from an outside source.

9 However, he has done no flow studies.  
10 He has done no infiltration and inflow, an I & I  
11 study. He has absolutely nothing objective to  
12 contradict anything that Mr. Haug will say or the  
13 position that we take.

14 Now, he's going to claim that I & I,  
15 for instance, is a problem, but we will show you  
16 it's a maintenance issue. It has absolutely nothing  
17 to do with the design of the plant or the system.

18 Now, their defense in this is, well, we  
19 don't like the data even though it's the data we  
20 report to DNR and the flow is based on over 150 or  
21 160 grabs at various times of the day.

22 They say, well, we're not comfortable  
23 using actual data. We're not comfortable using the  
24 actual number of people that live at Quail Valley.  
25 We want to use DNR's theory, that there is 3.7 per

1 household, even though there aren't, and, basically,  
2 Aqua doesn't know what their own plant can handle.

3           Their other defense is, well,  
4 Mr. Storey never filled out an application. We  
5 would have given it to him. He never filled it out  
6 because he was told that they weren't going to give  
7 him any more, and the law doesn't require you to do  
8 that which is a futile act.

9           Plus, you usually apply for a sewer  
10 connection when you're ready to build a house, and  
11 Mr. Storey was attempting to sell lots where those  
12 people would apply for the sewer.

13           Additionally, they definitely  
14 understood Mr. Haug's letter to be a request for ten  
15 additional hookups.

16           The evidence will show that the plant  
17 and the system has plenty of capacity to add  
18 32 homes, and if not -- although I can't see any way  
19 that that will be disproven.

20           The entire subdivision was included in  
21 the original plat. And if the plant can't handle  
22 it, Aqua Missouri should be responsible to expand  
23 that plant because they knew this entire subdivision  
24 was included and that this was built for the entire  
25 subdivision.

1                   Thank you.

2                   JUDGE JONES: Just a moment,

3   Mr. Ludwig.

4                   COMMISSIONER APPLING: It's Mark.

5   Right?

6                   MR. LUDWIG: Yes, sir.

7                   COMMISSIONER APPLING: I think I've

8   been to Quail Valley, but can you describe to me the

9   location of it.

10                  MR. LUDWIG: It's between Jefferson

11   City and Russellville, about four miles beyond the

12   city limits on your left as you go out Route C.

13                  COMMISSIONER APPLING: Thank you very

14   much. I know where it's at. Thank you.

15                  MR. LUDWIG: Thank you.

16                  JUDGE JONES: Although our cross-

17   examination -- you can go ahead and have a seat.

18                  Although our cross-examination will go

19   in a different order, for clarity, we'll go ahead

20   and go with Respondent's opening statement and then

21   Staff.

22                  MR. ELLINGER: May it please the

23   Commission. My name is Marc Ellinger, and I

24   represent the Respondent Aqua Missouri.

25                  Contrary to what Mr. Ludwig said,

1 contrary to the documents that he has put in the  
2 pleadings in this case, this case shouldn't even be  
3 before the Commission for a multitude of reasons.

4 First of all, under the Department of  
5 Natural Resources' rules and regulations, the Quail  
6 Valley wastewater treatment facility is at capacity.

7 Those rules and regulations carry the  
8 force and effect of law, and they say that when  
9 designing and reviewing a wastewater treatment  
10 facility, the population equivalent that is used to  
11 determine capacity is 3.7 persons per residence.

12 Based upon 3.7 persons per residence  
13 and based upon the design capacity of the treatment  
14 facility at Quail Valley, 80 homes is what is  
15 allowed to be hooked up.

16 80 homes have received applications for  
17 service and have been approved. I believe 78 of  
18 those have actually been built and connected, two of  
19 which have been approved but not yet been built.

20 Aqua Missouri is relying on good faith  
21 on the Department of Natural Resources' rules and  
22 regulations.

23 They have the force and effect of law.  
24 And were they not to rely upon the Department's  
25 rules and regulations, then Aqua Missouri would be

1 solely responsible for any issues that would arise  
2 out of their willful or knowledgeable ignorance or  
3 refusal to follow those regulations.

4 I think it's important to note that  
5 Mr. Storey's -- and the evidence will show --  
6 Mr. Storey's original design of this treatment  
7 facility sealed by his engineer, Mr. Ewing Mueller,  
8 who is now deceased, shows that the original design  
9 was for 80 homes. It was not for 112 homes or  
10 102 homes or 90 homes or anything else. The sealed  
11 design says 80 homes, and Aqua Missouri relies upon  
12 that document.

13 In the interest of trying to resolve  
14 this matter, Aqua Missouri offered and took solely  
15 at its own risk the offer to allow ten additional  
16 connections to this treatment facility.

17 And I say that solely at Aqua  
18 Missouri's risk, because if there turns out to be  
19 some type of water quality violation of any type,  
20 the sole responsibility is on Aqua Missouri.

21 The Department of Natural Resources has  
22 the ability to enter orders compelling maintenance  
23 and repairs to fix those types of problems. It also  
24 has the authority to enter fines. And Aqua Missouri  
25 is the only entity sitting in this room today that

1 would be responsible for those fines or be  
2 responsible for enforcing or maintaining the  
3 treatment facility.

4                   You're going to hear some discussion  
5 about the type of treatment facility it is. I think  
6 Mr. Ludwig said it's an innovative facility. It's  
7 not. It's a pretty normal facility to be quite  
8 honest with you.

9                   It's a bunch of homes that have septic  
10 tanks in their backyards, or perhaps in their front  
11 yards, that pumps into a collection system that goes  
12 down to a treatment facility.

13                   Around Cole County, around the state of  
14 Missouri, this is really the normal way subdivisions  
15 are developed today. The thing is, is that Aqua  
16 Missouri has no control over the septic tanks.

17                   You're going to hear discussion about a  
18 bylaw that has been passed by the Homeowner's  
19 Association. Clearly, bylaws are subject to change  
20 at any time because they were able to change it at  
21 any time. Aqua Missouri has no ability to control  
22 when a septic tank is cleaned, when a septic tank is  
23 maintained or when it's pumped out.

24                   However, if a septic tank is defective  
25 in some manner or is not cleaned or is not pumped



1 out and it throws additional effluent loading into  
2 the sewer treatment facility and that causes a  
3 violation, one person, one entity is responsible for  
4 that violation, Aqua Missouri, again, not having any  
5 ability to control what comes in but having the sole  
6 and absolute responsibility for everything that  
7 comes out.

8 Let me go back to this ten that you're  
9 going to hear a lot about, ten connections.

10 Ten is the most that has ever been  
11 requested in any format. And I use the term "any  
12 format" because there has never been an application  
13 for service ever made that's been denied at Quail  
14 Valley.

15 The files of Aqua Missouri show that  
16 there have been several applications for service  
17 made over the years, the last one I believe in 2005.  
18 Every application for service was approved. That's  
19 undisputed by all parties.

20 Mr. Storey, the Complainant in this  
21 case, never sought an application for service, never  
22 filed an application for service, even though he  
23 could have requested one.

24 And more importantly, under Aqua  
25 Missouri's tariff, the only actions that Aqua

1 Missouri is allowed to take is to act upon an  
2 application for service.

3 He never filed an application for  
4 service, he never asked for an application for  
5 service, and he was never ever denied any  
6 application for service.

7 What you've got here is what I would  
8 call more of an advisory opinion case. Mr. Storey  
9 wants to sell some lots. I don't think there is any  
10 doubt about that.

11 He wants the Commission to give him  
12 advisory opinion as to how much capacity there is in  
13 a treatment facility without him actually having to  
14 go through the steps that are mandated by the tariff  
15 that's been approved by this Commission.

16 Tariffs have the force and effect of  
17 law. If Aqua Missouri can't rely on the tariff and  
18 developers cannot comply with the tariff, it's  
19 inappropriate for Aqua Missouri to suffer the  
20 expense and the liability of having to go through  
21 these type of actions when, in fact, there is a  
22 procedure built into the tariff.

23 Under Missouri statutes and under this  
24 PSC regulation that deal with complaints, there is  
25 no jurisdiction in this case because there has never

1    been a rule or a statute or an order of this  
2    Commission that's been violated by Aqua Missouri,  
3    and those are the only grounds for which you can  
4    have a complaint.

5                   And I think you're going to hear that  
6    today as the testimony comes forward.  There will be  
7    no rule, statute or order that anyone is going to  
8    point at that is being violated.

9                   What is being asked for is a  
10   preclearance, and the Staff of the Public Service  
11   Commission has a long history of opposing  
12   preclearance.

13                  And all one has to do is think what  
14   happens when a utility comes in and says I want to  
15   build a plant, will you give us approval to put it  
16   in rate base before we build it?  No.  Build it  
17   first; then we'll take a look at it.

18                  There is a long history in the Public  
19   Service Commission against preclearance, yet that's  
20   exactly what the developer is asking for in this  
21   case, preclearance, before I sell the lots, before I  
22   apply for an application for service, in fact, with  
23   respect to the majority of the lots in question in  
24   this case.

25                  There is not even sewer main.  He's not

1 even applied to extend the sewer mains, which goes  
2 through another permitting process which you'll hear  
3 evidence about, and requires the Department of  
4 Natural Resources to take a separate analysis of the  
5 capacity of the treatment facility, one that cannot  
6 be controlled by the Public Service Commission.

7                   Ultimately what you're going to see is  
8 there is no basis for this complaint to be here. It  
9 ought to be dismissed.

10                   And I'll point out that the Respondent  
11 has sought mediation in this case and it was denied.  
12 We had an agreement to resolve this case by allowing  
13 at Aqua Missouri's burden solely ten connections.  
14 It was reneged upon by the Complainants in this  
15 case.

16                   Now they want the Commission to fix the  
17 mistakes they've made. It reminds me of -- to  
18 paraphrase the old comic strip Pogo -- Mr. Storey  
19 has met the enemy and it's himself. And for those  
20 reasons this case should be dismissed.

21                   Thank you.

22                   JUDGE JONES: Mr. Ellinger, I did want  
23 to ask something real briefly.

24                   Both of you all seem to agree that ten  
25 additional hookups is okay despite jurisdictional

1 questions or interpretation of tariffs or anything.

2 Is that true?

3 MR. ELLINGER: We, Aqua Missouri, has  
4 made an offer to allow ten lots to be hooked up.  
5 The capacity issue, if we're going to litigate the  
6 capacity issue, which I think is what they want to  
7 litigate, clearly shows the capacity is 80.

8 JUDGE JONES: Well, I mean, in the  
9 interest of getting along, the complaint was filed  
10 in February. Have ten additional hookups occurred  
11 during the duration of the complaint?

12 MR. ELLINGER: No. There has never  
13 been a request for a single connection. You know,  
14 Aqua Missouri made an offer to connect ten lots and  
15 be resolved of this issue and it was denied. It was  
16 rejected.

17 JUDGE JONES: Okay.

18 MR. ELLINGER: You'd have to ask  
19 Mr. Ludwig why --

20 JUDGE JONES: Well, we can go back and  
21 forth on this.

22 Thanks. I appreciate it.

23 COMMISSIONER APPLING: I have a  
24 question if you don't mind.

25 MR. ELLINGER: Yes, sir.

1                   COMMISSIONER APPLING: How are you  
2 doing this morning?

3                   MR. ELLINGER: Good. How are you,  
4 Commissioner?

5                   COMMISSIONER APPLING: Did you say that  
6 Aqua has offered to Mr. Storey a chance to sit down  
7 and talk about this case?

8                   MR. ELLINGER: Aqua Missouri offered  
9 right off the bat to mediate this case and reach a  
10 resolution without having to come in front of the  
11 Commission. It was rejected.

12                  COMMISSIONER APPLING: Surely  
13 Mr. Storey is a business man and will want to build  
14 additional houses out there and develop it, which  
15 would be a good thing if he probably did, you know.  
16 He's a businessman, and he wants to build additional  
17 housing.

18                  I was just curious about that question  
19 of whether they have sat down over the table and  
20 tried to resolve this issue.

21                  MR. ELLINGER: There have been some  
22 discussions -- and I think you'll hear a lot of  
23 testimony about that, Commissioner -- but since the  
24 complaint has been filed, there has been a couple of  
25 attempts to resolve it, to no effect.

1                   Ultimately -- they have ulterior  
2 motives for why they're in this Commission meeting.  
3 It has nothing to do with getting their connections.

4                   COMMISSIONER APPLING: Okay. Thank you  
5 very much, sir.

6                   MR. ELLINGER: Thank you.

7                   JUDGE JONES: Now we'll have an opening  
8 statement from the Staff of the Commission.

9                   MR. KRUEGER: Thank you, Your Honor.

10                  Good morning. May it please the  
11 Commission. My name is Keith Krueger, and I  
12 represent the Staff in this proceeding.

13                  The Complainants in this case are the  
14 developers of Quail Valley Lake, a residential  
15 subdivision. Aqua Missouri has a certificate of  
16 convenience and necessity to provide sewer service  
17 to Quail Valley Lake and is providing wastewater  
18 treatment with an extended aeration treatment plant.

19                  The subdivision consists of about  
20 120 lots. There are presently 78 homes connected to  
21 the wastewater treatment plant. The Complainants  
22 desire to develop another 32 lots. To do that they  
23 need to be able to connect these 32 lots to the  
24 existing wastewater treatment plant.

25                  Aqua Missouri claims that the existing

1 plant is over capacity and cannot serve an  
2 additional 32 lots unless it is expanded.

3 The principal issue in this case is  
4 whether the existing plant is over capacity, or, if  
5 not, how many additional lots it can serve.

6 The wastewater treatment plant at Quail  
7 Valley Lake has utilized what is sometimes known as  
8 an innovative design. By this we mean that each of  
9 the homes at Quail Valley Lake has a septic tank  
10 which provides primary treatment and reduces the  
11 organic load to the treatment plant.

12 The Missouri Department of Natural  
13 Resources has promulgated rules that govern the  
14 design and construction of sewer facilities. One of  
15 these rules is known as the design standards.

16 It generally requires that the designer  
17 of a new wastewater treatment plant must assume that  
18 residences will on average be occupied by  
19 3.7 persons per house and that they will  
20 contribute -- that each of these persons will  
21 contribute 75 to 100 gallons of sewage per day, or a  
22 total of 370 gallons per day per residence, and that  
23 each person will contribute 0.17 pounds of  
24 biochemical oxygen demand, or BOD, per day.

25 But the DNR's rules also allow the



1 engineer, the designing engineer, to use lower  
2 figures if there is sufficient justification for  
3 using them.

4               One way to justify the lower figures is  
5 through the use of data that -- based on the actual  
6 flows and the actual strength of the sewage that  
7 flows into the sewage treatment plant.

8               The DNR's design standard addresses two  
9 different kinds of loading. One is the hydraulic  
10 loading. That is the number of gallons of sewage  
11 that flow into the sewage treatment plant each day.  
12 The other is the organic loading, and that is the  
13 amount of BOD and total suspended solids that are in  
14 the sewage that flows into the treatment plant.

15              The evidence in this case will show  
16 that the average residence in Quail Valley uses only  
17 about 183 gallons of water per day compared with the  
18 370 that is the standard -- design standard of the  
19 DNR.

20              The evidence will also show that inflow  
21 and infiltration is not a significant problem at  
22 Quail Valley Lake, that the influent to the sewage  
23 treatment plant is about 183 gallons per day per  
24 residence and that the system is, therefore, not  
25 overloaded hydraulically.

1           The evidence will also show that  
2   because septic tanks are in use to pretreat the  
3   sewage, the BOD of the influent to the wastewater  
4   treatment plant is only about 83 milligrams per  
5   liter compared with 200 milligrams per liter or  
6   perhaps up to 220 that is typical for domestic  
7   sewage.

8           As a result, the sewage treatment plant  
9   is not overloaded organically either. So it is not  
10   overloaded hydraulically or organically.

11          The evidence will also show that the  
12   DNR's regulations require that the effluent from the  
13   sewage treatment plant must contain no more than  
14   30 milligrams per liter of BOD and no more than  
15   30 milligrams per liter of total suspended solids.

16          And that the effluent of -- the  
17   evidence will show that the effluent from Quail  
18   Valley Lake has consistently had a BOD of less than  
19   10 milligrams per liter and total suspended solids  
20   of less than 10 milligrams per liter. As a result,  
21   the existing sewage treatment plant is functioning  
22   properly.

23          In conclusion, the evidence will show  
24   that the existing sewage treatment plant is not over  
25   capacity and, in fact, is not near capacity. The

1 evidence will, therefore, show that the additional  
2 32 connections can safely be made and that Aqua  
3 should allow the Complainants to make those  
4 connections.

5 Jerry Scheible and Jim Merciel will  
6 testify on behalf of the Staff at this proceeding,  
7 and they'll be happy to answer your questions.

8 JUDGE JONES: Mr. Krueger, before you  
9 leave, what's your take on this jurisdictional  
10 issue?

11 MR. KRUEGER: One of the requirements  
12 of -- I think that there is jurisdiction. One of  
13 the requirements that the statutes impose is that  
14 one who holds a certificate of convenience and  
15 necessity provide safe and adequate service.

16 If they are not providing service at  
17 all to the territory that they're certificated to  
18 serve, they are not providing adequate service.

19 JUDGE JONES: Okay. Thanks.

20 COMMISSIONER APPLING: Mr. Krueger,  
21 answer one question. I think I read it in the  
22 testimony.

23 But Quail Valley, how long has this --  
24 when was the first house? When did they start this  
25 development out there? Do you recall?

1                   MR. KRUEGER: I don't recall other than  
2   what Mr. Ludwig said in his opening statement. I  
3   think it was the early '80s.

4                   COMMISSIONER APPLING: Okay. That's  
5   correct.

6                   MR. LUDWIG: 1983.

7                   COMMISSIONER APPLING: Thank you very  
8   much. I was just trying to get in my own mind the  
9   age of things here. You know, I ran all of the  
10  State-owned buildings for eight years. Thank you.

11                  JUDGE JONES: Okay. Let's move on to  
12  the first witness for the Complainants.

13                  MR. LUDWIG: Edward Storey.

14                         (Witness affirmed.)

15                  JUDGE JONES: Thank you, sir. You may  
16  be seated.

17                         DIRECT EXAMINATION

18  BY MR. LUDWIG:

19                 Q.     Would you state your name, please?

20                 A.     Edward P. Storey.

21                 Q.     How old a man are you, Mr. Storey?

22                 A.     Seventy-six.

23                 Q.     Where do you live?

24                 A.     Quail Valley Lake.

25                 Q.     And what is your occupation?

1           A.     Well, I'm kind of semiretired now, but  
2 I was in the home-building/lot-selling business.

3           Q.     You might want to get a little closer  
4 to that microphone and make sure everyone can hear  
5 you.

6           A.     Okay.

7           Q.     What is your affiliation with Greater  
8 Jefferson City Construction?

9           A.     I'm the president.

10          Q.     All right. And you're the owner?

11          A.     Yes.

12          Q.     When did you start Quail Valley?

13          A.     Approximately 1983, maybe built the dam  
14 a little bit before that.

15          Q.     Okay. Let me hand you what has been  
16 collectively marked Plaintiffs' Exhibit -- or  
17 Petitioners' Exhibit 1. Can you identify this for  
18 us, please?

19          A.     Yes. This -- this entire what you have  
20 here is representative of what's up there, the lots  
21 at Quail Valley Lake.

22          Q.     All right. When you say "what's up  
23 there," you're talking about what's been marked  
24 Petitioners' Exhibit 2, which is an overhead  
25 photograph with plat -- or houses and such on them.

1 Is that correct?

2 A. Yes, that's correct.

3 Q. And just for the ease of the  
4 Commission, there are three different recordings, I  
5 believe, in Exhibit 1. Is that right?

6 A. Yes, uh-huh.

7 Q. And what those show is that this area  
8 outlined in red all of the way around is what was in  
9 the original 1983 plat for Quail Valley Subdivision.  
10 Is that right?

11 A. Yes.

12 Q. The area outlined in black and in blue  
13 were not originally subdivided into the individual  
14 plats that are shown in the 1983 filing?

15 A. Yes, that's right.

16 Q. In other words, the area was included  
17 but they weren't broken down?

18 A. Yes.

19 Q. All right. What is outlined in black  
20 here, which has your house at the very bottom, was  
21 actually subdivided in 1988 and filed?

22 A. Uh-huh. That's correct.

23 Q. And then this area up here near the  
24 entrance to Quail Valley --

25 JUDGE JONES: Let me interrupt you for

1 a moment, Mr. Ludwig.

2 Will you be able to see that,  
3 Mr. Storey, if it's over here by the podium?

4 THE WITNESS: Sure. Sure.

5 MR. LUDWIG: I'm sorry.

6 JUDGE JONES: Why don't you move it  
7 over here, kind of slant it so we can all see it.

8 BY MR. LUDWIG:

9 Q. And we did this for the ease, so that  
10 people didn't have to try to piece those plats  
11 together and figure out what was what?

12 A. Right.

13 Q. Now, this area outlined in blue, that  
14 was the part that was actually subdivided and filed  
15 in 2001. Is that right?

16 A. That's correct, yes, sir.

17 Q. This area in blue has no sewer mains to  
18 it right now, no infrastructure?

19 A. That's correct.

20 Q. This area that was platted in 1988 is  
21 almost fully developed at this point?

22 A. Yes.

23 Q. And, of course, the area in red was  
24 subdivided and set out as early as 1983?

25 A. Right.

1           Q.     Okay. And this area here that is in  
2     blue that was actually subdivided into these  
3     individual plats in 2001 has 16 lots?

4           A.     16 lots.

5           Q.     All right. Thank you.

6                     Now, you had to get approval from Cole  
7     County and DNR when you were developing this  
8     subdivision. Is that right?

9           A.     That's correct.

10          Q.     Part of the deal, I guess, you struck  
11     with Cole County would be that you couldn't afford  
12     to put in the sewer lines right off the bat, so you  
13     were allowed to build up to 40 homes with septic  
14     tanks before you had to put in the sewer system?

15          A.     That's correct.

16          Q.     All right. In 1993 you began putting  
17     in the sewer systems -- or the sewer lines and the  
18     plant. Is that correct?

19          A.     Yes.

20          Q.     About how many feet of sewer lines are  
21     laid out there?

22          A.     Several thousand.

23          Q.     I mean, the lake is what, 37 acres or  
24     something?

25          A.     42 acres.



1 Q. 42 acres.

2 And it goes -- the sewer lines go all  
3 of the way around?

4 A. All of the way around the lake, both  
5 sides of the road.

6 Q. And the plant is down here?

7 A. Down there, right. And they both  
8 connect from each side coming down the dam bank.

9 Q. That's a d-a-m bank?

10 A. Yeah.

11 Q. So you've got somewhere like a mile and  
12 a half, maybe two miles of sewer lines out there?

13 A. At least.

14 Q. And the plant is located right down  
15 here below the dam?

16 A. Yes.

17 Q. All right. What is the diameter of the  
18 sewer pipes?

19 A. It's four inches.

20 Q. And did you supervise the installation  
21 of those lines?

22 A. Yeah, I supervised it, and three  
23 engineers.

24 Q. But, I mean, you didn't put them in  
25 yourself; you subcontracted that out?

1           A.     Yes, that's right.

2           Q.     All right. And the engineer gave you  
3 the option of putting in three-inch lines. Is that  
4 right?

5           A.     Yes, he did.

6           Q.     But you put in the four?

7           A.     Yes, sir.

8           Q.     All right. Let me hand you what's been  
9 marked Petitioners' Exhibit 3. Can you identify  
10 that for us, please?

11          A.     This is a letter from Capital  
12 Utilities, who took over the ownership of the entire  
13 system, and they assured me that this system would  
14 handle my entire, complete subdivision development.

15          Q.     What approximately did this sewer  
16 system cost you to put in?

17          A.     I threw all of that stuff away a long  
18 time ago. It was over \$200,000, 230, something like  
19 that.

20          Q.     At some time in 1993 you just handed it  
21 over to Capital Utilities?

22          A.     I just -- I still haven't got over  
23 that, because they turned around and sold it.

24          Q.     To Aqua Missouri?

25          A.     Yes.

1           Q.     All right.  Let's talk about our  
2     dispute with Aqua Missouri.  How did this -- well,  
3     let me hand you what's been marked Petitioners'  
4     Exhibit 4.  Can you identify that for us, please?

5           A.     Yes.  It's a contract I had for the  
6     sale of seven lots to one individual.

7           Q.     What's the date of that contract?

8           A.     August 13th, 2002.

9           Q.     Did that contract require you to put in  
10    the utilities?

11          A.     Yes, it did.

12          Q.     After you entered into that contract --  
13    and by the way, this would have been for seven lots  
14    in this area up here at the top that's in blue.  Is  
15    that right?

16          A.     That's correct, the undeveloped area,  
17    yes.

18          Q.     And the people you had to contract with  
19    lived, what, right over the hill there?

20          A.     Yes.

21          Q.     Or right over the top?

22          A.     Yes, that's correct.

23          Q.     After you had signed that contract, did  
24    you take steps to determine whether or not you could  
25    provide the utilities that the contract required?

1           A.     Well, to start off with, I started  
2     developing it. I started cutting roads. You can  
3     see where the roads are cut now.

4                     And I got a call from Aqua, and they  
5     said, you know, what's going on out there? I said,  
6     well, I've got this plat approved, and, you know,  
7     I'm putting in 16 lots. And they said, well, you  
8     only have sewer for 80 lots. And I said, what? I  
9     don't think so. I think -- you know, my plant is  
10    designed to cover, you know, the entire development  
11    because of the septic system. And they said, no,  
12    it's not.

13          Q.     All right. So they told you they  
14    wouldn't give you approval for any more lots?

15          A.     Yeah. I put culverts and anything  
16    there. I just stopped the whole deal.

17          Q.     Have there been any homes built since  
18    2002?

19          A.     Uh-huh. Yes.

20          Q.     Let me hand you what's been marked  
21    Petitioners' Exhibit 5. Your name is actually on  
22    one of these.

23          A.     Uh-huh, the spec home.

24          Q.     If they told you couldn't have any more  
25    lots, how do you explain those sewer hookups since

1 2002?

2 A. Because we weren't at the 80 homes yet.

3 Q. Okay. Because you had sold those lots  
4 and they were committed to having a sewer system?

5 A. Yes. Yes.

6 Q. And you weren't going to put in some  
7 more and take their right away?

8 A. I couldn't go over 80. I was shut  
9 down.

10 Q. All right. Are there still two lots  
11 that are sold but not built on?

12 A. Yes. That's owned by people that  
13 bought them years ago. They are part of that 80.

14 Q. And have you had inquiries other than  
15 this contract that we just marked Exhibit 4 from  
16 other people wanting to buy lots?

17 A. Oh, yes. I missed the five best years  
18 in the history of America and the State of Missouri.

19 Q. As far as real estate sales?

20 A. As far as building homes and selling  
21 lots, yeah.

22 Q. When Aqua told you that you couldn't  
23 have any more than 80, what did you do?

24 A. Well, I believed them, and I went and  
25 got a lawyer (sic) by the name of Wilbur Krogstad.

1 Q. An engineer?

2 A. An engineer. An engineer, Wilbur  
3 Krogstad.

4 And I told him that, you know, they  
5 were making me -- well, first of all I went to a  
6 company by the name of Murdon that put in this  
7 treatment plant, and they said they could add on to  
8 that treatment plant for \$29,000.

9 Well, that was turned down, and that's  
10 not going to happen that way. And then so I got  
11 Wilbur, and he ran the bill up to about 89,000. And  
12 I just said, I'm not going to do anything.  
13 Something is wrong here. I don't like what is going  
14 on here, and I just kind of stopped doing anything.

15 Q. Sometime after that, maybe in late  
16 2005, did you have an opportunity to talk to Greg  
17 Haug?

18 A. Yeah. His daughter and his daughter's  
19 friend that pitched softball here in town, they  
20 needed a place to workout indoors. And I rented  
21 them a building for one year, and that year I didn't  
22 talk to him about this at all, and the next year he  
23 rented a bigger building from me.

24 And in talking to him, I said, you're  
25 an engineer, aren't you? He said, yeah. I said,

1 well, you know, I got this deal going, you know,  
2 that I need some help on, because I don't want to  
3 spend a whole bunch of money that some other guy  
4 told me I had to spend on this thing.

5 And is there any way that we could work  
6 a deal out for me exchanging the rent of this  
7 building, which is a little over \$3,000, for you to  
8 do some work on this for me to find out, you know,  
9 if I'm right or wrong? He said, sure.

10 Q. All right. And then did Greg undertake  
11 a study as to the capacity of the plant?

12 A. Yes, he did.

13 Q. And what did he report to you  
14 preliminarily?

15 A. He reported back to me that that system  
16 will handle a lot more homes.

17 Q. Did we then have a meeting with DNR;  
18 you and Greg and I --

19 A. Yes. Yes, we did.

20 Q. -- met with a bunch of people from DNR?

21 A. Yes, we did.

22 Q. And that they were concerned -- one of  
23 the things they were concerned about is how many  
24 people did you actually have at Quail Valley?

25 A. That's correct.

1           Q.     And you understood they had design  
2     criteria for 3.7 people but we wanted -- they wanted  
3     to find out how many people were actually at Quail  
4     Valley?

5           A.     Right.

6           Q.     And was that census done?

7           A.     Yes, it was.

8           Q.     And it showed there were 229 people at  
9     Quail Valley?

10          A.     That's what it showed.

11          Q.     All right. And you provided that  
12     information to Greg?

13          A.     Yes, I did.

14          Q.     To your knowledge has that number  
15     changed since the spring of 2006?

16          A.     Basically not. People have moved in  
17     and moved out, and the only big change came when a  
18     foster family moved out. They had six or seven  
19     kids.

20          Q.     All right. And then who moved into  
21     that house?

22          A.     A couple. And I don't know if they  
23     have kids or not. They may have. I don't know.

24          Q.     So if anything, it's either the same or  
25     a little less people living at Quail Valley now?



1           A.     Oh, yeah, that would be my thinking.

2           Q.     Okay.  Another concern that DNR had was  
3 whether or not the septic systems would continue to provide  
4 pretreatment to this plant?

5           A.     Yes.

6           Q.     And the idea is that the septic systems, a lot  
7 of the solids settle out and they never reach the  
8 plant.  Is that your understanding?

9           A.     Yes, that's correct.

10          Q.     And that's the way the system was  
11 designed?

12          A.     Yes.

13          Q.     And did we agree with DNR that we would  
14 pass a bylaw that would make it the responsibility  
15 of the Homeowner's Association to pump those septic  
16 tanks every three years at the Association's  
17 expense?

18          A.     Yes.  We sent out a ballot and  
19 whatever -- the ballots went to everyone that lived  
20 out there, and only four people objected.

21          Q.     Let me hand you what's been marked  
22 Petitioners' Exhibit 6, and can you identify that,  
23 please?

24          A.     This is that amendment that we had  
25 drawn up and recorded.

1           Q.     And the pertinent area for what we're  
2     talking about here is that septic tanks shall be  
3     pumped to remove solids every three years, such  
4     pumping to be done at the expense of the  
5     Association?

6           A.     That's correct.

7           Q.     All right. And you reported that to  
8     Greg so he could report that to DNR. Is that  
9     correct?

10          A.     Yes, sir.

11          Q.     Okay. And was that done in the summer  
12     of -- what would that be, the summer of 2006?

13          A.     I guess. I mean --

14          Q.     Well, you know the tanks were pumped?

15          A.     Yes, sir. Yes. Yes.

16          Q.     But, you know, in your age the years  
17     kind of run together?

18          A.     Well, yeah.

19          Q.     Okay. And did we also have some  
20     meetings with Aqua?

21          A.     Yes.

22          Q.     And were you concerned that they  
23     weren't really listening to what we were telling  
24     them?

25          A.     No, they weren't.

1           Q.     Okay.  Now, Greg wrote a letter,  
2     September 14th of 2006, I believe, and in that  
3     letter gave Aqua his numbers and his capacity  
4     analysis.  You're, of course, familiar with that  
5     letter?

6           A.     Yes.

7           Q.     And we asked for ten hookups to be  
8     approved at that time.  Is that right?

9           A.     Yes.

10          Q.     And why only ten?

11          A.     Well, because we knew that it will  
12     handle 40, and we thought it would be easy to get  
13     the 10, and then after the 10, why, we expected to  
14     get more.

15          Q.     All right.  And did I sort of suggest  
16     to you that there is no way they could reasonably  
17     turn this down?

18          A.     Yes, sir.

19          Q.     All right.  Did Aqua ever agree to  
20     giving you those ten hookups without attaching some  
21     strings to it?

22          A.     Never.

23          Q.     And one point they said, well, you can  
24     hook up -- we'll give you one at a time.  You can  
25     build the homes, and we'll continue to assess the

1 plant. That would basically be one hookup a year?

2 A. Yeah. Yeah.

3 Q. That's not realistic, is it?

4 A. No, it's not.

5 Q. And at one time did they say, well,  
6 we'll give you ten but you have to sign a  
7 developer's agreement that says if you do any more,  
8 then you've got to expand that plant regardless of  
9 what the figures show as to capacity?

10 A. That's -- and that's after Greg Haug  
11 showed it would handle at least 40 more homes.

12 Q. So that wasn't -- again, those were  
13 strings you couldn't live with because why would you  
14 build a plant if it can handle more?

15 A. Not a good business decision.

16 Q. Right.

17 All right. Now, one of the things that  
18 Aqua seems to be claiming is that you didn't fill  
19 out an application for these lots. Did you consider  
20 Greg's letter to be, in essence, an application for  
21 ten additional hookups?

22 A. Well, I guess it could be.

23 Q. Did Aqua ever say, Mr. Storey, if you  
24 fill out these applications, we'll give you the  
25 hookups?

1           A.     No.

2           Q.     Plus they had told you originally 80  
3 was all you're going to get?

4           A.     Right.

5           Q.     Normally is the application for sewer  
6 service filled out before you sell a lot or is it  
7 filled out by the builder of the lot?

8           A.     You go and get your permit first before  
9 you start anything, so you make sure you've got the  
10 permit for the sewer.

11          Q.     That's the builder that normally does  
12 it?

13          A.     That's the builder.

14          Q.     So it wouldn't make much sense to apply  
15 for it now for a lot that might be sold and built on  
16 five years from now?

17          A.     No.

18          Q.     All right. Now, have there been  
19 backups in the sewer lines out there?

20          A.     There have been backups.

21          Q.     Now, you understand that Aqua is  
22 claiming that's because the collection lines are  
23 inadequate. What's your response to that?

24          A.     Well, no, it's not. It's because the  
25 lines aren't maintained properly for the type of a

1 system that it is.

2 Q. And explain for us what you mean.

3 A. Well, the system lays basically flat,  
4 with very little fall on the east side. Now, on the  
5 west side we have a lot more fall, and it's only --  
6 on the west side -- I'm sorry.

7 Q. You've got it backwards.

8 A. I've got it backwards. That's about  
9 par for me anymore.

10 On the east side it lays very flat and  
11 it has little fall.

12 Q. The west side -- this side over here on  
13 the left side of the --

14 A. That's the east side.

15 Q. That's the west side.

16 You're on the east side, Ed, right,  
17 going west?

18 A. I'm on the east side, that's right.

19 Q. This side has got more fall. You have  
20 no problems over here, do you?

21 A. You're correct. The west side is over  
22 here and that -- that has minimum fall.

23 Q. All right. And there have been  
24 occasions where the lines have backed up?

25 A. The east side has had one plugup in the

1 whole time since the development was built, and  
2 that's because it doesn't need the maintenance that  
3 the other side does because it lays so flat, and the  
4 other side needs the lines blown out at least once a  
5 year.

6 I say they should be blown out in the  
7 spring and they should be blown out in the fall, you  
8 know, and never have a problem over there.

9 Q. All right. And you're around a lot out  
10 here and such, and you're aware that they're not  
11 twice a year or once a year even jetting those  
12 lines?

13 A. That's right.

14 Q. All right.

15 A. Yeah. Yeah. Yeah.

16 Q. In fact, was there a problem here  
17 recently?

18 A. Yes, there was a problem here recently.

19 Q. And when they came in and put the hose  
20 down the line and jetted it, what happened?

21 A. Well, it broke it free.

22 First of all, they sent out two people  
23 that didn't even know what they were doing, and they  
24 were trying to blow the line out the other way from  
25 where the plugup was.

1                   And I asked them why they were doing it  
2     that way, and they said, well, this is the way it's  
3     supposed to be done, and just acted like I was an  
4     idiot. And so I just let them do whatever they were  
5     doing.

6           Q.     All right. But eventually they got it  
7     unplugged?

8           A.     Yeah. And then over on the other side,  
9     I said, well, you know, what about the other side?  
10    Because it's coming out -- when we unscrew that cap,  
11    it's coming out. They said, oh, it always comes out  
12    there like that. I said, no, it doesn't always come  
13    out. It only comes out like that when the line is  
14    plugged over there.

15          Q.     All right.

16          A.     Which is the truth.

17          Q.     Do you have a bylaw at Quail Valley  
18    regarding downspouts and the hooking up -- or not  
19    allowing the hookup of downspouts to the wastewater  
20    treatment?

21          A.     Yes, we do. It's in the covenants and  
22    restrictions.

23          Q.     And to your knowledge are there any  
24    downspouts going into the wastewater treatment?

25          A.     No, there are not.



1 Q. All right. You're sure of that?

2 A. Yes, I'm sure of that.

3 Q. Okay. Why did you file this complaint  
4 in the PSC?

5 A. Because Aqua Source just said, that's  
6 it. You're not getting any more hookups.

7 Q. All right.

8 A. It was my next course of action.

9 Q. Have you done everything you think you  
10 could do short of filing this action to convince  
11 them that your plant had capacity?

12 A. I certainly did.

13 Q. And for five years have you been  
14 selling any lots out there?

15 A. No, sir. Just -- just those ones that  
16 were called for.

17 Q. Do you think you've lost a significant  
18 amount of money because of that?

19 A. A lot of money.

20 MR. ELLINGER: I'm going to object at  
21 this point, Judge. Whether there is loss or not is  
22 irrelevant to the question of what is represented in  
23 this case.

24 JUDGE JONES: Objection sustained.

25 BY MR. LUDWIG:

1           Q.     To do the engineering studies to  
2     convince Aqua that the plant had capacity, have you  
3     spent a significant amount of money for that?

4           A.     Yes.

5                     MR. ELLINGER:  I object again, Judge.  
6     The relevance about how much is being spent has no  
7     application to what the capacity of the system is or  
8     whether the steps were taken to seek service.

9                     MR. LUDWIG:  Well, Your Honor, if I  
10    may.

11                    You might note in the Staff's report on  
12    this, they note that Aqua has a history of requiring  
13    the developers and such to expend money to tell them  
14    what their plant capacity is, and I think it's  
15    relevant on that issue.

16                    JUDGE JONES:  Well, Mr. Ellinger's  
17    objection goes to the amount of money.

18                    MR. LUDWIG:  I didn't ask him an  
19    amount.  I just asked if there was a significant  
20    amount of money.

21                    JUDGE JONES:  How is the amount --  
22    significant or insignificant, how is that relevant?

23                    MR. LUDWIG:  He is spending the money  
24    to do their job.  That's all the point I'm making,  
25    Judge.

1 JUDGE JONES: Well, I'll allow that.

2 Overruled.

3 BY MR. LUDWIG:

4 Q. You paid Mr. Krogstad, you paid

5 Mr. Haug and, of course, you had to pay us?

6 A. That's correct.

7 MR. LUDWIG: I believe that's all I

8 have, Your Honor.

9 JUDGE JONES: Commissioner Appling, any  
10 questions of Mr. Storey?

11 QUESTIONS

12 BY COMMISSIONER APPLING:

13 Q. Good morning, Mr. Storey.

14 A. Good morning.

15 Q. How are you doing?

16 A. Good.

17 Q. Let's take a couple steps back just for

18 my own edification. Is the \$29,000 that the

19 engineer indicated to you that he could expand the

20 treatment plant --

21 A. Yes.

22 Q. -- is that correct?

23 A. Yes.

24 Q. Can you describe what he was going to

25 do to expand the treatment plant?

1           A.     Well, he was going to expand -- he was  
2 going to expand it, but to my recollection, it  
3 wasn't for 40 homes. It was just for a certain  
4 amount of homes for that 29,000.

5           Q.     Okay. Let me get clear on the next  
6 thing. How many more lots do you have that you  
7 could develop right now?

8           A.     I've got 40 lots total -- 38 lots  
9 total. I'm sorry. Yeah. 38 lots total that I  
10 could develop.

11           COMMISSIONER APPLING: Okay. I might  
12 have a question later on, but that's all I have.  
13 That is the only questions I have at the present  
14 time.

15           JUDGE JONES: Okay.

16           THE WITNESS: Judge, could I just add  
17 one thing here at this point?

18           JUDGE JONES: Is this in response to a  
19 question?

20           THE WITNESS: Yeah, I think it's very  
21 relevant, because their lawyer got up there and said  
22 that this plant, you can only hook up 80 homes, and  
23 then he criticized me for not coming in and trying  
24 to get more hookups.

25           JUDGE JONES: You're not done yet,

1 Mr. Storey.

2 We'll have cross-examination now from  
3 Staff of the Commission.

4 MR. KRUEGER: Thank you, Your Honor.

5 CROSS-EXAMINATION

6 BY MR. KRUEGER:

7 Q. Good morning, Mr. Storey.

8 A. Good morning.

9 Q. You testified that all of the sewer  
10 lines out there are four-inch. Is that correct?

11 A. Yes, sir.

12 Q. How do you know that they are  
13 four-inch?

14 A. Because I paid for the four-inch lines.  
15 They're SDR35 and that's what was recommended.

16 Q. Do you have personal knowledge that the  
17 lines were four-inch or --

18 A. Yes. Yes, sir.

19 Q. Did you actually observe that?

20 A. Yes, sir.

21 Q. Okay. Would it be possible for the  
22 Homeowner's Association to rescind the addendum to  
23 declaration of covenants and restrictions?

24 A. Well, I -- I don't know 100 percent. I  
25 know it would have to be a two-thirds vote.

1           Q.     Okay.  So they could rescind it if  
2     there was a two-thirds vote?

3           A.     I think that's the way it's worded in  
4     what we've got, uh-huh.

5           Q.     Is there any way for Aqua Missouri to  
6     know that they will not do that?

7           A.     Um, I don't know.  All I -- I do know  
8     this, is that there is Class A votes and Class B  
9     votes, and I'm Class A votes, and I have two votes  
10    for every lot that is still under my control.  And I  
11    can't see anyone out there rescinding something that  
12    shouldn't be rescinded.

13                   MR. KRUEGER:  Thank you.  That's all of  
14    the questions I have.

15                   JUDGE JONES:  Cross-examination from  
16    Aqua Missouri.

17                               CROSS-EXAMINATION

18    BY MR. ELLINGER:

19           Q.     Good morning, Mr. Storey.

20           A.     Good morning.

21           Q.     You filed a complaint in this case  
22    originally asking for 22 additional connections.  Is  
23    that correct?

24                   Your original complaint that was filed,  
25    you asked for 22 connections.  Is that correct?

1           A.     I don't know if that's correct or not.

2           Q.     You understand that you filed an  
3 amended complaint in this case, a second complaint?

4           A.     Do you have that with you?

5           Q.     I do. And that asks for 32. Do you  
6 understand that?

7           A.     Well, if I could see it.

8           Q.     Well, do you understand that you're  
9 currently asking for 32?

10          A.     Oh, yes, I am currently asking for 32,  
11 yes.

12                 MR. ELLINGER: Judge, you wanted us to  
13 start with No. 20. Is that correct?

14                 JUDGE JONES: Yes.

15 BY MR. ELLINGER:

16          Q.     Let me hand you what's been marked as  
17 Aqua Missouri Exhibit No. 20. Have you seen a copy  
18 of this document?

19          A.     I think so, yes.

20          Q.     Is this what's styled a First Amended  
21 Complaint?

22          A.     It's what again?

23          Q.     The name. The title of the document  
24 says First Amended Complaint. Do you see that?

25          A.     Yes, I see it.

1           Q.     And if you turn to the last page, it's  
2     signed by Mr. Ludwig. Is he your attorney in this  
3     case?

4           A.     Yes.

5           Q.     Okay. And do you understand what an  
6     amended complaint means?

7           A.     Probably not.

8           Q.     Is it your understanding that you have  
9     to have had an original complaint before you can  
10    amend it?

11          A.     That makes sense.

12          Q.     Okay. But this is the complaint that's  
13    before the Commission now. Is that your  
14    understanding?

15          A.     That's my understanding.

16          Q.     Okay. And I'd like you to first of all  
17    take a look at the last paragraph on the last page,  
18    page 3. There is a paragraph that starts with  
19    wherefor. Do you see where I'm at?

20          A.     Uh-huh. Yeah, that's correct, 32 lots.

21          Q.     32 lots is what you're asking for --

22          A.     Yes.

23          Q.     -- is that correct?

24                   Okay. Now, if the treatment facility  
25    does not have capacity for 32 lots, are you also



1 asking Aqua Missouri then to upgrade the treatment  
2 facility?

3 A. I think my lawyer is handling that.

4 Q. Well, sir, this is a complaint on your  
5 behalf, is it not?

6 A. Yeah.

7 Q. And are you saying that if the facility  
8 cannot handle 32 lots, that you'll pay to expand the  
9 facility?

10 A. No, I won't pay to expand it, not when  
11 it's proven it will handle 40.

12 Q. But if it's determined that it cannot,  
13 will you pay to expand the facility?

14 A. No, I will not.

15 Q. Okay. I'd like you to flip back to the  
16 first page of this complaint real quick, please.

17 I note that the first paragraph -- or  
18 excuse me -- paragraph 4A says corporate -- excuse  
19 me -- Complainants corporately and individually are  
20 the developers of the Quail Valley Lake Subdivision.  
21 Do you see that?

22 A. Yes.

23 Q. Is the Greater Jefferson City  
24 Construction Company the developer?

25 A. Yes.

1           Q.     Okay.  What is your role as an  
2 individual in developing this subdivision?

3           A.     Well, I'm the president, and I do own a  
4 couple of lots out there that are mine.

5           Q.     And those couple of lots, how many lots  
6 are there that you own personally?

7           A.     Two.

8           Q.     And have you been denied service for  
9 either of those two lots?

10          A.     I never asked for service for those two  
11 lots.

12          Q.     Are those within the 80 of the original  
13 capacity?

14          A.     They were, and then I subjugated them  
15 to two other lots to build homes on --

16          Q.     So --

17          A.     -- and lost my service hookups to those  
18 two.

19          Q.     So you gave away -- what you're saying  
20 is you gave away sewer hookups to build lots?

21          A.     To myself, yes.

22          Q.     Okay.  Let me ask you to take a look at  
23 what your attorney had previously put in front of  
24 you as Petitioners' Exhibit 5.  It's a packet of  
25 applications for service.

1 A. Uh-huh.

2 Q. Do you have that in front of you?

3 A. I don't see it. Oh, here they are.

4 Okay. I got them.

5 Q. Now, you had originally earlier  
6 testified, I believe, that the person that is  
7 building -- that owns a lot and is building the home  
8 is who fills out an application for service. Is  
9 that correct?

10 A. Yes, sir. Yes.

11 Q. The first page, Petitioners' Exhibit 5,  
12 says customer name, Ed Storey. Is that you?

13 A. Yes.

14 Q. Okay. So this was an application for  
15 service that you filled out on your own behalf. Is  
16 that correct?

17 A. Yes.

18 Q. Okay. And was this application for  
19 service approved?

20 A. Yes.

21 Q. Okay. Have you ever filled out an  
22 application for service with Aqua Missouri that has  
23 not been approved?

24 A. No.

25 Q. You testified earlier that you had a

1 meeting with the Department of Natural Resources.

2 Do you recall that?

3 A. Yes.

4 Q. Did you arrange to have that meeting?

5 A. Well, I think my lawyer did.

6 Q. Okay. Do you know whether Aqua

7 Missouri was present at that meeting?

8 A. I don't remember.

9 Q. Do you remember contacting Aqua

10 Missouri and inviting them to that meeting?

11 A. I don't remember.

12 Q. Would you normally go to a regulatory

13 agency to talk about somebody else's property

14 without inviting that person, the owner of the

15 property, to be in attendance?

16 A. Well, they did.

17 Q. Who is "they"?

18 A. Aqua.

19 Q. Aqua --

20 A. They had a meeting -- had a meeting

21 that I requested, and they didn't invite me to it.

22 Q. They had a meeting with you --

23 A. No.

24 Q. -- but didn't invite you?

25 A. They had a meeting with a lady that

1     came down from Macon to make tests on the plant  
2     because I complained to her about what they were  
3     doing to me, and they didn't invite me to come to  
4     that meeting.

5           Q.     So what you're saying is that somebody  
6     from the Department of Natural Resources showed up  
7     to test the plant?

8           A.     Right.

9           Q.     At your request?

10          A.     Yes.

11          Q.     Okay. And was that request made in  
12     conjunction or in cooperation with Aqua Missouri?

13          A.     Well, I didn't ask Aqua Missouri for  
14     permission to do that.

15          Q.     Okay. So in other words, you've had a  
16     number of meetings and communications with the  
17     Department of Natural Resources about the Quail  
18     Valley wastewater facility. Is that correct?

19          A.     How many?

20          Q.     I don't know. You tell me how many,  
21     sir.

22          A.     I don't know.

23          Q.     But you've had several?

24          A.     I've had them, yeah.

25          Q.     And you've not invited Aqua Missouri to

1 participate in those communications, have you?

2 A. No. I didn't know I needed to invite  
3 them.

4 Q. I'd like you to take a look at what  
5 you've marked as Petitioners' Exhibit 4, which is  
6 this real estate agreement. Do you have that in  
7 front of you?

8 A. Yes.

9 Q. And I note in here that in the hand --  
10 is this your handwriting by the way?

11 A. Yes.

12 Q. It says -- there is some language in  
13 here that says that seller is to pave street 20 feet  
14 wide and install all utilities. Do you see that  
15 language?

16 A. Yes.

17 Q. So you were responsible for paving the  
18 street?

19 A. Yes.

20 Q. And you were responsible for installing  
21 the utilities. Correct?

22 A. Yes.

23 Q. Is there sewer main to these lots?

24 A. No.

25 Q. How were you going to install utilities

1 if you don't put sewer main in?

2 A. Well, No. 1, sewer is just part of the  
3 utilities that are put in. And I never thought that  
4 I'd have a problem because I knew my plant would  
5 handle it.

6 Q. Did you apply to extend the sewer mains  
7 into this area?

8 A. I guess we didn't get to that point.

9 Q. Would that be, no, you did not apply to  
10 extend the sewer mains?

11 A. Well, you know, I didn't think I had  
12 to. I thought I could just go ahead and put them in  
13 according to the way Cole County told me to do it  
14 after I submitted a plan from my engineer.

15 Q. Are you familiar with the construction  
16 permitting process?

17 A. Probably not.

18 Q. Do you have to get Department of  
19 Natural Resources' approval to extend sewer mains?

20 A. No, I didn't know that.

21 Q. So you were just going to go ahead and  
22 dig the ground up and put the main in?

23 A. No. I was going to have an engineer go  
24 and lay them out and submit them to Cole County --

25 Q. And did you --

1           A.     -- just like I did before.

2           Q.     Did you have an engineer lay them out?

3           A.     I never got to that point.

4           Q.     And you never filed an application to  
5 extend mains either, did you?

6           A.     No.

7           Q.     And without those mains, you simply  
8 can't connect sewer to any treatment facility, can  
9 you?

10          A.     That's right.

11          Q.     After your meeting -- after some of  
12 your meetings with the Department of Natural  
13 Resources, did you receive communications back from  
14 the Department of Natural Resources?

15          A.     I believe I did.

16          Q.     Would those be letters?

17          A.     I believe they were.

18          Q.     Okay. Let me hand you what's been  
19 marked as Aqua Missouri Water Exhibit No. 21.

20                 JUDGE JONES: Mr. Ellinger, are you  
21 expecting us to follow along with these exhibits?

22                 MR. ELLINGER: Would you like copies of  
23 the exhibits, Judge?

24                 JUDGE JONES: I don't have a preference  
25 one way or another. I want to know what your



1 expectation is.

2 MR. ELLINGER: Well, I was just going  
3 to walk him through each of the exhibits. Then when  
4 we're done, there will be a packet of exhibits,  
5 unless you have a preference.

6 JUDGE JONES: Do you want to look at it  
7 while he's talking about it, Commissioner?

8 COMMISSIONER APPLING: That would be  
9 helpful.

10 MR. ELLINGER: Okay.

11 COMMISSIONER APPLING: But if you don't  
12 have enough copies --

13 MR. ELLINGER: I will give you my copy.

14 COMMISSIONER APPLING: Can you talk  
15 from it?

16 MR. ELLINGER: I'll try to.

17 COMMISSIONER APPLING: Thanks.

18 MR. ELLINGER: We can make additional  
19 copies if you'd like.

20 JUDGE JONES: I'll look at it later.

21 MR. ELLINGER: Okay.

22 BY MR. ELLINGER:

23 Q. You should have a copy in front of you,  
24 a letter dated September 1, 2005. Do you have that?

25 Mr. Storey, do you have that letter in

1 front of you?

2 A. Yes.

3 Q. Okay. That's marked as Aqua Missouri  
4 Exhibit No. 21, is that correct, down in the bottom  
5 corner?

6 A. Yes.

7 Q. Is this a letter you received from the  
8 Department of Natural Resources?

9 A. Yes.

10 Q. And I note there is a large amount of  
11 handwriting on that letter. Do you see that  
12 handwriting?

13 A. Yes.

14 Q. Whose handwriting is that?

15 A. That's mine.

16 Q. And it references that you had some  
17 communications with Keith Forck. Do you see that?

18 A. Yes.

19 Q. What did Keith Forck tell you?

20 A. Well, can I read it? Because I don't  
21 remember.

22 Q. Sure. That's fine.

23 A. Keith Forck told me another plant might  
24 be a better way to expand. We were talking about --  
25 at that time they were talking about making me

1     expand.

2           Q.     Well, let's stop at that point and talk  
3     about that a little bit.  You said they were making  
4     you talk about expanding.

5           A.     Yes.

6           Q.     Who is "they"?

7           A.     Aqua Missouri, Aqua Source, whatever  
8     their name was at the time.

9           Q.     Okay.  These were communications you  
10    had with the Department of Natural Resources.  
11    Correct?

12          A.     Uh-huh.  Right.

13          Q.     And the Department of Natural Resources  
14    is telling you that you should expand.  Is that  
15    correct?

16          A.     I think that's what he told me.

17          Q.     Okay.  Do you know why he would tell  
18    you that they need to expand -- that you need to  
19    expand the plant out there?

20          A.     Yes, because he told me they were not  
21    going to give any consideration at all for a septic  
22    system, and he didn't care anything about septic  
23    tanks out there, and if I wanted more hookups, then  
24    that's the way that I should do it.

25          Q.     Okay.  And that was the position of the

1 Department of Natural Resources as of the date of  
2 that letter?

3 A. That's the position he took.

4 Q. And that was September 1, 2005. Is  
5 that correct?

6 A. Uh-huh. That's correct.

7 Q. Okay. I just want to make sure I  
8 understand this before we move on.

9 As of September 1, 2005 you had been  
10 told by the Department of Natural Resources that  
11 you would have to expand the facility at Quail  
12 Valley if you wanted to add more than  
13 80 connections?

14 A. By Keith Forck. And then -- and  
15 then -- then -- that's why we eventually led into a  
16 meeting with several people, because I didn't think  
17 that his word should be bound on something this  
18 important.

19 Q. And that was September 1 of 2005, was  
20 it not?

21 A. Yes.

22 Q. Let me hand you what's been marked as  
23 Aqua Missouri Exhibit No. 22 and ask you to take a  
24 look at that, please.

25 MR. ELLINGER: Would you like a copy of

1 this one, Commissioner?

2 I might take a break at some point and  
3 make extra copies, Judge.

4 BY MR. ELLINGER:

5 Q. Have you seen the document that's been  
6 marked as Exhibit 22?

7 A. Uh-huh. Yes, I do.

8 Q. And what is that document?

9 A. It's a letter from Wilbur Krogstad to  
10 Tina Russ (sic).

11 Q. And what is that letter regarding?

12 A. It's in regard to an expansion of the  
13 treatment facility.

14 Q. So you had contracted with Mr. Krogstad  
15 to expand the Quail Valley treatment facility?

16 A. Yes, because they were still bullying  
17 me at this point, and I wasn't aware that maybe I  
18 should proceed in a different direction.

19 Q. And what's the date of that letter?

20 A. March 7th, 2005.

21 Q. Okay. And did Aqua Missouri work with  
22 Mr. Krogstad in the process of trying to develop a  
23 plan for expansion?

24 A. I wouldn't say they worked with him.  
25 They listened to what he was wanting to propose.

1 Q. Okay. And that was in March of 2005.

2 Is that correct?

3 A. Yes.

4 Q. Or is that May? I don't have the  
5 letter in front of me. I'm sorry, sir.

6 May. That was in March of 2000-- March  
7 7th, 2005. Is that correct?

8 A. Okay.

9 Q. Okay. Is that correct?

10 A. That's what it says.

11 Q. Okay. So that was prior to your  
12 meeting with Mr. Forck in September of 2005.

13 Correct?

14 If you look at the previous exhibit --

15 A. Yes.

16 Q. And what size expansion on the  
17 treatment facility were you looking at as of March  
18 of 2005, do you know?

19 A. What again now?

20 Q. What size of an expansion on the  
21 treatment facility were you looking at in 2005?

22 A. Well, according to this they were  
23 suggesting 12,000 G.P.D.

24 Q. Okay. And that was your engineer that  
25 was saying 12,000 G.P.D.?

1           A.     And at this same time he also presented  
2     an option to me that he felt very confidently that  
3     that plant would --- in its present state would  
4     handle a lot more homes, and it would cost me 8 or  
5     90 -- \$9,000 for him to undertake that task.

6           Q.     But the corres--

7           A.     But he couldn't guarantee me anything.

8           Q.     But that correspondence was never  
9     forwarded to anyone, was it, as far as you know?

10          A.     It was forwarded to me.

11          Q.     Okay. But the letters that were sent  
12     to Aqua Missouri reflected an expansion of the  
13     plant, did they not?

14          A.     That's what this -- that's what this  
15     does.

16          Q.     Okay. Let me hand you what's been  
17     marked as Aqua Missouri Exhibit 23.

18                   MR. ELLINGER: Sorry, Commissioner.

19                   COMMISSIONER APPLING: Thank you.

20     That's okay.

21     BY MR. ELLINGER:

22          Q.     Have you seen Aqua Missouri Exhibit 23  
23     before?

24                   It's the one I believe that is in your  
25     hand.

1           A.     Yes.

2           Q.     And what is Exhibit 23?

3           A.     It's a letter from Murdon to me.

4           Q.     And what does that letter discuss?

5           A.     It discussed the expansion of that

6 plant.

7           Q.     Of what plant?

8           A.     Of the plant that is out at Quail

9 Valley, if it were necessary. And he told me also

10 that it wasn't necessary to expand that plant, and

11 it would easily handle a lot more homes than it was

12 handling right then.

13          Q.     And that's in that letter that he told

14 you that?

15          A.     No, it's not in the letter.

16          Q.     No. Okay.

17                 That letter addresses an expansion to

18 the plant, does it not?

19          A.     That's right.

20          Q.     And what is the date on that letter?

21          A.     November 10th, 2004.

22          Q.     So on November 10th of 2004 you were

23 looking to do an expansion of the plant also, were

24 you not?

25          A.     Right.



1           Q.     And then in March you were talking to  
2     Mr. Krogstad about an expansion of the plant, were  
3     you not?

4           A.     That's right, uh-huh.

5           Q.     And then in September of 2005 you were  
6     talking to the Department of Natural Resources, and  
7     they were telling you that you had to expand the  
8     plant. Is that correct?

9           A.     That's what they told me.

10          Q.     Okay.

11          A.     Yes.

12          Q.     Okay.

13          A.     These people didn't tell me I had to  
14     expand the plant. They just gave me prices.

15          Q.     So you asked them to look at expanding  
16     the plant, didn't you?

17          A.     Well, what it could cost me, yes. I  
18     needed to know.

19                 MR. ELLINGER: I'm going to move this,  
20     if that's okay, Judge.

21     BY MR. ELLINGER:

22          Q.     I hand you what's been marked as Aqua  
23     Missouri Exhibit No. 24.

24                 MR. ELLINGER: Old habits die hard,  
25     Commissioner.

1 COMMISSIONER APPLING: This is 24?

2 MR. ELLINGER: This is 24.

3 BY MR. ELLINGER:

4 Q. Do you have Exhibit 24 in front of you?

5 A. Yes.

6 Q. Have you seen this document before?

7 You might take a minute and read

8 through it. Look at both pages.

9 A. I can't say that I've seen it before.

10 Q. Is that a DNR construction permit?

11 A. Yes, it is.

12 Q. And does it refer to Quail Valley?

13 A. Yes, it does.

14 Q. And then down at the bottom I believe

15 it's dated?

16 A. Yes, it is.

17 Q. What date is it dated?

18 A. Two dates.

19 Q. What are those dates?

20 A. 1992 and 1993.

21 Q. What was going on in 1992 and 1993 out

22 at Quail Valley?

23 A. This plant was just completing

24 construction.

25 Q. Okay. And so presumably '92 is when

1   you started construction, and that's when you would  
2   have obtained the permit?

3           A.    Yes.  Yes, that's what it says.

4           Q.    And there is some typewritten text  
5   towards the upper top in the middle part of the page  
6   that looks like it's been entered into the form.  Do  
7   you see where I'm talking about?

8           A.    Yes.

9           Q.    Would you read that text, or at least  
10  the first sentence of that text?

11          A.    Where it says "An extended aeration" --

12          Q.    Yes.

13          A.    -- "wastewater treatment facility with  
14  chlorination to treat a population equivalent of 296  
15  and a flow of 2200."

16          Q.    Okay.  Thank you.

17                   And 296, do you understand where the  
18  number 296 comes from?

19          A.    Yes, uh-huh, the 3.7 figure they have.

20          Q.    Times 80 homes, times 75 gallons per  
21  person.  Is that correct?

22          A.    Yes.  Yes.

23          Q.    And --

24          A.    Are you -- excuse me.  Are you also  
25  aware that the national people have redone these

1 figures and it's now 2.9?

2 Q. Sir, I'm asking the questions up here.

3 A. Good.

4 Q. Let's talk about the 3.7 a minute.

5 A. That's fine.

6 Q. If your counsel wants to bring up a  
7 different number, he's certainly welcome to do it.

8 But I think what I want to point out  
9 here is, that is the permit that you received to put  
10 the plant in, is that correct --

11 A. That's correct.

12 Q. -- at Quail Valley?

13 A. That's correct.

14 Q. And it has a population equivalent of  
15 296 based on 3.7?

16 A. That's correct.

17 Q. And in 1992 or 1993 did you object to  
18 the use of the 3.7?

19 A. No, because I knew that it was an -- it  
20 was a septic system, and my engineer and Capital  
21 Utilities told me that it was going to handle my  
22 entire development and gave me a letter on it.

23 Q. And I want to make sure I understand.

24 You could have -- at the time you put  
25 the plant in and got it approved, you could have

1 asked for a larger population equivalency, could you  
2 have not?

3 A. Well, I don't think so. I can't change  
4 their rules. How can I change their rules?

5 Q. Well, you're attempting to change the  
6 rules through this process, are you not?

7 A. No. I'm attempting to show that the  
8 plant will handle more because of the septic system.

9 Q. So couldn't you have shown that the  
10 plant could have handled more back in 1992 and 1993?

11 A. I think it was a given. They  
12 couldn't -- he couldn't put that in -- the engineer  
13 couldn't put it in.

14 It's a full-blown 80-plant home, which  
15 means raw sewage coming from 80 homes straight into  
16 it. That's not happening out at Quail Valley.

17 Q. It's permitted for 80 homes. Correct?

18 That's what that construction permit is  
19 for. Correct?

20 A. That is what it was originally. I  
21 understand it's changed now. It's for a certain  
22 amount of gallons running through.

23 Q. Let me hand you what's been marked as  
24 Exhibit 25. Have you seen that document before?

25 A. Yes, I have.

1           Q.     And that's a document that's been  
2     signed by Mr. E. A. Mueller. Do you see that at the  
3     bottom?

4           A.     Yes.

5           Q.     Who is E. A. Mueller?

6           A.     He was my engineer that designed the  
7     system.

8           Q.     And that is Ewing Mueller?

9           A.     Yes.

10          Q.     And he was a professional engineer, was  
11     he not?

12          A.     Yes.

13          Q.     And that document that you have in  
14     front of you is sealed by Mr. Mueller, is it not?

15          A.     Yes, it is.

16          Q.     And do you know what a sealed  
17     engineering document means?

18          A.     It means he's an official certified man  
19     to do the job.

20          Q.     He's put his license on the line, so to  
21     speak?

22          A.     That's right, yeah.

23          Q.     And that is a document that talks about  
24     the construction design for the Quail Valley  
25     wastewater treatment facility, does it not?

1           A.     That's correct.

2           Q.     And how many homes does he say the  
3     facility will treat?

4           A.     It says 80 homes.

5           Q.     Okay. Does his document say it will  
6     treat 120 homes?

7           A.     He was required to submit it this way  
8     because that's the only way it would be accepted.

9           Q.     Does this document say it would treat  
10    120 homes?

11          A.     No.

12          Q.     Okay. Does this document --

13          A.     He knew it would.

14          Q.     Does this document say that it would  
15    treat more than 80 homes?

16          A.     The document doesn't say that.

17          Q.     Okay. And that's the document he  
18    sealed with his engineer's seal. Correct?

19          A.     That's correct.

20          Q.     Okay. Do you have any other  
21    correspondence from Mr. Mueller that indicates that  
22    the plant was going to handle a larger capacity when  
23    it was designed?

24          A.     No, but he told me that it would before  
25    we even started.





1 It's a conclusion of law.

2 MR. ELLINGER: Well, I'm asking, in his  
3 opinion, does he believe that there has been --

4 JUDGE JONES: I understand what you're  
5 asking. The question is clear. That's why it's  
6 clearly sustained.

7 MR. ELLINGER: Okay.

8 BY MR. ELLINGER:

9 Q. I hand you what's been marked as  
10 Exhibit 26.

11 MR. ELLINGER: Can I use that for a  
12 moment, Commissioner, to ask a question and then  
13 I'll give it to you?

14 COMMISSIONER APPLING: Sure, you can.

15 BY MR. ELLINGER:

16 Q. I hand you what's been marked as  
17 Exhibit 26. Have you ever seen this statute before?

18 A. Never.

19 Q. Okay.

20 MR. ELLINGER: I'll give that back to  
21 you. That's all I needed to hear.

22 BY MR. ELLINGER:

23 Q. I'm going to hand you what's been  
24 marked as Exhibit 27. Have you ever seen this  
25 regulation of the Public Service Commission before?

1           A.     No.

2           Q.     Okay.  Could you read the first  
3 paragraph, please?

4           A.     You know, I hired a lawyer to do all of  
5 this.  This wasn't my job to do this.

6           Q.     Could you read the first paragraph?

7                   MR. LUDWIG:  I object, Your Honor.  I  
8 mean, the law is the law.  Again, he's working up to  
9 a legal conclusion and wasting the Commission's  
10 time.

11                   JUDGE JONES:  Mr. Ellinger, are you  
12 trying to prove your point a different way?

13                   MR. ELLINGER:  No, Judge.  Actually I  
14 just want him to read this provision and see if he  
15 has had the opportunity in the preparation of a  
16 complaint before this Commission to review the rules  
17 of the Commission and understand what a complaint  
18 means when it's filed before the Commission.

19                   JUDGE JONES:  Well, he said he's never  
20 seen it before, so he hasn't looked at it or  
21 anything.

22                   MR. ELLINGER:  So my question is, after  
23 he reads the rule, does he understand what a  
24 complaint is before the Commission.

25                   JUDGE JONES:  He doesn't have to

1 understand what a complaint is. All he has to do is  
2 go find an attorney and say somebody I think is  
3 doing me wrong. Will you look it up and do some  
4 research and do something about it?

5 He doesn't have to understand anything  
6 about the law, the rules, the statutes or nothing.  
7 He's just a factual witness and that's it.

8 MR. ELLINGER: Well, he's the  
9 Complainant, Judge, and --

10 JUDGE JONES: I'm not going to keep  
11 arguing with you about this. Let it go.

12 MR. ELLINGER: That's fine. I won't go  
13 any farther.

14 BY MR. ELLINGER:

15 Q. I hand you what's been marked as  
16 Exhibit 28, sir.

17 Have you seen Exhibit 28 before, sir?

18 A. I must have because I signed it. I  
19 must have because I signed it.

20 Q. That was going to be my next question.

21 Page 4, that's your signature?

22 A. Yes, sir.

23 Q. And this is a Sewer Extension  
24 Agreement - Developer. Is that what the title says?

25 A. Yes, it does.

1 Q. Do you know what this document is used  
2 for?

3 A. Well, I know that I put the system in  
4 according to the way I was told to put it in by  
5 three different engineers, and I guess that's what  
6 all this pertains to.

7 Q. Okay. If you'd look at the last page  
8 of that document.

9 A. Okay. I'm there.

10 Q. It should be -- it should have -- does  
11 it have your engineer's seal at the bottom corner of  
12 that?

13 Are you on the last page, sir?

14 A. Oh, the last page.

15 I'm at the last page. Is that this  
16 page?

17 Q. No. I think there is one page after  
18 that.

19 A. Oh. There is plat.

20 Q. Oh. Sorry. Never mind. Let me  
21 rephrase the question.

22 There are plats attached to that  
23 document, are there not?

24 A. Yes.

25 Q. All right. What do those plats

1 represent?

2 A. Those plats represent the 174 acres  
3 that I own out at Quail Valley Lake.

4 Q. Okay. And this document says that the  
5 developer is going to deposit \$138,218 with the  
6 company. Do you see that on the first page?

7 A. Yes.

8 Q. And is that the amount that it costs to  
9 put in the system at Quail Valley?

10 A. It costs a lot more than that.

11 Q. Do you know what this \$138,000  
12 represents then?

13 A. I think it probably was a good faith,  
14 to show that I was capable of paying for it after it  
15 was done.

16 Q. And that was on the 14th of July 1992.  
17 Is that correct?

18 A. I don't see that here. Where is that?

19 Q. If you look on the signature page.

20 A. That's correct.

21 Q. And that was the date you signed the  
22 agreement with the predecessor to Aqua Missouri, on  
23 the basis that there would be an extension of the  
24 sewer plant, in this case construction of the sewer  
25 plant, out in the Quail Valley area. Right?

1           A.     Right.

2           Q.     So you have signed a developer  
3     agreement before with Aqua Missouri's predecessor,  
4     have you not?

5           A.     I signed this one.

6           Q.     But you're refusing to sign the  
7     developer agreement today.  Correct?

8           A.     Excuse me?

9           Q.     Have you been presented with a  
10    developer agreement by Aqua Missouri to sign to  
11    expand the system at Quail Valley?

12          A.     You'll have to start over again.  I'm a  
13    little bit slow sometimes.

14          Q.     Do you know what a developer agreement  
15    is, sir?

16          A.     Yeah.  It's what the developer agrees  
17    to do.

18          Q.     Okay.  And with respect to an expansion  
19    of a sewer treatment facility, do you understand  
20    that you would sign a developer agreement with Aqua  
21    Missouri out at Quail Valley to expand the system?

22          A.     I did?

23          Q.     Would you -- do you understand that  
24    that is how you expand the treatment facility out at  
25    Quail Valley is by signing the agreement?

1           A.     That I would pay for the expansion?

2           Q.     Do you understand that there is a

3 document called the developer agreement?

4           A.     Yeah. Is it here somewhere?

5           Q.     No.

6           A.     Okay.

7           Q.     You've got an older copy in front of

8 you. Right?

9           A.     All right.

10          Q.     Do you understand that to expand a

11 facility, if a developer wants to expand a facility,

12 they have to sign a developer agreement. Do you

13 understand that?

14          A.     Okay.

15          Q.     Yes? Do you understand that?

16          A.     Okay.

17          Q.     Have you ever signed a developer

18 agreement with Aqua Missouri except for the original

19 one?

20          A.     Not to my knowledge.

21          Q.     Okay. But you have signed applications

22 for single-lot service?

23          A.     Yes.

24          Q.     And you've had every one of those

25 approved. Correct?

1 A. Yes.

2 Q. And that developer agreement that you  
3 have in your hand you signed with Aqua Missouri.  
4 Correct?

5 A. No. I signed it with Capital  
6 Utilities.

7 Q. Which was the predecessor of Aqua  
8 Missouri. Correct?

9 A. It wasn't Aqua Missouri.

10 Q. It was the predecessor?

11 A. That's correct.

12 Q. And they approved that agreement, did  
13 they not?

14 A. Yes, they did.

15 That's the same people that told me  
16 that they would serve all of the lots in my  
17 development, Capital Utilities did, in writing.

18 Q. Well, let's take a look at this comment  
19 about all of the lots in your development.

20 The original platted development does  
21 not show 120 lots, does it?

22 A. No.

23 Q. It shows large tracts of land that are  
24 called, quote, future development, does it not?

25 A. Well, let me interject something here



1 at this point.

2 MR. ELLINGER: Judge, I'd ask him to  
3 answer my question, please.

4 JUDGE JONES: Mr. Storey --

5 THE WITNESS: Well, it pertains to what  
6 he's asking.

7 JUDGE JONES: -- if he asks you a  
8 question and you can answer it yes or no, just do  
9 that, and let your lawyer do the work making you  
10 look better after he makes you look bad.

11 THE WITNESS: Okay.

12 MR. ELLINGER: Could you repeat the  
13 question, please?

14 (THE COURT REPORTER READ BACK THE  
15 FOLLOWING:

16 QUESTION: It shows large tracts of  
17 land that are called, quote, future development,  
18 does it not?)

19 MR. ELLINGER: That was the question.

20 THE WITNESS: Yes.

21 BY MR. ELLINGER:

22 Q. And those large tracts of land titled,  
23 quote, future development, close quote, did not show  
24 a number of lots platted on them, did they?

25 A. They did at Cole County because they

1 required me to do that, the whole 174 acres, and  
2 they've got that on record.

3 Q. Okay. But the original plat back in  
4 1992 when that sewer extension agreement was filed  
5 did not show platting of the future development  
6 land, did it?

7 A. It says on here future development on  
8 this plat.

9 Q. And does it show platted lots in that  
10 area?

11 A. No, it doesn't show the platted on  
12 that.

13 Q. And did that area have sewer lines  
14 running in it?

15 A. No, it didn't.

16 Q. Does it have easements already laid out  
17 in there for sewer lines?

18 A. Not to my knowledge.

19 Q. So at the time that you received your  
20 letter from -- at that time it was Capital  
21 Utilities, I believe, saying that it would treat  
22 your entire development. Do you recall that letter?

23 A. Yes.

24 Q. I think it's Exhibit 3 in front of you.

25 A. Uh-huh. Yes.

1           Q.     That entire future development area  
2     didn't show any lots or any sewer lines, did it?

3           A.     No.  No, it didn't.

4           Q.     Did you receive a report from your  
5     engineer Mr. Haug?

6           A.     Yes.

7           Q.     And did you receive a couple copies of  
8     it, drafts of it?

9           A.     Yes.

10          Q.     Did you ever receive a final signed  
11     report from your engineer?

12          A.     I don't know.  I'd have to look at my  
13     stuff.

14          Q.     Okay.  Did your engineer recommend that  
15     you have a meeting between the home-- well, strike  
16     that.  Let me go back.

17                 Did your engineer's report recommend  
18     four different options for allowing you to develop  
19     land out at Quail Valley as far as the sewer  
20     treatment went?

21          A.     I can't -- I don't know how to answer  
22     that.  I just can't answer that off the top of my  
23     head.  I don't completely understand where you're  
24     going.

25          Q.     Well, you received a report from your

1 engineer. Correct?

2 A. Yes.

3 Q. And it contained four alternatives for

4 how you could have treated the wastewater from your

5 Phase II development at Quail Valley. Is that

6 correct?

7 A. Well, I don't remember that.

8 Q. Well, one of them was to connect to a

9 larger regional wastewater treatment facility. Do

10 you recall that?

11 A. No.

12 Q. No.

13 Do you recall expanding -- building a

14 new plant at Quail Valley? Did your engineer

15 mention that to you?

16 A. You're talking about Mr. Haug?

17 Q. Yes.

18 A. Do you have it there? Can I look at

19 it?

20 Q. Well, let me ask you these questions.

21 Okay?

22 A. Okay.

23 Q. Do you recall that, that he made -- one

24 of the alternatives was to build a new treatment

25 facility?

1           A.     Yeah, he may have, but I don't -- I  
2     don't remember without seeing what you're talking  
3     about. You know, I can't remember back everything.

4           Q.     And was another alternative to just  
5     simply expand the existing treatment plant?

6           A.     I just -- all I know is he told me that  
7     it could handle 40 more homes.

8           MR. ELLINGER: If I can find my exhibit  
9     stickers, I'll mark this as Exhibit 29.

10           Do you have the deposition exhibits,  
11     Mark? Can we use that?

12           Sorry, Judge. Just a moment, please.

13     BY MR. ELLINGER:

14           Q.     Let me mark as Exhibit 29 what is  
15     reflected as a Draft Wastewater Facilities Report  
16     and ask you to take a look at that.

17           A.     Yes, I recall this.

18           MR. ELLINGER: Let me get a copy for  
19     the judge real quick.

20           MR. LUDWIG: Marc, I've got an unmarked  
21     second draft here.

22           MR. ELLINGER: Here you go,  
23     Commissioner. I'll give you a copy of what we're  
24     looking at.

25     BY MR. ELLINGER:

1 Q. Do you have that document in front of  
2 you?

3 A. Yes.

4 Q. Okay. Do you see back around -- let's  
5 see. Moving around I lost my page.  
6 Around page 12 or so there is a  
7 Subheading E, Treatment Plant Alternatives.  
8 Yes.

9 Q. And do you see where -- is this a  
10 report you received, this draft, from your engineer?

11 A. Yes.

12 Q. Okay. And you've seen this report  
13 before?

14 A. Yes.

15 Q. Now, I know that on page 12,  
16 paragraph -- or heading E, it says, "Four separate  
17 alternatives were reviewed . . ." Do you see that?

18 A. What page?

19 Q. Where you're at there, sir, page 12,  
20 Section E.

21 A. Okay. I see it.

22 Q. It says, "Four separate alternatives  
23 were reviewed . . ."

24 A. Right.

25 Q. Do you see that?

1 A. Yes.

2 Q. Is it your understanding that your  
3 engineer Mr. Haug did that review?

4 A. Yes.

5 Q. Okay. And Alternative 1 is to connect  
6 to a larger regional wastewater operation. Do you  
7 see that?

8 A. Yes.

9 Q. And that's not a very good option, is  
10 it, because there is not one in existence?

11 A. I'd say so.

12 Q. Okay. The second one, which is on the  
13 next page, I believe, it's labeled Alternative 2,  
14 and it says, "Plant expansion based on standard  
15 design criteria." Do you see that?

16 A. Yes.

17 Q. And what is your understanding that  
18 that alternative represents?

19 A. I guess what it says.

20 Q. Okay. Which is to expand the plant.  
21 Right?

22 A. Based on standard design criteria.

23 Q. And that's Department of Natural  
24 Resources' design criteria. Is that your  
25 understanding?

1           A.     Now that you said it, I guess it is.

2           Q.     Well, if it's not your understanding --

3     I don't want to put words in your mouth.

4           A.     Well, you know, I'm not an expert.

5           Q.     That's good enough. Let's turn back a

6     couple more pages, and you should have an

7     Alternative No. 3.

8                     What page are you on?

9           Q.     I believe it's page 15 of my copy.

10          A.     Which page?

11          Q.     I believe it's page 15. It's two pages

12     past where we were just looking at.

13          A.     Okay.

14          Q.     Does it say "Alternative No. 3:

15     Replacement Plant"?

16          A.     Yes.

17          Q.     Okay. That was another option. Is

18     that correct?

19          A.     Yes.

20          Q.     And that would be building an entire

21     new plant for everything out at Quail Valley.

22     Correct?

23          A.     Yes.

24          Q.     Okay. And if you'd turn a couple more

25     pages, you'd come up with "Alternative No. 4:



1 Implementation of the septic tank pretreatment  
2 system."

3 Do you see that?

4 A. Yes.

5 Q. And is it your understanding these were  
6 the four alternatives that Mr. Haug came up with  
7 with respect to how to allow Phase II development to  
8 have wastewater treatment?

9 A. Yes.

10 Q. Okay. And it contains cost estimates  
11 and all sorts of things of that type with respect to  
12 each one, do they not?

13 A. What?

14 Q. This document contains cost estimates  
15 with respect to each type of option that would  
16 involve construction. Right?

17 A. Yes.

18 Q. And it shows how much it would cost you  
19 to build it, how much it would cost to operate it,  
20 things of that nature. Correct?

21 A. Yes.

22 Q. And the Option 4, the septic tank  
23 system, would cost you the less to implement -- the  
24 least to implement, would it not?

25 A. Okay. Yes.

1           Q.     And it would cost the landowners the  
2 most to maintain. Is that correct?

3           A.     How would it cost them more to maintain  
4 when we were paying for it, the Association?

5           Q.     You don't bill the homeowners? They  
6 don't pay dues?

7           A.     They pay dues, yes.

8           Q.     So it does come out of their pocket  
9 ultimately?

10          A.     Yes.

11          Q.     But if you don't put in septic  
12 tanks, if you build a new treatment plant, the  
13 homeowners and the homeowners have much less cost.  
14 Correct?

15          A.     Yeah.

16          Q.     If you'd turn to one of the documents  
17 on page 21. At the top it has the heading G,  
18 Selected Process.

19                 Are you there, sir?

20          A.     I'm there.

21          Q.     Under Selected Process there is three  
22 paragraphs in discussion, the last paragraph of  
23 which I'd like you to read out loud. Please start  
24 there.

25          A.     "Therefore, based upon meetings with

1 the leadership of the Homeowner's Association  
2 and Aqua Missouri, Inc. the proposed alternative  
3 is . . ."

4 Q. Blank. Correct?

5 A. Yes.

6 Q. There is no proposed alternative, is  
7 there?

8 A. I guess not.

9 Q. Okay. This report appears to indicate  
10 you should have -- that there should be meetings  
11 with the Homeowner's Association and Aqua Missouri  
12 about the various options. Is that how you  
13 understand that sentence?

14 A. Well, that's what Greg has got in here.

15 Q. Okay. Are you familiar -- are you  
16 aware of any meetings between the leadership of the  
17 Homeowner's Association and Aqua Missouri where  
18 these four alternatives were discussed?

19 A. No.

20 Q. Do you know if this report was ever  
21 shared with Aqua Missouri?

22 A. I don't think that was my job.

23 Q. Do you know if it was ever shared?

24 A. I do not know.

25 Q. Okay. And this report is not signed by

1 Mr. Haug, is it?

2 A. I don't know.

3 Q. If you'll take a moment and look  
4 through it.

5 A. Where would I find where he would have  
6 signed it?

7 Q. I don't know because I can't find where  
8 he would have signed it.

9 A. Well, I guess that was his choice.

10 Q. And you never received a final report  
11 that had a proposed alternative, did you?

12 A. You know, you're asking me questions  
13 that, you know, I really don't have the answer to  
14 one way or the other right off the top of my  
15 head.

16 JUDGE JONES: Mr. Storey, if you don't  
17 know, I don't know is fine with me.

18 THE WITNESS: Okay. I don't know.

19 BY MR. ELLINGER:

20 Q. You had indicated you retained Mr. Haug  
21 to do this analysis. Correct?

22 A. Yes.

23 Q. Okay. And you paid him for those  
24 services?

25 A. I have paid him some, yes, and he took

1 the money out where I would have received money from  
2 him.

3 Q. So you bartered part of it?

4 A. There you go.

5 Q. And did you report that income  
6 bartering --

7 A. Oh, yes --

8 Q. -- services?

9 A. -- absolutely.

10 Q. You talked about doing the census out  
11 at the Quail Valley Subdivision. Who did that  
12 census?

13 A. It was done by Rita Storey, who has a  
14 list of everyone's name that lives out there, the  
15 mother, the father and any children, and we totaled  
16 all of those up, and that's how we came up with the  
17 census. It's in writing, and I can provide it at  
18 any time.

19 Q. And I believe that census was done in  
20 March. Does that sound correct to you, March or  
21 April?

22 A. Yes. If that's when it was done, yes.

23 Q. And obviously is Mr. Rita Storey  
24 related to you?

25 A. Yes. She's my daughter-in-law.

1           Q.     Okay. Did she knock on each door and  
2     verify those numbers?

3           A.     Not that I'm aware of.

4           Q.     Okay. Do you know personally how many  
5     people actually live in the Quail Valley  
6     Subdivision?

7           A.     She knows better than I do, but, you  
8     know, I went down through them. I don't know all of  
9     the children's names. I don't know how many there  
10    were. I basically know that there is -- there is a  
11    few single ladies that live out there.

12          Q.     But you basically know who the  
13    landowner is probably out there for each home?

14          A.     Sure.

15          Q.     And maybe their spouse?

16          A.     Yes.

17          Q.     And possibly if they have kids?

18          A.     Right.

19          Q.     But really not how many people are in  
20    each house, do you?

21          A.     No. I had to go off of that report  
22    that she had that is accurate.

23          Q.     But you've never verified that.  
24    Correct?

25          A.     Not personally. I didn't feel I needed

1 to.

2 Q. You talked a little bit about  
3 maintenance lines and jetting. Do you recall that  
4 discussion?

5 A. Uh-huh.

6 Q. Are you a certified wastewater  
7 treatment operator?

8 A. No, I'm not.

9 Q. Okay. Do you have any training in  
10 wastewater treatment facility operations  
11 maintenance?

12 A. No, I don't.

13 Q. Are you licensed by the Department of  
14 Natural Resources to do maintenance on wastewater  
15 treatment facilities?

16 A. No, I am not. But I have done  
17 maintenance on that line out there myself with a  
18 hose to break it loose when Capital Utilities  
19 wouldn't get out there and also Aqua Missouri  
20 wouldn't get out there.

21 Q. And whose lines are they?

22 A. They belong to the people that -- Aqua  
23 Missouri at this time.

24 Q. Okay. And did you get permission from  
25 Aqua Missouri before you opened it, cleaned --

1           A.     No.

2           Q.     -- out --

3           A.     No, I didn't, because it took them a  
4     couple days to come out, and we were having sewer  
5     run into the lake.

6           Q.     Let me finish my questions before you  
7     answer, sir.  Okay?

8                     Did you get permission from Aqua  
9     Missouri before you opened and cleaned out the sewer  
10    lines?

11          A.     No, I didn't.

12          Q.     Okay.  Is it normal occurrence to  
13    allow -- let me rephrase it.

14                    Is it normal occurrence for you to go  
15    on to other people's properties and work on it  
16    without their permission?

17          A.     Sure.

18          Q.     So you normally go on to other people's  
19    properties without their permission?

20          A.     In this particular instance, yes.

21          Q.     And you've gone to other treatment  
22    facilities without permission?

23          A.     I haven't gone into their treatment  
24    facility basically.  I mean, I've gone there and --  
25    down there and reported damage to them that was done



1 by children that lived out in the area, vandals, so  
2 they could come out and fix it.

3 Q. And the system, the collection system,  
4 it's your normal business to open up, clean out in  
5 the collection system and do things with it?

6 A. When sewer is going into the lake I do.

7 Q. And whose responsibility is it to -- if  
8 there is a leak or something of that nature from the  
9 sewer system?

10 A. It's Aqua Missouri's.

11 Q. Did they ever give you permission to do  
12 maintenance on their system?

13 A. No, they didn't.

14 Q. I hand you what's been marked as  
15 Exhibit 30.

16 MR. ELLINGER: And I apologize. I only  
17 have one copy of this exhibit. It was in the  
18 documents.

19 BY MR. ELLINGER:

20 Q. I hand you what's been marked as Aqua  
21 Missouri Exhibit 30.

22 MR. ELLINGER: I apologize,  
23 Commissioner, for not having an extra copy.

24 COMMISSIONER APPLING: That's fine.

25 BY MR. ELLINGER:

1 Q. Have you seen that document before?

2 A. Yes, I have.

3 Q. What is that document?

4 A. It's a Warranty Deed from me to Aqua  
5 Missouri, I'm assuming.

6 Q. Okay. And what are you deeding in that  
7 document?

8 A. I'm deeding the property that that  
9 septic -- that the treatment plant system sets on  
10 and also ingress and egress right-of-way to get to  
11 it.

12 Q. Okay. So prior to that deed you had  
13 never given the treatment facility back to Aqua  
14 Missouri, had you?

15 A. Prior to this deed -- I had made out a  
16 deed and gave it to Capital Utilities, and for some  
17 reason or another they failed to file it.

18 I hired a man for \$750, back whenever  
19 Capital Utilities took over, to hire a plat -- to  
20 make a plat -- and Mark has a copy of the plat --  
21 and why they never recorded the warranty deed is  
22 news to me. I have no idea.

23 Q. But that's the first -- that's the only  
24 warranty deed you know of that's ever been filed  
25 regarding the plant out at Aqua Missouri. Is that

1 correct?

2 A. That's what I, you know, have to assume  
3 at this point. I mean, they certainly didn't file  
4 the other one or they wouldn't have come to me and  
5 wanted another one.

6 Q. What's the date on that?

7 A. It's 2002.

8 Q. What's the date on that specifically?

9 A. November 1st, 2002.

10 Q. Okay. And your sales contract -- I  
11 think there was a copy of it. It's Exhibit 4, the  
12 long document.

13 A. Uh-huh.

14 Q. What's the date on that sales contract?

15 A. August 13th, 2002.

16 MR. ELLINGER: Thank you.

17 Judge, I have no further questions.

18 JUDGE JONES: Okay. Let's take about  
19 five minutes here, just for the court reporter, and  
20 then we'll go into redirect and take it to noon and  
21 then take an hour lunch.

22 (A RECESS WAS TAKEN.)

23 JUDGE JONES: Okay.

24 Okay. We're back on the record with  
25 the Case No. WC-2007-0303, and now we'll have

1     redirect of Mr. Storey.

2                                 REDIRECT EXAMINATION

3     BY MR. LUDWIG:

4             Q.     Mr. Storey, I just have a few questions  
5     for you.

6                     These design plans that Mr. Krogstad  
7     did, would it be a fair statement that the only  
8     reason you hired somebody to look at expanding that  
9     plant is because Aqua told you that you had to?

10            A.     Yes.

11            Q.     We're beyond that now. Now we actually  
12    have analyzed whether the plant can handle more?

13            A.     Yes.

14            Q.     All right. You were asked whether you  
15    ever filled out an application that they turned  
16    down. Why didn't you fill out an application, an  
17    application to hook up a home?

18            A.     Because they told me I couldn't have  
19    but 80.

20            Q.     Okay. So you thought it would be  
21    futile?

22            A.     Absolutely.

23            Q.     You made the comment about census  
24    figures. Were you referring to the U. S. Census  
25    Bureau study that came out recently that said that

1 now the average home in America has 2.4 people in  
2 it? Is that what you're referring to?

3 A. Yeah. I thought it was 2.9. It's 2.4,  
4 I guess.

5 Q. Mr. Mueller's letter of May 1992 is  
6 referring to design criteria. Right?

7 A. Yes.

8 Q. And what we're talking about here is  
9 what is actually happening at your plant?

10 A. Yes.

11 Q. And when he talks about 80 homes, he's  
12 just regurgitating the garbage -- you know, the  
13 3.7 persons, et cetera, that the design criteria  
14 have?

15 A. Yes.

16 Q. All right. He also put in here that it  
17 is anticipated 40 to 60 -- 46 to 50 pounds of BOD 5  
18 will arrive at the plant to be treated.

19 Have you seen Greg's calculations that  
20 it's about one-fifth of that?

21 A. Yeah.

22 Q. It's 9.9 pounds a day coming into the  
23 plant?

24 A. Yes.

25 Q. Because it's all pretreated?

1           A.     Right.

2           Q.     You were asked whether -- he showed you  
3     that original sewer extension agreement you signed  
4     in 1992 and asked you whether you refused to sign  
5     one that they may have presented here since they got  
6     Greg's letter.

7                     Do you recall that question?

8           A.     Yes.

9           Q.     They were asking you to commit to  
10    expanding the plant after you got your ten hookups  
11    in that sewer extension agreement that they sent us?

12          A.     Yes.

13          Q.     And you're not willing to do that  
14    because it would be a stupid business decision?

15          A.     Yes, that's correct.

16          Q.     The plats that were in that document  
17    and was talking about -- the sewer extension  
18    agreement document, I guess it was.

19                     There actually weren't any sewer lines  
20    in it at the time that that was signed, were there?

21                     They weren't in yet. This is showing  
22    where they were going to go?

23          A.     Right, yes.

24          Q.     All right. Does Rita hold a position,  
25    Rita Storey, in the Association?

1           A.     Yes.  She's the secretary/treasurer.

2           Q.     And she keeps track of who is living  
3     there?

4           A.     Yes, she does.

5           Q.     And these are part of the documents?

6           A.     Yes.

7           Q.     She also does lawnmowing and other  
8     maintenance things out there?

9           A.     Yes.

10          Q.     And gets to talk to people every day  
11     basically?

12          A.     Yes, that's correct.

13          Q.     Do you think she's pretty much on top  
14     of who is living there?

15          A.     I think, yes, she is.

16          Q.     All right.  Now, you were asked whether  
17     you got permission to stick a hose down in and  
18     unclog that line when you had sewage running into  
19     the lake.

20                     Do you remember those questions?

21          A.     Yes.

22          Q.     Wouldn't you think that -- now, how  
23     much time went by before you did that, after you had  
24     called Aqua?

25          A.     Well, sometimes it was, like, two days.

1           Q.     Okay.  You'd think they'd welcome your  
2     help in stopping that from happening, wouldn't you?

3           A.     Well, you'd think so.

4           Q.     You had deeded the plant and the sewage  
5     system to -- with all of the easements and all of  
6     the things that go into that to Capital Utilities in  
7     1993?

8           A.     Yes.

9           Q.     What they did with that you don't know?

10          A.     I do not know.

11          Q.     And you've done real estate contracts.  
12     Who normally records a deed, the --

13          A.     The people that receive it.

14          Q.     The buyer?

15          A.     The buyer, that's right.

16          Q.     Or in this case the givee --

17          A.     Yes.

18          Q.     -- since they didn't pay anything for  
19     it?

20          A.     Right.

21                   MR. LUDWIG:  All right.  Nothing  
22     further, Your Honor.

23                   JUDGE JONES:  Okay.  You may step down,  
24     Mr. Storey.

25                   Since we still have 25 more minutes,



1 let's go ahead and keep going right up to then.

2 MR. LUDWIG: Okay. I call Greg Haug.

3 JUDGE JONES: Mr. Haug, would you raise  
4 your right hand, please.

5 (Witness affirmed.)

6 JUDGE JONES: Thank you, sir. You may  
7 be seated.

8 DIRECT EXAMINATION

9 BY MR. LUDWIG:

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

12 A. Gregory G. Haug.

13 Q. And what is your profession, Mr. Haug?

14 A. Engineer.

15 Q. Are you a registered professional  
16 engineer in the State of Missouri?

17 A. Yes.

18 Q. Where did you get your degree?

19 A. University of Missouri-Rolla.

20 Q. And what year?

21 A. 1976.

22 Q. And do you have any study toward a  
23 master's program?

24 A. Yes. I completed 20 hours of graduate  
25 work at Mizzou.

1 Q. In what area?

2 A. Sanitary engineering.

3 Q. Do you focus your engineering work in  
4 any particular area?

5 A. The environmental area, water,  
6 wastewater, sewers.

7 Q. Exactly what we're dealing with here?

8 A. Correct.

9 Q. Let me hand you what's been marked  
10 Petitioners' Exhibit 7, and can you identify that  
11 for us?

12 A. That's my resume.

13 Q. Is that current and up to date?

14 A. Yes.

15 Q. This has your education and your  
16 experience, design experience, et cetera?

17 A. Correct.

18 Q. All right. I'm going to leave this up  
19 here in case you need to refer to it.

20 You've been involved in the design of  
21 wastewater treatment facilities?

22 A. Yes.

23 Q. And what other type of work have you  
24 done with wastewater treatment facilities?

25 A. Energy studies. I've done preliminary

1 design of entire cities, not only on the collection  
2 system but the treatment plant. I've done a lot of  
3 industrial wastewater work, a lot of energy-related  
4 wastewater work, energy production facilities.

5 Q. Okay. And you've been doing this for  
6 how many years now?

7 A. Thirty-one.

8 Q. You don't seem that old.

9 How was it that you got involved with  
10 Mr. Storey?

11 A. We were renting a building from Ed, and  
12 at the time he indicated he was having some trouble  
13 with his Quail Valley development. And he kind of  
14 talked about, you know, that he was having to expand  
15 the plant. He told me that it was originally  
16 designed for more. He told me that it had a septic  
17 tank pretreatment system.

18 And from what it sounded like to me,  
19 that there was probably some opportunity there with  
20 the existing system to really have more capacity  
21 than what was given under the current -- the  
22 standard design guide from DNR.

23 Q. Let's talk about the standard design  
24 guide a little bit.

25 What is that exactly?

1           A.     It's in the regulations.  It's under  
2  10 CSR -- and I think it's 8.020.

3                     But basically it's a guidance that's  
4  used throughout the state.  If you want to design a  
5  sewer collection system, a wastewater treatment  
6  plant, you have to use those standard design  
7  guidelines, unless the regulation also allows you to  
8  deviate from those if you can provide adequate  
9  justification to do that.

10                    So in talking with Ed, that's what  
11  seemed to be happening, is that everyone was simply  
12  looking at standard design criteria.

13                    The original design of that facility  
14  basically allowed for pretreatment to occur at the  
15  septic tanks and then a much lower loading going to  
16  the treatment plant.

17           Q.     Did you undertake, then, a study to  
18  determine what the capacity of that plant was and  
19  what it was operating at?

20           A.     Yes.

21           Q.     What types of things did you do?

22           A.     Basically started with looking at his  
23  existing plans that he had from Murdon, which was  
24  the manufacturer of the equipment, the treatment  
25  plant equipment.  Ed gave me a copy of that

2                   And then I also wanted to look at  
3   actual data, what was really happening with the  
4   system. It's been there a number of years. What  
5   was the loading on the plant? Is it -- is there a  
6   lot of organic or hydraulic load happening?

13 Q. What is BOD?

15 Q. What is that an indication of?

21 Q. Okay. And what is TSS?

25 And it basically -- a typical municipal

1 sewage would have 250 parts per million of suspended  
2 solids.

3 Q. We'll get to this later, but generally  
4 have you done studies of the influent -- lab studies  
5 of the influent at Quail Valley to determine what  
6 the loading is for TSS and BOD?

7 A. We did. We took a number of samples to  
8 determine what that actual influent load was on both  
9 BOD and suspended solids.

10 Q. And what are the ranges it's running  
11 in?

12 A. Typically far less than your standard  
13 municipal wastewater.

14 Q. All right. We'll get to the actual  
15 numbers here in a little while.

16 You say you got the records from Aqua  
17 Missouri. Correct?

18 A. Correct.

19 Q. And those would include their monthly  
20 reports to the DNR?

21 A. That's correct.

22 Q. And those include what? What's  
23 pertinent to here?

24 A. Also their operating record. They have  
25 a daily record that shows really what is happening

1 with the plant. They measure flow daily. They  
2 measure mixed liquor suspended solids daily. They  
3 measure DO.

4 So there is a number of operating  
5 parameters that are on that log. They also indicate  
6 if there is anything else happening in the system  
7 that is worthy of note.

8 Q. All right. So these are Aqua's records  
9 though? These are the readings they're getting and  
10 the findings they're making in their own plant?

11 A. That's correct.

12 Q. Okay. Did you also obtain a copy of  
13 their operating permit?

14 A. Yes.

15 Q. Let me hand you what's been marked --  
16 it's got two stickers on it, but Petitioners'  
17 Exhibit 8. Can you identify that?

18 A. That's their Missouri operating permit.

19 Q. Okay. Now, there are some numbers on  
20 the front of that permit. Correct?

21 A. Correct.

22 Q. Are those actually permitted  
23 limitations, or what are they?

24 A. On the front of the document, it's a  
25 facility description that describes basically the

1 plant, that shows some design flows and actual  
2 flows.

3 Q. Okay.

4 A. The second page actually shows the  
5 permit limitations.

6 Q. For instance, this has design flow as  
7 22,000 gallons per day. That's what the plant was  
8 designed to?

9 A. That's correct.

10 Q. And do you know where that actual  
11 flow -- where it says 14,400 gallons per day, where  
12 that comes from?

13 A. I believe it comes from Aqua's actual  
14 monthly reports.

15 Q. It says design sludge production is  
16 5.3 dry tons a year and actual sludge production is  
17 .375 dry tons per year. Do you know where those  
18 numbers come from?

19 A. Again, the design is based on standard  
20 design criteria at the time the plant was permitted,  
21 and the actual was based on Aqua's numbers.

22 Q. What is the significance of that .375  
23 dry tons per year figure?

24 A. Basically a lot less solids are  
25 occurring in the treatment plant itself. Therefore,



1 less amount has to be wasted from the system.

2 Q. Okay. So, again, this stuff on the  
3 front here just describes the design of the  
4 facility, assuming so much production per person, so  
5 much -- so many people per household, et cetera?

6 A. That's correct.

7 Q. There is nothing on here that says how  
8 many homes can be serviced by this plant, is there?

9 A. That's correct.

10 Q. There is nothing in the permit that  
11 touches on that?

12 A. That's correct.

13 Q. And there is nothing on the permitted  
14 numbers that limits flow?

15 A. That's correct.

16 Q. What they're really looking for at DNR,  
17 based on this, is what is coming out of that plant  
18 and going into the environment?

19 A. That is the limitation.

20 Q. All right. Now, you referred in your  
21 deposition -- and I referred to it earlier -- that  
22 this is an innovative sewage system. What do you  
23 mean by that?

24 A. Back in the 1980s when this concept was  
25 developed, there weren't a lot of systems around

1 that had the type of collection system and package  
2 with the extended aeration plant.

3 So I called it an innovative system,  
4 because the standard design criteria basically  
5 assumes you're going to get no pretreatment out in  
6 the collection system.

7 Today it is more prevalent, but back  
8 when this concept was developed, it was considered  
9 innovative because you were basically doing some  
10 treatment out in the collection system.

11 Q. Okay. Was there anything else  
12 innovative about the plant, or different?

13 A. The extended aeration plant is a  
14 standard. I mean, that's -- that's a good  
15 technology to use to treat wastewater.

16 Q. Okay. When you had looked through  
17 these documents, did you come to a preliminary  
18 opinion regarding the capacity of the Quail Valley  
19 treatment plant?

20 A. Yes.

21 Q. And what did you believe that capacity  
22 to be?

23 A. My report basically shows that we could  
24 add as many -- or a total of 120 homes in that  
25 development based on the existing system with

1 pretreatment with the septic tanks and the existing  
2 extended aeration plant.

3 Q. Did we attend a meeting at DNR to  
4 discuss expansion or the additional hookups of homes  
5 to the Quail Valley wastewater treatment facility?

6 A. Yes.

7 Q. And I believe that was March 2nd of  
8 2006, and you and Mr. Storey and I attended with a  
9 number of members of DNR?

10 A. Correct.

11 Q. They raised concerns at that meeting  
12 about whether the septic tanks would continue to  
13 pretreat the solids. Correct?

14 A. Correct.

15 Q. They also questioned how many people  
16 were actually living at Quail Valley?

17 A. Yes.

18 Q. And they wanted to know what the actual  
19 water usage was at Quail Valley?

20 A. Yes.

21 Q. And did you undertake some actions then  
22 to determine and answer those questions for DNR?

23 A. We did. We basically then followed up  
24 with -- actually we had Rita Storey do the census  
25 count, and she was the most capable of doing that,

1 had all of the data.

2 We contacted the county water district  
3 to come up with the actual water usage. And, again,  
4 at DNR's recommendation we took that for the month  
5 of January, because that's, as DNR said, one of the  
6 more representative months of the year.

7 So basically we were trying to address  
8 some of the concerns DNR had about this system based  
9 upon what we provided as the preliminary draft  
10 information to them.

11 Q. Let me hand you what's been marked as  
12 Petitioners' Exhibit 9. Do you recognize that?

13 A. Yes.

14 Q. Is that the letter that you wrote to  
15 DNR after the meeting and after some of those --  
16 some of that investigation had been done?

17 A. Yes.

18 Q. The census revealed what?

19 A. The census revealed that we had a total  
20 of 229 people in the 77 homes.

21 Q. And that came out to something, like,  
22 2.97 people per household?

23 A. Correct.

24 Q. And DNR has 3.7 people per household in  
25 the design criteria. What does that number assume?

1           A.     That is based upon -- that number has  
2     been in the regulation for quite some time, and it's  
3     based upon averages throughout the country.

4                     It's a number that is a conservative  
5     value, basically if you use that number. In most  
6     cases you're going to be well conservative on the  
7     design of your facility.

8           Q.     Does that number assume it's a  
9     municipal plant that has more than just individual  
10    homes coming into it?

11          A.     It sure can.

12          Q.     Okay. In other words, that might have  
13    commercial buildings and some industrial included in  
14    it?

15          A.     Where that really comes into effect is  
16    where you're varying from 75 to 100 gallons per day  
17    per person.

18                     So if you have a typical municipal  
19    system, you're going to have closer to the  
20    100 gallons per person per day. A little  
21    subdivision like this, you'll be closer to the  
22    75 gallons per person per day.

23          Q.     Let's talk about the water usage.

24                     You got those actual figures from the  
25    water district. Is that right?

1           A.     Correct.

2           Q.     And what did it show?

3           A.     It basically showed we had a total of  
4     425,900 gallons in the month of January 2006.

5           Q.     And that was for 75 homes, because two  
6     people were smart enough to get the heck out of here  
7     during January?

8           A.     That's correct.

9           Q.     Okay.  What did that come out to per  
10    home?

11          A.     It works out to 183 gallons per home.

12          Q.     Where does that fall and compare to the  
13    design criteria that DNR assumes?

14          A.     The design criteria goes back to the  
15    3.7 times anywhere from 75 to 100 gallons.  It could  
16    be as high as 370,000.

17                 The other thing that is probably  
18    important to note, though, is if we go back to that  
19    Missouri State operating permit and DNR has the  
20    actual flow of 14,400 gallons per day, and if you  
21    take the 78 homes or even 80 homes, that works out  
22    to about 185 gallons per house per day.

23                 So what happened is our numbers from  
24    the water district basically confirm what the actual  
25    data was that Aqua is reporting.

1           Q.     And that would be significant not only  
2     that that's the water usage but for what else? Why  
3     else would that be significant?

4           A.     The flow relates to the capability of  
5     the plant to handle.

6           Q.     Would it also tend to indicate very  
7     little I & I?

8           A.     I & I is a different animal.

9                     Basically you have data with -- what  
10    these monthly reports from Aqua shows is only one  
11    data point in the month. You really have to go back  
12    and look at a lot more data to see if you have I & I  
13    problems.

14          Q.     But would the fact that the water usage  
15    was about the same as what is shown as the flow per  
16    day would indicate there is not at least a gross  
17    amount?

18          A.     Right. Over time that shows real  
19    consistency.

20          Q.     Okay. You also reported to DNR that a  
21    bylaw had been passed for the pumping of septic  
22    systems every three years?

23          A.     Yes. That was a concern DNR had,  
24    because Aqua did not have continuing authority or  
25    control over the septic tanks. They wanted to see

1 something where they knew that the septic tanks  
2 would be pumped periodically.

3 They basically preferred that it happen  
4 at the Association level than simply waiting for a  
5 homeowner to do it. So that was kind of the result  
6 is to have the Homeowner's Association force that to  
7 happen.

8 Q. So we took steps to alleviate that  
9 concern?

10 A. That's correct.

11 Q. And did DNR then indicate that they  
12 really had no objection to additional hookups if we  
13 could get Aqua Missouri to agree?

14 A. That was kind of the whole premise that  
15 we went to DNR with originally is that Aqua had  
16 raised questions whether we even should hook more  
17 up.

18 And at the staff level of DNR they tend  
19 to always use the standard design criteria. So if  
20 you're using the standard design criteria, a staff  
21 engineer at DNR would say the plant doesn't have any  
22 more capacity.

23 But given the ability that we can go in  
24 with justification to show that you can actually  
25 vary from those standard design criteria, that was



1 the whole purpose is to go back to DNR, provide them  
2 some justification as to why this existing plant had  
3 capacity to hook up more homes, and that was kind of  
4 the whole purpose.

5 In our meeting with DNR, then they  
6 raised a number of questions, said, well -- that's  
7 why they wanted to know flow. They wanted to know  
8 the census. They wanted to know that there was some  
9 continuing authority. So that's -- that's the whole  
10 purpose of that meeting.

11 Q. By the way, on flow, does it satisfy  
12 DNR when you've got a number of instantaneous flow  
13 readings; in other words, they're not running a flow  
14 meter out there that is running constantly?

15 A. If you have a flow meter, you  
16 definitely have more accurate data, but given the  
17 large number of data points that we had, we  
18 basically have a real good indication of what is  
19 happening with flow in that system.

20 Q. And how many data points did you have  
21 originally?

22 A. Originally we had 160 data points, and  
23 then more recently, going back and checking for the  
24 last twelve months, we've looked at, you know, one  
25 daily point for every day that Aqua reported for the

1 last 12 months. So generally that's five days a  
2 week.

3 Q. Now, they report once a month on BOD  
4 and flow, but they actually check flow every time  
5 they're out there?

6 A. That's correct.

7 Q. All right. And at different times of  
8 the day?

9 A. That's correct.

10 Q. And the flows tend to be the highest in  
11 the morning when people are cleaning up?

12 A. Correct.

13 Q. All right. Did you test the influent  
14 prior to the pumping of the septic tanks?

15 A. Yes.

16 Q. Let me hand you what's been marked  
17 Petitioners' Exhibit 10. Do you recognize that?

18 A. Yes.

19 Q. And what is that?

20 A. It shows the influent BOD and suspended  
21 solids on April 5th and June 1st, 2006.

22 Q. Okay. And what are those numbers?

23 A. For April 5th the influent BOD was 81;  
24 the suspended solids were 33. On the 6th of June it  
25 was 84 for BOD and 32 for suspended solids.

1           Q.     And that was before the septic tanks  
2     were pumped?

3           A.     That's correct.

4           Q.     But that still shows very, very light  
5     loading?

6           A.     Yes.

7                     We wanted to know what the loading was  
8     before the septic tanks were pumped, because all  
9     indications were from the data that Aqua provided to  
10    DNR in all of their monthly reports, that the plant  
11    loading must be very low; otherwise, they would have  
12    more problems with their effluent than they did.

13          Q.     All right. Did you then test the  
14    influent, the water coming into the plant after the  
15    septic tanks had been pumped?

16          A.     Yes.

17          Q.     Let me hand you Petitioners'  
18    Exhibit 11. Do you recognize that?

19          A.     Yes.

20          Q.     And what is that, sir?

21          A.     This is from August 21st of 2006. It's  
22    an influent test result from the wastewater. BOD  
23    was 68 milligrams per liter and suspended solids was  
24    28.

25          Q.     Now, again, so it had gone down

1 somewhat?

2 A. Correct.

3 Q. Okay. And do you believe that is  
4 because the septic tanks had been emptied out and more  
5 stuff was settling?

6 A. It basically shows that there was some  
7 improvement with the pumping of septic tanks, but it  
8 also shows that a lot of the septic tanks were doing  
9 quite a good job of pretreating even before they  
10 were all cleaned at the same time.

11 Q. Okay. Eventually you wrote a letter on  
12 Mr. Storey's behalf to Aqua Missouri. Is that  
13 correct?

14 A. That's correct.

15 Q. Let me hand you what's been marked  
16 Exhibit 12. Do you recognize that?

17 A. Yes.

18 Q. And what is that?

19 A. It was a letter summarizing all of the  
20 additional investigations that happened, the census  
21 data, the flow records, changes to the bylaws, talk  
22 about the septic tanks pumpings. We also looked at  
23 I & I based upon the data that we had at the time.  
24 We also looked at the treatment capacity  
25 calculations and made recommendations to Aqua.

1           Q.     And that letter sets forth the actual  
2 data that was available. Correct?

3           A.     That's correct.

4           Q.     Much of that was obtained from Aqua  
5 Missouri themselves?

6           A.     That's correct.

7           Q.     And the census is based on an actual  
8 number?

9           A.     Right.

10          Q.     And the water usage was an actual  
11 number from a 31-day month in the middle of winter  
12 when people tend to be home?

13          A.     Correct.

14          Q.     And the bylaw change obviously was an  
15 actual event that took place?

16          A.     That's correct.

17          Q.     And the tanks had been pumped by the  
18 time that that letter was sent?

19          A.     Yes.

20          Q.     And it also references the loading on  
21 the plant. Is that correct?

22          A.     That's correct.

23          Q.     Now, Aqua is complaining -- or one of  
24 their defenses in this case is that that flow --  
25 that flow data is not accurate. What would your

1 response be to that?

2 A. I mean, it's data that they take daily  
3 on the treatment plant. The data should be valid.

4 Q. And if you had one, it might not be;  
5 but when you have over 150 data points, you get a  
6 pretty good idea how that plant is operating?

7 A. Yeah. You get a real good indication  
8 what is happening within the system when you start  
9 looking at how the flows are every day of the year.

10 If you have I & I, then you would see  
11 changes in that flow data. If you have no I & I,  
12 then it's -- really, it's going to relate to time of  
13 day, it's going to relate to the number of pumps  
14 that are out in that collection system, so there are  
15 changes, but overall it basically shows consistency.

16 Q. All right. Now, in your report you  
17 concluded that infiltration and inflow was not a  
18 problem.

19 First of all, what is infiltration?

20 A. Infiltration really relates more to  
21 water seeping into the sewer lines from kind of  
22 saturated soil conditions; whereas, inflow is more  
23 direct flow directly into the pipe, either from a  
24 downspout being connected, an opening in the pipe or  
25 a manhole.

1           Q.     Okay.  And there are no manholes in  
2     this system?

3           A.     That's correct.

4           Q.     And based on our information, there are  
5     no downspouts tied into the system?

6           A.     That's correct.

7           Q.     Okay.  So two of the major sources of  
8     infiltration are not -- or inflow are not present?

9           A.     That's correct.

10          Q.     Did you do any further study of the  
11     infiltration and inflow?

12          A.     Yes.

13          Q.     Let me hand you what's been marked  
14     Petitioners' Exhibit 13.  Can you tell us what this  
15     is?

16          A.     This is data that was taken from Aqua's  
17     daily operating records, and it basically shows flow  
18     for the last twelve months for each day.

19                     And basically what -- what I did was  
20     took kind of that total flow.  I also broke it down  
21     into -- sorted by the highest flows so we could see  
22     what was happening based upon time of year, time of  
23     day, whether there was precipitation or not.

24                     I took that data, the flow data,  
25     prepared another table to show what is happening.

1 And I took flows greater than 20,000 gallons a day.

2 And the reason for that is that was the nameplate  
3 description on the plant is 22,000 gallons per day.

4 So I had 28 data points where flow was  
5 greater than 20,000 gallons per day over the last  
6 year. And of those data points, 13 of those days  
7 had precipitation. 15 of those days did not have  
8 precipitation.

9 Q. So what did you conclude from that?

10 A. There was really no direct correlation  
11 between flow and precipitation based upon that  
12 year's worth of data.

13 Q. So your initial conclusion that I & I  
14 was not a significant problem at Quail Valley is  
15 borne out by their data and the precipitation  
16 records?

17 A. That's my opinion.

18 Q. All right. Now, Aqua is claiming that  
19 the collection system is overtaxed. Do you agree  
20 with that?

21 A. The collection system is different than  
22 most collection systems. Because this one is  
23 considered a variable grade treatment system, at the  
24 design capacity, assuming the slope is half a  
25 percent, it is not overtaxed.



1                   With a flat slope, which Ed mentioned  
2 earlier that there is a flat slope on part of that,  
3 I went back and looked to see what the capacity of  
4 that line would be at a flat slope.

5                   And basically it shows that that line  
6 will handle 137,000 gallons a day based upon backing  
7 some water up in the system, which is one of the  
8 reasons that when you look in some of the cleanouts,  
9 you'll see water in there. It basically has to push  
10 water through.

11           Q.     Okay. Did you do some calculations,  
12 you said?

13           A.     Yes.

14           Q.     Let me hand you Petitioners'  
15 Exhibit 14. Are those the calculations you were  
16 just referring to?

17           A.     Yes.

18           Q.     Tell me how that 100-- what was it,  
19 133, 138?

20           A.     137,520 actually is the gallons per day  
21 that the calculations show. And that's based upon  
22 the original notes that shows that the sewer system  
23 was put in at a half-a-percent slope. So, again, if  
24 you have a half-a-percent slope everywhere, then  
25 that's the figure.

1           Q.     And how does that -- how does that  
2     number relate to what the plant is doing? Explain  
3     that.

4           A.     In a typical collection system you're  
5     going to get slugs of water that will come in at one  
6     point in time.

7                     So that collection system needs to have  
8     a higher capacity than the treatment plant. If it  
9     doesn't, then you're restricting flow to the  
10    treatment plant.

11                    So in this case if you've got adequate  
12    slope, there is more than the volume if the  
13    collection system is greater than the volume of the  
14    treatment plant.

15          Q.     This system also has lift stations?

16          A.     Correct, four.

17          Q.     What role do they play?

18          A.     Basically houses discharge from their  
19    septic tanks by gravity to the pump stations. The  
20    pump stations pump it up, so that it will flow by  
21    gravity in the next part of the collection system to  
22    the treatment plant.

23                    It is actually divided into two sides.  
24    The east half of the lake goes around the east end.  
25    The west half goes around the west end.

1           Q.     So because -- gosh. This is so easy to  
2 do in this case.

3                     Because stuff flows downhill, you lift  
4 it up a little and it flows downhill?

5           A.     Correct.

6           Q.     In your letter you compare capacity --  
7 wait a minute. Let me back up for a second.

8                     We've got these flow readings at  
9 various times of the day, and some of them are over  
10 22,000 gallons. That doesn't mean they're over the  
11 design capacity of the plant, are they?

12          A.     That's correct.

13          Q.     And why is that?

14          A.     The plant is designed with an average  
15 flow and a peak flow. In this case the average flow  
16 is 22,000 gallons per day as listed on the permit in  
17 the description. The peak flow will be two or two  
18 and a half times that.

19          Q.     I see.

20                     So if you've got a reading of 30,000 at  
21 7:15 in the morning or 7:30 in the morning, you may  
22 have a reading of 4,000 at 3:00 in the afternoon,  
23 and you have to average all that out?

24          A.     That's correct.

25          Q.     Okay. Let's compare your calculations

1 and figures on capacity with the permit.

2 Now, again, the permit, those are  
3 design parameters. Correct?

4 A. Yes, that's a design parameter based on  
5 standard guidelines.

6 Q. And now we're going to compare reality  
7 to standard?

8 A. Correct.

9 Q. The population equivalent of the -- it  
10 shows in the permit is 296, and you came up in your  
11 calculations, I believe, with a maximum of 352.

12 Could you explain it for us?

13 A. Again, that's based upon the actual  
14 number of people in the number of homes today,  
15 multiply it out by 120 homes.

16 Q. Okay. And your calculations showed  
17 this plant would at the flow rates that we've got  
18 and such would handle 352 people?

19 A. Correct.

20 Q. And there is only 229, so there is  
21 about almost 70 less out there than what the design  
22 capacity showed per household, or number of people,  
23 population equivalent, I guess is what it is?

24 A. Than the current plant permit  
25 description, yes.

1           Q.     Okay.  Now, you've got a number on  
2     there, flow per population equivalent.  What is  
3     that?

4           A.     Um, that's basically the number of  
5     gallons that will come from each person living in  
6     that development.

7           Q.     All right.  And did you find that it's  
8     below or above the assumptions or the standards DNR  
9     uses in design?

10          A.     If you base it on 75 gallons per day as  
11     to standard design guide, this one is at 62 gallons  
12     per day.

13          Q.     Okay.  But as I understand it, DNR will  
14     use somewhere between 75 and 100 for design?

15          A.     That's correct.

16          Q.     Sludge production, what did you come up  
17     with sludge production there?

18          A.     Actual is 9.9 -- I'm sorry -- 3.375 dry  
19     tons per year.

20          Q.     And that's straight off the actual  
21     numbers on the permit?

22          A.     That came from Aqua, yes.

23          Q.     Okay.  And where is that in relation to  
24     what it's designed for?

25          A.     It's far less than a standard design

1 criteria for a plant.

2 Q. And what does that mean?

3 A. It means less loading on the plant.

4 Q. Okay. You also did something on BOD  
5 loading. You did some figures on that. How did you  
6 figure that?

7 A. Again, that's based upon the  
8 concentration of the BOD that we measured in the  
9 influent of the wastewater.

10 Q. Okay. And how do you come up with that  
11 9.9, I believe it is?

12 A. So basically you can take the  
13 concentration of that influent, multiply it by the  
14 flow rate that is measured, and you can come up with  
15 the pounds of loading.

16 Q. Now, I remember Mr. Ellinger was asking  
17 Ed about the letter from Mr. Ewing where he -- or  
18 Mr. Ewing Mueller, where he says we could anticipate  
19 46 to 50 pounds BOD loading per day.

20 Why is this number so much less?

21 A. That was based on standard design  
22 criteria using -- if you go back to 220 milligrams  
23 per liter as the loading on BOD coming into the  
24 plant versus ours which is in the 80s.

25 Q. So we've got less people per home,

1 we've got less flow and we've got a lot of  
2 pretreatment going on, so those numbers are much,  
3 much lower?

4 A. Actual numbers are lower.

5 Q. All right. There is no limitation in  
6 the permit on the number of homes that can be  
7 connected. Is that right?

8 A. That's correct.

9 Q. Okay. Just run through for the  
10 Commission how they came up with this magic  
11 80 number.

12 A. That was back-calculated from using the  
13 standard design criteria.

14 If you take the permit description  
15 itself, it's going to show that you have 296  
16 population equivalent. And if you divide that,  
17 you'll get back to 80 homes. So it's standard  
18 design criteria.

19 Q. And you decided it could handle 120?

20 A. Based on actual numbers, yes.

21 Q. Okay. Now, if, you know, the  
22 population would change drastically at Quail Valley,  
23 those could change -- your numbers -- your  
24 recommendations could change?

25 A. That's correct.

1           Q.     Is there anything in the permit on flow  
2 per home?

3           A.     No.

4           Q.     And you came up with flow per home how?

5           A.     Based upon really two ways. One is  
6 using the data that Aqua provided to DNR, that  
7 basically shows we have 14,400 gallons per day, and  
8 in that case they were using 80 homes as the  
9 standard. That works out to 185 gallons per home  
10 per day.

11                     We did actual census data to show that  
12 based upon the actual water usage, assuming all of  
13 that got into the wastewater system, and based on  
14 the census of the number of people there, it would  
15 work out to 183 gallons per home per day.

16           Q.     All right. Now, based on your study,  
17 how many additional homes can Quail Valley  
18 wastewater treatment plant handle?

19           A.     Forty more than are there today.

20           Q.     A total of 120?

21           A.     Correct.

22           Q.     Is that within a reasonable engineering  
23 certainty?

24           A.     Yes.

25           Q.     Now, in your letter you recommended ten



1 to be approved at that time. Is that correct?

2 A. That's correct.

3 Q. And was that your original inclination  
4 to put ten in this or did you have another?

5 A. When I first wrote the draft of that, I  
6 basically was going to recommend hooking up 20 homes  
7 immediately and then doing it in blocks of ten.

8 After discussions with Ed and with you,  
9 we decided that it was more conservative to go in  
10 blocks of ten, simply because things don't get  
11 hooked up overnight.

12 Q. And if 10 or 20 or 25 are put in,  
13 they're still making these monthly reports to DNR?

14 A. That's correct.

15 Q. And if at any time we get close to the  
16 capacity, they can just -- we can stop hooking up  
17 homes?

18 A. That's correct.

19 Q. All right. So it isn't like we're  
20 going to put up a big condominium and 32 families  
21 are going to move in and start dumping stuff into  
22 the system at once?

23 A. That's correct.

24 And it even goes back to the meeting we  
25 had with DNR where they basically said, what happens

1 if you get down the road here and you've got a lot  
2 of homes hooked up and you start getting close to  
3 those levels? What are your options at that point?

4 Which is why in that meeting with DNR  
5 we indicated that there were opportunities. We  
6 could go with tube settlers in the clarifiers. We  
7 could put aerators back in the septic tanks.

8 So there was some ability down the road  
9 if we start approaching those permit limits to take  
10 corrective action with not a whole lot of dollars  
11 spent.

12 Q. You mentioned we could put aerators  
13 back in the septic tanks. Now, obviously the first  
14 40 homes that were built before the sewage plant  
15 went in, they had aerators in those septic tanks?

16 A. That's correct.

17 Q. Are you aware that at some point  
18 Capital Utilities told the homeowners to turn off  
19 those aerators?

20 A. Yes. Ed told me that that had  
21 happened.

22 Q. And why would that be?

23 A. There was not enough loading in the  
24 plant to make it operate effectively.

25 Q. So there wasn't enough, if you will,

1 food there for the bugs to eat?

2 A. Correct.

3 Q. So what you're saying is if this --  
4 with these unaerated septic tanks, if we started to  
5 reach capacity with this plant, one of the options  
6 would be is just put the aerators back in the septic  
7 tanks and start stirring it up so the bugs are  
8 eating more there?

9 A. That's correct.

10 Q. Okay. A relatively inexpensive  
11 solution?

12 A. Inexpensive and you would reduce the  
13 load to the treatment plant at that time by almost  
14 another 50 percent.

15 Q. Now, was there other data that you  
16 relied on? Did you get -- you've talked about  
17 monthly DNR reports. Correct?

18 A. Correct.

19 Q. Let me hand you Exhibit 15 and  
20 Exhibit 16. Can you identify those?

21 A. Yes. Those are monthly monitoring  
22 reports. And then the Exhibit 16 is a summary of  
23 those reports.

24 Q. 16 is what, two years' worth of data  
25 regarding what?

1           A.     We did a year's worth of data before I  
2 wrote the first draft report, and then we did  
3 another year's, the most recent 12 months, as of  
4 June 2007, the previous 12 months.

5                     So that data shows the flow that is  
6 reported, it shows the BOD, the suspended solids,  
7 the oxygen, temperature, chlorine, fecal coliform  
8 counts, all effluent data.

9           Q.     And you have done tests on grab  
10 samples. Is that correct?

11          A.     That's correct.

12          Q.     Let me hand you Exhibit 17, and can you  
13 tell us what this represents?

14          A.     Exhibit 17 is kind of a summary of that  
15 influent testing data. It shows the four times  
16 where we have influent data. It also shows some  
17 additional testing that we did one year after the  
18 septic tank cleaning; in other words, the summer of  
19 2007, where we show two grab samples and one  
20 composite sample.

21          Q.     Now, there is a composite reading there  
22 that you split that sample with Aqua?

23          A.     Yes. We requested that we take samples  
24 this summer. Aaron with Aqua basically said, let's  
25 put on a composite sample, and I agreed with that,

1 because that definitely will give you better data.

2 So a composite sampler was set up. We  
3 took samples on August 3rd of 2007. And basically  
4 what it showed is that the BOD was at 30, the  
5 suspended solids was 34, effluent BOD was 14 and the  
6 effluent suspended solids was 38.

7 Q. Do you think that that 38 was an  
8 anomaly?

9 A. Yes, I do, because it's a higher number  
10 than what was coming into the plant. And  
11 historically when I look at the numbers, what is  
12 coming into the plant averaged 34. So what is going  
13 out, going at 38, looked like it could be some kind  
14 of an issue in the plant itself.

15 Q. Okay. And you understand that Aqua's  
16 numbers, test results, from that same split sample  
17 were completely different than yours?

18 A. Correct.

19 Q. Okay. You don't think that's  
20 representative of the operation of the plant?

21 A. I guess the other reason that I  
22 question the effluent is because we tried to take a  
23 second composite sample just recently to determine  
24 if this first one was an anomaly, and on three  
25 separate occasions the effluent sampler failed to

1 get an adequate sample. So I kind of have to  
2 question the sampler itself.

3 Q. Okay. Now let's talk about the  
4 effluent. Your two years' worth of data there, you  
5 average it out for the effluent readings?

6 A. Correct.

7 Q. The ones that actually are reported to  
8 DNR and are actually covered under their permit.  
9 Correct?

10 A. That's correct.

11 Q. In other words, if they go over the  
12 permit numbers, they're in -- God, this is so easy  
13 to do -- they're in a deep tank?

14 A. Yes.

15 Q. Where do those numbers fall compare to  
16 their permit?

17 A. The permit for both are 30/30. The  
18 averages prior to the draft report were 7.4 for BOD  
19 and 7.9 for suspended solids, and the averages in  
20 the last 12 months were 6.8 for BOD and 8.7 for  
21 suspended solids.

22 Q. So they're running about 25 to  
23 35 percent of the permit, the permitted numbers.  
24 Correct?

25 A. Correct.

1           Q.     Okay. Mr. Haug, based on all of the  
2 data that you've seen and the studies that are  
3 available and that you've done, do you have an  
4 opinion within a reasonable degree of engineering  
5 certainty whether the Quail Valley wastewater  
6 treatment facility can handle 32 additional homes?

7           A.     It will handle 32 in my opinion.

8           Q.     Will the collection lines handle the  
9 additional flow to connect those homes?

10          A.     The lines will handle the flow if they  
11 are maintained and there is no solids in those  
12 lines.

13          Q.     Do you have any doubt about whether the  
14 plant can handle 32 additional and whether the lines  
15 can handle the 32 additional?

16          A.     There is no doubt in my mind that the  
17 plant will handle 32 additional homes.

18                   My recommendation would be that all of  
19 the lots that are connected to the existing sewer  
20 system, call it the new lots, be connected into that  
21 system.

22                   If you're going to develop the new  
23 area, the future area, I would collect that water  
24 and pump that directly to the plant and avoid the  
25 existing collection system.

1           Q.     Okay.  In other words, run the lines a  
2     little further?

3           A.     Avoid going into the existing system.  
4     Go around directly to the treatment plant.

5           Q.     Okay.  One other question.

6                     There is a design capacity for flow on  
7     this plant of 22,000 gallons.  In reality can this  
8     plant handle more than that and continue to treat  
9     the waste adequately?

10          A.     Yes.  And I need to go back to the  
11     draft report where I stated that -- and I used the  
12     numbers that came out of Murdon's documentation.

13                     Based upon that, I basically felt that  
14     the plant had capacity.  What I've learned since  
15     then, really in the last couple of weeks now, is  
16     that one of those numbers was actually wrong on the  
17     settling capacity.  There was actually twice as much  
18     settling capacity on that clarifier as I thought  
19     they had.

20                     Basically what that means is that this  
21     plant at the current flow rate is well below -- it's  
22     probably four or five times below the rated capacity  
23     of a clarifier.

24                     A typical extended aeration clarifier  
25     has a settling rate, a design rate, of 800 gallons



1 per day per square foot. This plant is down around  
2 156 gallons per day per square feet.

3 Even if you had twice as much loading  
4 coming into that plant, or four times the load,  
5 you're still below that settling rate of that  
6 clarifier, which means you have capacity.

7 MR. LUDWIG: Thank you very much,  
8 Mr. Haug. I have no further questions.

9 JUDGE JONES: Commissioner Appling, do  
10 you have any questions?

11 QUESTIONS

12 BY COMMISSIONER APPLING:

13 Q. Mr. Haug, I would say good morning but  
14 it's good afternoon. How are you doing, sir?

15 A. Yes.

16 Q. One question and one question only.

17 With your expertise with DNR, with Aqua  
18 and Quail Valley -- and the question, I want to be  
19 very careful because I want to make sure that I'm  
20 being fair to everybody here.

21 With your expertise, what you're saying  
22 is it has the capacity to hook up another 40 houses,  
23 for a total of 120?

24 A. Yes, sir.

25 Q. Okay. If that is the case, in your

1 expert knowledge, what is needed to be done there in  
2 order to get everybody on track so we can start  
3 building houses out there and Aqua could do exactly  
4 what they need to do in order to protect that 296,  
5 300 people that will be out there?

6 My concern is to fix things here so  
7 people can get back on track and do what each one of  
8 them wants to do here.

9 So would you describe for me very  
10 briefly what needs to be done, and not only that,  
11 what's the cost and who would that cost fall on, if  
12 you can share that with me.

13 A. I guess that's one of the reasons I got  
14 involved with this to start with, because this  
15 problem can be solved. You don't simply have to  
16 take the standard design criteria to solve this  
17 problem. If you do that, then you've got to go back  
18 to my report where I looked at all of those  
19 different options.

20 To take advantage of the ability of  
21 that existing pretreatment system, DNR needed to  
22 have some comfort level that, yes, will it handle  
23 more capacity?

24 So that was the purpose of the study  
25 was to show that the BOD and suspended solids

1 loading coming into that plant is far less than the  
2 standards.

3               So DNR had to have some comfort level  
4 that, yes, there is some reason that you can hook up  
5 more homes beyond the standard design criteria.

6               So given that -- that's -- that's kind  
7 of the whole purpose is to show that, yes, we've got  
8 ability to put more water from homes into that  
9 system.

10              The collection system is a different  
11 question, because that's designed -- I've never seen  
12 one -- a variable grade system like this one out  
13 there where you could possibly have water flowing  
14 uphill. I mean, that's just not a typical design.

15              That's why my recommendation is to  
16 serve that new area where he wants to hook up  
17 16 homes, keep that collection system away from the  
18 existing, pump it directly to the treatment plant.  
19 The plant has capacity.

20              That existing system, in order to keep  
21 that west side of the lake flowing, requires a lot  
22 of additional maintenance. So the costs to operate  
23 that system are higher. They're higher for Aqua.  
24 They're higher for the homeowner, because the  
25 homeowner has to maintain a septic tank. They have

1 to have it pumped periodically.

2           If they ever go to aeration, they have  
3 to have aerators in there and pay the electric for  
4 that. So there is an additional cost for the  
5 homeowner. There is an additional cost for Aqua.  
6 But the plant itself has capacity.

7           So my recommendation is that -- which  
8 is what -- why I never really signed a final report,  
9 was we needed Aqua, we needed Ed Storey to agree  
10 that basically here is a strategy to go forward, to  
11 make -- be able to serve this subdivision, and here  
12 is a way to do that without a whole lot of risks to  
13 the environment, because at the end of the day you  
14 can't put a lot of dirty wastewater out.

15           So that was kind of the whole focus is  
16 let's take advantage of those septic tanks, let's  
17 take advantage of the additional capacity in that  
18 little extended aeration plant and let's come up  
19 with a way to hook that up.

20           Q. Are you telling me the increase for the  
21 rate would be only for the new development and the  
22 existing houses out there would continue to operate  
23 with the amount of money they are paying for the  
24 sewage?

25           A. Yeah.

1           Q.     The new costs is hooking up that new  
2 street, where he's got -- I don't know exactly --  
3 16 lots or whatever it is on that new street.  
4 That's where the cost is. Because you've got to put  
5 in a new collection system for that, you have to go  
6 back to DNR and you have to get a permit.

7                     So before you can ever do that, you  
8 have to be able to prove to DNR that the treatment  
9 plant has capacity, which kind of our whole focus is  
10 let's start with the treatment plant and then work  
11 our way.

12          Q.     But you've already proved that it does  
13 have the capacity to do that?

14          A.     In my opinion it does.

15                     COMMISSIONER APPLING: Okay. I have no  
16 further questions.

17                     COMMISSIONER CLAYTON: Judge, I have no  
18 questions. Thank you.

19                     JUDGE JONES: Nor do I.

20                     Actually, you can step down for now and  
21 we'll break for lunch, come back for cross-  
22 examination from the Staff. I'll see you back here  
23 at 1:30.

24                     MR. LUDWIG: Thank you, Judge.

25                     (THE NOON RECESS WAS TAKEN.)

1 JUDGE JONES: We are back on the record  
2 with Case No. WC-2007-0303. On the stand is  
3 Mr. Gregory Haug. We've had direct testimony, and  
4 now we'll have cross-examination from Staff.

5 MR. KRUEGER: Thank you, Your Honor.

6 CROSS-EXAMINATION

7 BY MR. KRUEGER:

8 Q. Good afternoon, Mr. Haug.

9 A. Good afternoon.

10 Q. You testified that a typical municipal  
11 system has a BOD of 200 to 220. Is that correct?

12 A. Yes, sir.

13 Q. And total suspended solids of about  
14 250 milligrams per liter?

15 A. Yes, sir.

16 Q. Now, does a typical municipal system  
17 include residential, commercial, industrial, all  
18 kinds of waste?

19 A. Yes, sir.

20 Q. And the system at Quail Valley Lake is  
21 residential only?

22 A. Yes, sir.

23 Q. Would you expect the BOD from Quail  
24 Valley Lake to being similar to that of a typical  
25 municipal system?

1           A.     With residential only I'd expect it to  
2     be somewhat lower.

3           Q.     You would expect --

4           A.     It to be lower.

5           Q.     At Quail Valley Lake?

6           A.     Yes, sir.

7           Q.     Okay. Exhibit 8 was the plating permit  
8     that was issued to Aqua Missouri. Do you remember  
9     testifying about that?

10          A.     Yes, sir.

11          Q.     The first page of that, at the bottom  
12     there is two signature lines, one for Michael D.  
13     Wells, which appears to be signed, and another for  
14     G. Irene Crawford, which is not. Do you know why  
15     that -- do you have an explanation for that?

16          A.     I don't.

17          Q.     Do you know if this is the permit that  
18     was issued?

19          A.     It's my understanding it is.

20          Q.     Okay. And can it be valid even though  
21     its signature is missing?

22          A.     I don't know.

23          Q.     Okay. Do you recall the date when you  
24     had the meeting with the Department of Natural  
25     Resources where you discussed septic tanks?

1           A.     It would have been early March.

2           Q.     Of what year?

3           A.     2006.

4           Q.     Now, Mr. Storey testified about -- that  
5     DNR did not give credit for septic tanks. Did you  
6     hear that testimony?

7           A.     Yes, sir.

8           Q.     But that was based upon a letter that  
9     was sent to him in September of 2005?

10          A.     Yes, sir.

11          Q.     Was there a change in position by the  
12     DNR between September of 2005 and the time that you  
13     met with him?

14          A.     No. The -- our purpose in that meeting  
15     was to give them additional information that would  
16     really be more of a variance from the standard  
17     design criteria.

18          Q.     Okay. What is -- do you know what  
19     authority there is for your statement that you can  
20     justify deviation from the standard design criteria?

21          A.     At the beginning of -- I think it's  
22     10 CSR 8.020. There is a statement that basically  
23     says if you have justification, you can vary from  
24     the design criteria.

25                 MR. KRUEGER: May I approach the



1 witness?

2 JUDGE JONES: Yes, you may.

3 BY MR. KRUEGER:

4 Q. Can you identify these papers that I've  
5 shown you?

6 A. Yes, sir.

7 Q. And what is that?

8 A. This is the regulation 20-8.020, design  
9 of small wastewater sewage works.

10 Q. Now, I've marked a provision there.  
11 I've circled it. Is that the provision you were  
12 referring to?

13 A. Yes, sir.

14 Q. Would you read that into the record,  
15 please?

16 A. "Deviation from minimum requirements  
17 will be allowed if sufficient documentation  
18 justifies the deviation."

19 Q. I'd like to also show you something  
20 from a little further back in that regulation that  
21 I've circled. Would you read that, please?

22 A. "Sewage flow and strength. Minimum  
23 design loadings for all treatment processes shall be  
24 calculated using the following table unless the  
25 engineer can document the validity of lower per

1   capita figures based on actual waste strength and/or  
2   flow data from the development to be served or from  
3   similar developments."

4           Q.    And did you also rely on that?

5           A.    Yes, sir.

6           Q.    And then I'd like to call your  
7   attention to one other provision on the following  
8   page that I've also circled and ask you to read that  
9   into the record, please.

10          A.    "Population to be served.  Unless  
11   satisfactory justification can be given for using  
12   lower per-unit occupancies, the following numbers  
13   shall be used in determining the population for  
14   which to design the sewage works: . . ."

15          Q.    And did you also rely on that?

16          A.    Yes, sir.

17          Q.    Okay.  Thank you.

18               MR. LUDWIG:  Did you mark those as  
19   exhibits?

20               MR. KRUEGER:  I did not.  I have copies  
21   that I can -- I would offer it as an exhibit.

22               MR. ELLINGER:  Is that the whole rule?

23               MR. KRUEGER:  It's all of Rule 10 CSR  
24   20-8.020.

25               I think these are to be designated A.

1                   MR. ELLINGER: Judge, if I can make a  
2 suggestion. Can PSC mark theirs with letters --

3                   JUDGE JONES: They are.

4                   MR. ELLINGER: -- since we're already  
5 in the midst of our numbers?

6                   MR. KRUEGER: That's what I just told  
7 her.

8                   JUDGE JONES: It will be Exhibit A.

9                   MR. KRUEGER: And I would offer  
10 Exhibit A.

11                  JUDGE JONES: Any objection?

12                  MR. LUDWIG: None here.

13                  MR. ELLINGER: No, Judge.

14                  JUDGE JONES: Exhibit A is admitted  
15 into the record.

16                  (STAFF EXHIBIT A WAS MARKED FOR  
17 IDENTIFICATION BY THE COURT REPORTER AND RECEIVED  
18 INTO EVIDENCE.)

19                  JUDGE JONES: Mr. Krueger, are all  
20 these pages 020?

21                  MR. KRUEGER: Yes, they are. At least  
22 that was my intention.

23 BY MR. KRUEGER:

24                  Q. Mr. Haug, does all of the water that is  
25 distributed to the residents of Quail Valley Lake

1 end up at the sewage treatment plant?

2 A. I don't know, but I would make the  
3 assumption that most of it does. There could be  
4 some lawn watering, that sort of thing.

5 Q. Lawn watering?

6 A. Yes, sir.

7 Q. Anything else that you can think of?

8 A. No, sir.

9 Q. Does the influent to the Quail Valley  
10 Lake's treatment plant include anything other than  
11 domestic sewage?

12 A. Not to my knowledge.

13 Q. What about inflow and infiltration?

14 A. It could happen.

15 Q. Or anything else?

16 A. Not that I'm aware of.

17 Q. But you testified that there was -- so  
18 far as you could tell, there was not much, if any,  
19 inflow and infiltration?

20 A. The data that I looked at that Aqua has  
21 in their operating records does not indicate a  
22 problem.

23 Q. On Exhibit 12, which is the letter that  
24 you wrote to Tena Rush on September 14th, 2006 -- do  
25 you have that?

1           A.     Yes, sir.

2           Q.     Attached to that was Table 2 and other  
3     attachments.

4                     In Table 2 I notice that some numbers  
5     appear repeatedly. For example, on the first page,  
6     15,218 gallons per day. It looks like that number  
7     appears about eight or ten times. Is that  
8     coincidence or can you explain why that happens?

9           A.     Most of the time when reading a weir,  
10    there are certain levels on the weir that represent  
11    a certain flow rate.

12                    So if the operator is looking at a  
13    level and he sees that it's this far up on the  
14    gauge, he'll give it that same rate every time he  
15    sees it at that level.

16          Q.     So then there would never be a reading  
17    of 15,219. Is that right?

18          A.     Probably not, because the calibration  
19    would be based upon so many inches up on the weir.

20          Q.     Okay. I believe you testified that  
21    with a half-percent slope, the collection system  
22    could carry 137,520 gallons per day --

23          A.     Yes, sir.

24          Q.     -- is that right?

25                    If it was flat or if there were

1 portions of it that were flat, how would that affect  
2 the amount of sewage that could be carried into the  
3 collection system?

4 A. You'll have to have head pressure to  
5 push that amount through since you don't have the  
6 same half-a- percent slope.

7 So in other words, if you back the  
8 water up in the system, you can calculate how high  
9 you have to back the water up in order for it to  
10 flow the same way.

11 Q. How do you obtain this head pressure?

12 A. When a system is buried in the  
13 ground -- in this case the system has cleanouts.  
14 You can basically see that the water backs up in the  
15 system because it raises up higher in the cleanout.  
16 So, therefore, you have several feet of head pushing  
17 the water through the four-inch pipe.

18 Q. But it can still carry 137,520 gallons  
19 per day?

20 A. With the head pressure, yes.

21 Q. I believe you testified that the sewage  
22 treatment facility there was designed for an average  
23 flow of 22,000 gallons per day. Is that right?

24 A. That's on the description of the  
25 permit.

1           Q.     Right. And you testified that the peak  
2 flow could be two to two and a half times that?

3           A.     All of the plants I've designed, that's  
4 what I've always used is a two to two and a half  
5 time peak flow rate through the plant.

6           Q.     Have you seen any data showing that the  
7 design -- that the peak flow of two to two and a  
8 half times 22,000 gallons per day has ever been  
9 exceeded at Quail Valley Lake?

10          A.     The highest flow rating I saw was  
11 45,000 gallons per day from Aqua's records, about  
12 twice the flow.

13                 MR. KRUEGER: That's all of the  
14 questions I have.

15                 JUDGE JONES: Thank you.

16                 Now we'll have cross-examination from  
17 Aqua Missouri.

18                 MR. ELLINGER: Thank you, Judge.

19                         CROSS-EXAMINATION

20 BY MR. ELLINGER:

21           Q.     Good afternoon, Mr. Haug.

22           A.     Good afternoon.

23           Q.     I have a few questions for you.

24                 Early on in your testimony you talked,  
25 maybe even in response to some of Mr. Krueger's

1 cross also, about the average loading of influent  
2 into a municipal plant was somewhere between 200 to  
3 250 parts per million?

4 A. Yes, sir.

5 Q. Now, this is not a municipal plant, is  
6 it?

7 A. No, sir.

8 Q. It uses different design guidelines  
9 when you look at a nonmunicipal plant?

10 A. Yes, sir.

11 Q. You would expect it to have lower  
12 flows?

13 A. Yes, sir.

14 Q. And the design guidelines and criteria  
15 contained in the Department of Natural Resources'  
16 rules would be based upon that fact that they would  
17 have different flows than a municipal plant,  
18 wouldn't it?

19 A. I was reviewing this one based upon  
20 their guidelines for 22,500 gallons per day in this.

21 Q. And most municipal plants are not  
22 22,500 gallons per day or less, are they?

23 A. Correct.

24 Q. In fact, do you have a copy of Public  
25 Service Commission Staff Exhibit A in front of you?



1           A.     No, sir.

2           Q.     The rules and regulations, I think.

3                   MR. ELLINGER:  Oh, you took it back.

4   BY MR. ELLINGER:

5           Q.     And under 10 CSR 20-8.020 it says

6   Purpose.  Do you see where I'm at?

7           A.     Yes, sir.

8           Q.     Could you read the first two sentences

9   of that, please?

10          A.     "This rule sets out criteria as a guide  
11   in designing and constructing small sewage works.  
12   These criteria are not necessarily applicable to the  
13   design of works having daily flows in excess of  
14   22,500 gallons per day."

15          Q.     And if a plant has more than 22,500  
16   gallons, then there is a whole different set of  
17   rules and regulations that they have to comply with,  
18   do they not?

19          A.     Yes, sir.

20          Q.     Noting that the treatment facility at  
21   Quail Valley -- excuse me -- is 22,000 gallons per  
22   day, do you think it's surprising that it was  
23   intentionally designed to be less than the  
24   22,500-gallon limit?

25          A.     I don't have an opinion on that.

1           Q.     Well, if it was more than 22,500  
2     gallons a day, how much more restrictive are the DNR  
3     regulations?

4           A.     Let me answer the question and see if  
5     this is what you want.

6                     In looking -- when I did the engineer's  
7     report, the draft, we were at that point where if we  
8     stayed less than 22,500 gallons per day, we're under  
9     one set of guidelines. If we go above that, we're  
10    in a separate set of guidelines.

11                    That's kind of how I focused the draft  
12    report was to look at what happens for which flow  
13    rate we're operating at.

14          Q.     So you worked your report to try to  
15    stay underneath that 22,500?

16          A.     No. My report basically had four  
17    options. And I really wanted to give Ed Storey the  
18    opportunity to look at what are your options here.

19                    It came down to I made the  
20    recommendation to stay with the capacity with the  
21    existing system based on actual data, based on  
22    real-world conditions.

23          Q.     Well, if your analysis had come up with  
24    the flow that would have been in excess of 22,000  
25    gallons, would you agree that the plant would then

1 have to be expanded?

2 A. Please repeat that.

3 Q. If your analysis came up with flows for  
4 the additional lots in excess of 22,000 gallons per  
5 day, would your opinion be that the plant would have  
6 to be expanded?

7 A. No. The plant has capacity.

8 Q. Okay.

9 A. The plant has both BOD and hydraulic  
10 capacity.

11 Q. So on a hydraulic capacity basis,  
12 should the plant have been designed, should it be  
13 permitted at 30,000 gallons per day?

14 A. I don't have a value. I'd have to go  
15 back and figure out what that value would be.

16 Q. Okay. But if it was permitted at, say,  
17 30,000 gallons per day, then a whole different set  
18 of regulations would apply, would they not?

19 A. That's true.

20 Q. Looking at the language that I think  
21 Mr. Krueger showed you, which is on page 10 of  
22 Exhibit A in front of you, paragraph 4, talking  
23 about the population to be served. Do you see where  
24 I'm talking about?

25 A. Yes, sir.

1           Q.     That language -- and I think you read  
2     it into the record -- says, "Unless satisfactory  
3     justification can be given for using lower per-unit  
4     occupancies . . .

5                     Satisfactory justification, that is in  
6     the eyes of the Department of Natural Resources, is  
7     it not?

8           A.     Yes, sir.

9           Q.     And they may take census numbers; they  
10    may not take census numbers. Is that correct?

11          A.     Yes, sir.

12          Q.     Do you know how the 3.7 number was  
13    arrived at by the Department of Natural Resources?

14          A.     I don't know how they got it.

15          Q.     Do you think it's an arbitrary number?

16          A.     No. This number has been in use for a  
17    whole lot of years, but I don't know how it was  
18    originally derived.

19          Q.     Do you think it's an inaccurate number?

20          A.     I don't call it inaccurate, but I will  
21    call it dated.

22          Q.     Do you think it should be revised?

23          A.     I think DNR should take a look.

24          Q.     These rules were revised as lately --  
25    it appears at least at the bottom of the page -- in

1 February of 1999. Is it an inaccurate number in  
2 1999?

3 A. I didn't call it inaccurate. I simply  
4 said DNR ought to look at revising these numbers or  
5 at least take a look to see if they're still  
6 adequate based upon census data today.

7 Q. But based upon the Department's rules,  
8 that's the number that is used, 3.7. Correct?

9 A. Correct.

10 Q. And that's the number that in the  
11 professional community people rely on when designing  
12 treatment facilities?

13 A. If you're using standard design, yes,  
14 sir.

15 Q. And standard design means standard  
16 permitting. Right?

17 A. Yes, sir.

18 Q. And if you try to go to something that  
19 is different than standard design, then you have a  
20 much higher burden of getting permitting done, do  
21 you not?

22 A. That's correct.

23 Q. So when an engineer seals a document  
24 saying that the capacity of a system is 80 homes,  
25 using the standard criteria, that makes sure that

1 he's going to fall within the permitting capacity of  
2 the Department. Right?

3 A. That's correct.

4 Q. If he was going to -- if he thought  
5 that it had extra capacity, he could have sealed the  
6 documents saying it had extra capacity, couldn't he  
7 have?

8 A. He could have.

9 Q. But then that would have required a lot  
10 more work to get the permit issued. Right?

11 A. That's right.

12 Q. Presumably a lot more money to get the  
13 permit issued?

14 A. That's right.

15 Q. A lot cheaper to seal the number 80,  
16 isn't it?

17 A. That's correct.

18 Q. I think earlier you had talked about  
19 your report. I think that was the term Mr. Ludwig  
20 used at one point in the questioning.

21 You never did do a final report on  
22 this, did you?

23 A. No, sir.

24 Q. We talked earlier -- and I think there  
25 is an exhibit in front of you. I apologize. I

1 don't recall what number it is. But it's a copy of  
2 your draft report.

3 Do you have that in front of you?

4 A. Yes, sir.

5 Q. Could you read what number exhibit that  
6 is?

7 A. This page says 16, but I'm not sure  
8 that this was from the deposition.

9 Q. It should have a small sticker on it  
10 that says AMO exhibit.

11 A. I'm sorry. 29. I'm sorry.

12 Q. So you have in front of you Aqua  
13 Missouri Exhibit No. 29, which is your draft report.  
14 Right?

15 A. That's the first draft.

16 Q. And there was a revised draft, wasn't  
17 there?

18 A. Correct.

19 Q. And there were only two drafts?

20 A. Correct.

21 Q. And the changes between the second  
22 draft from the first draft were relatively  
23 insignificant, were they not?

24 A. Correct.

25 Q. Your recommendations on a substantive

1 basis didn't change, did they?

2 A. Didn't change.

3 Q. I'd like you to take a look at that  
4 report, and I believe on page 21 of that report --  
5 excuse me -- you have a heading called G, Selected  
6 Process. Do you see that?

7 A. Yes, sir.

8 Q. And this is, for lack of a better term,  
9 kind of your set of recommendations on what ought to  
10 be done. Is that right?

11 A. Yes, sir.

12 Q. And it sounds to me like these  
13 recommendations, in reading them, really consist of  
14 the Homeowner's Association, Aqua Missouri needs to  
15 sit down together and figure out what the best  
16 option is. Is that right?

17 A. My purpose in writing this in this  
18 manner was to have both Aqua Missouri and Ed Storey  
19 basically agree that this was the preferred option  
20 in order to go to DNR and get needed permits.

21 Q. But there was no preferred option  
22 recommended in this report, was there?

23 A. My thought -- no, sir.

24 My thought was to basically have this  
25 dialogue with Aqua to try to get to the point where



1 we could come to an agreement, so that when this  
2 report was finalized and submitted to DNR, that  
3 everyone would be in agreement. We didn't get that  
4 far.

5 Q. So your understanding of the process  
6 would be this document would be shared with  
7 Mr. Storey and with Aqua Missouri so everybody could  
8 see your recommendations and then come to the  
9 agreement on one?

10 A. That was my intention.

11 Q. This document was never shared with  
12 Aqua Missouri, was it?

13 A. I don't know. I didn't share it with  
14 them.

15 Q. You did not share it. Correct?

16 A. Correct.

17 Q. Did you have any meetings with Aqua  
18 Missouri and Mr. Storey where this document was  
19 discussed?

20 A. No.

21 Q. Did you ever have any meetings with  
22 Mr. Storey and Aqua Missouri at the same time in the  
23 same room?

24 A. No.

25 Q. Did you ever have any meetings with the

1 Department of Natural Resources and Aqua Missouri at  
2 the same time in the same room?

3 A. No.

4 Q. I do recall you spoke somewhat about a  
5 meeting that you had with the Department of Natural  
6 Resources. Is that correct?

7 A. Yes.

8 Q. And did you arrange to have that  
9 meeting put together?

10 A. Yes, sir.

11 Q. And did you invite Aqua Missouri to  
12 attend that meeting?

13 A. No.

14 Q. But it was a meeting to discuss the  
15 capacity of their plant, was it not?

16 A. Correct.

17 Q. You talked a little bit about -- what  
18 is currently being asked for is 32 connections. Do  
19 you understand that that's the matter before the  
20 Commission?

21 A. Yes, sir.

22 Q. Okay. In your letter to Tena Hale  
23 Rush, indicating that you thought that there ought  
24 to be ten connected and then evaluated. Is that  
25 correct?

1           A.     That's correct.

2           Q.     If this Commission were to issue 32 --  
3     an order saying 32 connections could be connected to  
4     the facility, would that be good engineering  
5     practice to go ahead and just hook up all  
6     32 connections without evaluating?

7           A.     My recommendation would be to go in  
8     blocks of 10. My original thought was to go 20 and  
9     then in blocks of 10. That's the way I would do it.

10          Q.     So the important thing is to go in  
11     smaller increments and then evaluate what the effect  
12     is going to be upon the facility?

13          A.     That's my opinion.

14          Q.     And if the effect at the facility at  
15     some point calls into question the treatment  
16     capability of the system, then you would recommend  
17     stopping, adding more connections at that point?

18          A.     That's correct.

19          Q.     Okay. You talked a little bit about  
20     January water usage numbers. Do you recall that?

21          A.     Yes, sir.

22          Q.     And I think you said something about  
23     the Department of Natural Resources recommended  
24     January?

25          A.     In our meeting in March, whenever they

1    said, do you have census data, we said no but we  
2    would get it, we talked about what month or months  
3    would be appropriate.

4                    Their recommendation was to go with  
5    January since most people are home and we don't have  
6    the influents of watering lawns and other things  
7    that impact flow.

8            Q.     And then after that meeting, after you  
9    obtained that information -- first of all, did you  
10   during the month of January see how many people were  
11   actually living in the houses?

12          A.     I did not.

13          Q.     Okay.  January can be kind of a brutal  
14   month in Missouri.  A lot of people leave.  Do you  
15   know if there were people that were snowbirds and  
16   were in Arizona or Florida at that time?

17          A.     I don't know.

18          Q.     If there were, that would reduce the  
19   amount of water being used, wouldn't it?

20          A.     What we had was data showing that there  
21   were 75 homes in use at that time.

22          Q.     75 bills that were collected?

23          A.     Correct.

24          Q.     After that meeting with the Department  
25   of Natural Resources and you got the census

1 information, I think that's when you sent the letter  
2 to Mr. Galbraith in March of '06, which I believe is  
3 Exhibit 9. Is that correct?

4 A. Yes, sir.

5 Q. And then did you receive a response  
6 letter to that?

7 A. Yes, sir.

8 MR. ELLINGER: Let me mark this.

9 (RESPONDENT'S EXHIBIT NO. 31 WAS MARKED  
10 FOR IDENTIFICATION BY THE COURT REPORTER.)

11 BY MR. ELLINGER:

12 Q. I hand you what's been marked as Aqua  
13 Missouri Exhibit 31 and ask you to take a look at  
14 that for a moment.

15 MR. ELLINGER: Commissioner.

16 COMMISSIONER APPLING: Thank you.

17 BY MR. ELLINGER:

18 Q. Is this the letter you received in  
19 response to your letter of March 17, 2006?

20 A. Yes, sir.

21 Q. And this letter addresses several of  
22 the issues that you had talked about in your letter,  
23 does it not?

24 A. Correct.

25 MR. ELLINGER: Okay. Take one second,

1 please, Judge.

2 (OFF THE RECORD.)

3 MR. ELLINGER: Judge, if we could, I'd  
4 like to substitute this in just until we can get a  
5 photocopy made of the extra page omitted.

6 JUDGE JONES: You'd like to do what?

7 MR. ELLINGER: Substitute this copy --  
8 this is the copy off of which -- the copy of which  
9 was made, a page was omitted in the photocopying,  
10 and then at the next break we'll just substitute  
11 that page in so that everybody has it.

12 JUDGE JONES: Oh. So you don't have  
13 the page in the exhibit?

14 MR. ELLINGER: That exhibit, when it  
15 got photocopied, a page got omitted.

16 JUDGE JONES: Does he need to refer to  
17 that page then?

18 MR. ELLINGER: Yeah. I'm going to hand  
19 this to him and then just re-mark and make this  
20 marked as Exhibit 31.

21 JUDGE JONES: Not a problem.

22 MR. ELLINGER: It's a two-page  
23 document, Judge, front and back.

24 (RESPONDENT'S EXHIBIT NO. 31 WAS  
25 RE-MARKED FOR IDENTIFICATION BY THE COURT REPORTER.)

1 BY MR. ELLINGER:

2 Q. I'm going to hand you what's been  
3 re-marked as Exhibit 31 and ask you to take a look  
4 at that.

5 MR. ELLINGER: My apologies to the  
6 Commission.

7 BY MR. ELLINGER:

8 Q. Is that the letter that you received in  
9 response?

10 A. Yes, sir.

11 Q. And that letter does go through and it  
12 addresses basically on a paragraph-by-paragraph  
13 basis the points that you addressed in your letter  
14 to Mr. Galbraith in March 2006, does it not?

15 A. Yes, sir.

16 Q. And it raises concerns with several of  
17 those issues, does it not?

18 A. Yes, sir.

19 Q. For example, No. 3, which dealt with  
20 the bylaws of the Homeowner's Association being  
21 revised, the Department of Natural Resources raised  
22 a concern about enforcement of that pumping of  
23 septic tanks. Is that correct?

24 A. That's correct.

25 Q. And their concern was they didn't know

1     how it would be enforced.  Is that right?

2             A.     That's correct.

3             Q.     Have you ever reached a conclusion on  
4     how that would be enforced?

5             A.     My understanding is that the  
6     Homeowner's Association passed a bylaw where the  
7     Homeowner's Association would actually do the  
8     pumping of the tanks.  I don't know about  
9     enforcement.

10            Q.     I think that's what your letter said is  
11    that there was a bylaw passed?

12            A.     Yes, sir.

13            Q.     And the Department asked, how do you  
14    know that it will be enforced.  And my question is,  
15    did you inquire to see how it would be enforced?

16            A.     I didn't.

17                   MR. LUDWIG:  Excuse me.  Could we look  
18    at the original letter?

19                   I'm going to object.  I think the  
20    original letter said a bylaw will be passed, and  
21    then this response came back and the bylaw was  
22    passed after that, I think, if you want to be  
23    completely accurate.

24                   MR. ELLINGER:  Why don't we just go  
25    through and read the question then.



1 BY MR. ELLINGER:

2 Q. Would you read the statement that is  
3 No. 3, starting with "The By-laws"?

4 A. "The By-laws of the Homeowner's  
5 Association will be revised to require the solids  
6 from the septic tanks be pumped at a minimum of once  
7 every three years."

8 Q. And what was the Department's -- and  
9 that is basically your position that you sent to the  
10 Department in March. Correct?

11 A. In my March letter, correct.

12 Q. And then what was the Department's  
13 response to that?

14 A. "For additional houses to be considered  
15 for a connection, adequate primary treatment must be  
16 provided to reduce the organic loading to the  
17 treatment plant. The department has some  
18 reservations about the homeowner's association  
19 maintaining the septic tanks over the long term.  
20 How can the department be assured that this  
21 requirement will be enforced?"

22 Q. And did you make any inquiries to see  
23 how the Department could be assured that this  
24 requirement would be enforced?

25 A. No.

1           Q.     That is a question. Right? They  
2     are -- it looks like they are asking for some kind  
3     of response.

4           A.     Correct.

5           Q.     Do you know if any response was ever  
6     given to the Department with respect to that  
7     question?

8           A.     I'm not aware of any response.

9           Q.     I'd like you to turn to the last page  
10    of that document.

11                   The second full paragraph makes a  
12    recommendation about coordinating with Aqua  
13    Missouri. Do you see that?

14          A.     The second full paragraph.

15          Q.     Starting with, "The Department  
16    recommends that you coordinate with . . ."

17          A.     Help me. I don't see it.

18                   MR. ELLINGER: I think it got pulled  
19    off an exhibit.

20    BY MR. ELLINGER:

21          Q.     Do you have the page of the letter  
22    dated May 5th, '06 to you?

23          A.     Yes.

24          Q.     And in the third -- or the second full  
25    paragraph on page 3. Do you see that?

1           A.     Yes, sir.

2           Q.     "The department recommends that you  
3     coordinate . . ."

4           A.     Yes, sir.

5           Q.     Do you see where I'm at?

6           A.     Yes, sir.

7           Q.     Could you read that sentence, please.

8           A.     "The department recommends that you  
9     coordinate with Aqua Missouri and submit a short  
10    report on the capacity of the treatment plant and  
11    the potential of remaining capacity."

12          Q.     Okay. Did you coordinate with Aqua  
13    Missouri to come up with that capacity?

14          A.     I submitted a letter to them kind of  
15    summarizing all of the results, and that letter was  
16    dated September 14th, 2006.

17          Q.     And is that the letter -- is that your  
18    response to this paragraph, where it says to  
19    coordinate with Aqua Missouri and prepare a joint  
20    report?

21          A.     Yes, sir.

22          Q.     Do you know if there was a joint report  
23    ever submitted?

24          A.     We didn't get that far.

25          Q.     Okay. And did you -- between May 5th,

1 2006 and September 14th, 2006, which is the date of  
2 your letter, which is, I think, Petitioners'  
3 Exhibit 12, did you-all meet and confer with Aqua  
4 Missouri to work on preparing that report?

5 A. During that time period we were testing  
6 the influent to get data for the preparation of this  
7 letter.

8 Q. Okay. So you did not work with Aqua  
9 Missouri to jointly prepare a report, did you?

10 A. Not on the report, no, sir.

11 Q. Even though that's what the Department  
12 of Natural Resources requested. Correct?

13 A. The meeting of the September 14th  
14 letter was the attempt to provide the data necessary  
15 for the development of the report.

16 Q. So the September 14th letter, instead  
17 of being a report or anything of that nature, was  
18 simply the beginnings of a discussion to come up  
19 with a report?

20 A. I had already prepared the report.  
21 This summarized the data that we could go to DNR  
22 with for recommending the additional hookups.

23 Q. Read the next sentence -- excuse me.  
24 Read the next sentence of the letter on page 3,  
25 please.

1           A.     The one, "If you have any  
2     questions . . ."? Is that what you're --  
3           Q.     "Upon submittal of this report . . ."  
4           A.     Oh. "Upon submittal of this report,  
5     the department will review and would likely agree  
6     with Aqua Missouri's analysis of the capacity of the  
7     treatment plant, as they are ultimately responsible  
8     for the treatment plant and the water quality of the  
9     effluent therefrom."  
10          Q.     What does that mean they're ultimately  
11     responsible?  
12          A.     It's their permit. They have to  
13     comply.  
14          Q.     So if additional connections are put on  
15     and there is a problem with the treatment and  
16     effluent gets out that is not properly treated, it's  
17     Aqua Missouri's responsibility. Correct?  
18          A.     That's correct.  
19          Q.     Mr. Storey would have no  
20     responsibility?  
21          A.     That's my understanding; he would not.  
22          Q.     No homeowner would have any  
23     responsibility?  
24          A.     That's correct.  
25          Q.     You wouldn't have any responsibility?

1           A.     That's correct.

2           Q.     It would solely be Aqua Missouri?

3           A.     That's correct.

4           Q.     You also mentioned that you had been  
5     told by someone that Aqua Missouri had told people  
6     to turn off aerators. Are you familiar with that?

7           A.     Yes, sir.

8           Q.     Do you have any personal knowledge of  
9     that?

10          A.     Ed Storey told me that that happened,  
11     and that's my understanding.

12          Q.     You personally didn't talk to any  
13     homeowners and ask them if they had correspondence  
14     from Aqua Missouri?

15          A.     No, sir.

16          Q.     When we started talking about capacity  
17     issues, what the treatment facility can and can't  
18     handle, ultimately the Department of Natural  
19     Resources makes that determination, do they not?

20          A.     When they issue a permit, correct.

21          Q.     So if these additional connections were  
22     somehow approved by the Public Service Commission, a  
23     construction permit would have to be issued to  
24     construct mains, would they not?

25          A.     For new construction, yes.

1           Q.     And part of the 32 that is requested is  
2     new construction, isn't it?

3           A.     Yes, sir.

4           Q.     And when that construction permit is  
5     applied for with the Department, then the Department  
6     of Natural Resources is going to conduct its own  
7     review of the capacity of the plant, is it not?

8           A.     That's correct.

9           Q.     And if it determines that there is not  
10    sufficient capacity for those additional  
11    connections, what will the Department do?

12          A.     They'll limit it to -- I mean, they  
13    won't be able to -- the Department will not allow  
14    them to hook up new sewer lines that would feed that  
15    plant.

16          Q.     So if the Department of Natural  
17    Resources determined that capacity was insufficient  
18    to connect those homes, those homes could not be  
19    connected, could they?

20          A.     The Department wouldn't allow new  
21    construction to tie into that system.

22          Q.     And part of what they're asking for  
23    today is new construction. Right?

24          A.     Correct.

25          Q.     The other way to allow those additional

1 homes to be connected, then, would be to expand the  
2 plant. Correct?

3 A. That's one option.

4 Q. And that would add enough capacity to  
5 allow additional new construction to connect?

6 A. Based on standard design guidelines,  
7 yes.

8 Q. Okay. You talked a little bit, I  
9 think, earlier on about there was 137,520 gallon  
10 capacity of pipes with a half-percent slope?

11 A. That's correct.

12 Q. It's not -- and that would be, like,  
13 basically a standard half-percent slope throughout  
14 the system?

15 A. Yes, sir.

16 Q. But it's not a standard half-percent  
17 slope throughout the system, is it?

18 A. That's correct.

19 Q. I think you called it a variable grade  
20 system?

21 A. That's correct.

22 Q. And some places, I think Mr. Krueger  
23 asked, had a flat grade?

24 A. Correct.

25 Q. Some places have a negative grade,



1     don't they?

2             A.     They could.

3             Q.     The pipe actually goes uphill?

4             A.     It could.

5             Q.     That's what a negative grade would be?

6             A.     Yes, sir.

7             Q.     Okay. That would change the volume

8     that a pipe could handle, would it not?

9             A.     You have to have head to push it

10    through at the same volume.

11            Q.     You talked something about working on

12    preliminary designs for other treatment facilities.

13    Do you recall that?

14            A.     Yes, sir.

15            Q.     Have you ever done preliminary design

16    on a treatment facility of this type?

17            A.     Extended aeration, yes.

18            Q.     Have you ever done final plans and

19    specifications for an extended aeration system?

20            A.     Yes.

21            Q.     Okay. And was that in Missouri?

22            A.     Yes.

23            Q.     Okay. You talked a little bit about

24    clarifiers. Do you recall that discussion earlier

25    on?

1           A.     Yes, sir.

2           Q.     Do you know what kind of clarifiers are  
3     on the Quail Valley system?

4           A.     It's a standard gravity clarifier.

5           Q.     Do you know what size they are?

6           A.     Um, there is two of them. My original  
7     draft said only 72 square feet of surface area.  
8     There is actually 144 square feet of surface area.

9           Q.     Each one has 72 feet?

10          A.     Correct.

11          Q.     And do you know what the appropriate  
12     amount of flow through a 72-square-foot clarifier  
13     would be per day?

14          A.     I have that in the report, yes, I do  
15     know.

16          Q.     What is it, do you know? You can  
17     refresh your memory with the report.

18                     And when you say "the report," are you  
19     referring to the --

20          A.     Draft report.

21          Q.     -- Draft Wastewater Facilities Report?

22          A.     Correct.

23                     Okay. Based upon that 72-square-foot  
24     clarifier, minimum depth of 10.25 feet, has a volume  
25     of 5,520 gallons, 3.98 hour detention time, total

1 weir length of 11 feet.

2 Q. What page are you on?

3 A. That's page 19.

4 Q. And is this where you came up with some  
5 conclusion I recall -- and you may have to help me  
6 with this -- 800 gallons per square foot is the  
7 appropriate amount or the maximum limit for a  
8 clarifier?

9 A. If you're looking at clarifier  
10 performance, you need to look at the surface  
11 settling rate. And if you go back to the Missouri  
12 regulations there for extended aeration plants, they  
13 talk about the design rate of 800 gallons per day  
14 per square foot. So that's kind of a maximum rate  
15 that you want to design a plant at.

16 This plant with two clarifiers is down  
17 in the 156-gallon-per-minute-square-foot range, well  
18 below that standard.

19 Q. That 800 -- what was the term used  
20 again?

21 A. Gallons per day per square foot.

22 Q. Gallons per day per square foot.

23 Is that for a small sewage work or is  
24 that for the larger, over 22,500-gallon sewer work?

25 A. I don't think it's defined in the small

1     sewage work. I found that in the larger one.

2             Q.     Okay. So in a smaller sewer works,  
3     presumably the number may be smaller; it may be  
4     different?

5             A.     DNR has no guidance on that that I'm  
6     aware of.

7             Q.     But if there was guidance --

8             A.     It could be different.

9             Q.     It could be different. Okay.

10            And you're currently practicing as a  
11     professional engineer in Missouri. Is that correct?

12            A.     Yes, sir.

13            Q.     And if I recall correctly, that the  
14     focus of your business is materials management now?

15            A.     I do permitting for a lot of industrial  
16     customers and some municipalities and some private  
17     people.

18            Q.     And that's in materials management?

19            A.     It's water. It's air. It's sewer.  
20     It's waste, solid waste, hazardous waste. I do a  
21     lot of those things, all environmental.

22            Q.     But it's not solely focused on  
23     wastewater or clean water treatment?

24            A.     Not solely, no, sir.

25            (RESPONDENT'S EXHIBIT NO. 32 WAS MARKED

1 FOR IDENTIFICATION BY THE COURT REPORTER.)

2 BY MR. ELLINGER:

3 Q. Let me hand you what's been marked  
4 as -- I'm sure all of the pages are on this one --  
5 yes -- Aqua Missouri Exhibit 32 and ask you to take  
6 a look at that. Commissioner. Have you seen this  
7 letter before?

8 A. Yes, sir.

9 Q. And what is Exhibit 32?

10 A. It's a letter from DNR to Ed Storey.

11 Q. Is this signed by Brenda Bethel?

12 A. Yes.

13 Q. Who is Brenda Bethel?

14 A. She's a permit engineer out of the  
15 Macon office for DNR.

16 Q. And this letter addresses certain  
17 concerns apparently that Mr. Storey raised to the  
18 Department. Is that correct?

19 A. That's correct.

20 Q. And have you had a chance to evaluate  
21 these various concerns that are in here?

22 A. I've read the letter.

23 Q. One of the discussions in the letter  
24 talks about the size of the aeration and the volume  
25 of the aeration tanks that are contained within

1 facility. Do you see that?

2 It's at the bottom of page 2 and then  
3 carries over to page 3.

4 A. Yes.

5 Q. Based upon the Department's analysis of  
6 this and looking at its reference to its various  
7 rules, does it appear that additional clarifiers  
8 would have to be added?

9 Is that what Ms. Bethel's opinion is?

10 A. She's addressing the aeration tank and  
11 the loading on the aeration tank, and this is based  
12 upon standard design criteria.

13 Q. Okay. And based upon that standard  
14 design criteria, does the Department of Natural  
15 Resources at this point seem to indicate that there  
16 may need to be expansion done to the treatment  
17 facility?

18 A. If it's based on standard design, yes.

19 Q. And then I'd also like you to take a  
20 look at the third paragraph down, the second  
21 sentence therein says, "However, if additional  
22 hydraulic flow is added to the treatment  
23 plant . . ." Do you see that?

24 A. Yes.

25 Q. ". . . 10 CSR 20-8.160(4) (A) requires

1 clarifiers following the activated sludge  
2 process . . .", and then it goes into more detail.  
3 Do you see that?

4 A. Yes.

5 Q. So as an engineer, when you see that  
6 language, does that mean if you're adding additional  
7 flow, additional connections which would produce  
8 additional flow into a treatment plant that is rated  
9 at 22,000 gallons, that it's going to require  
10 additional expansion with respect to clarifiers?

11 A. Based on standard design criteria, yes.

12 Q. And that reference to the regulations,  
13 do you see the reference that is in there to the  
14 regulations?

15 A. 10 CSR.

16 Q. Is that the same regulation we talked  
17 about earlier that controls if a plant has more than  
18 22,500 gallons per day of flow?

19 A. I don't know. I'd have to go back and  
20 read the regs.

21 Q. Why don't you take a look at PSC  
22 Exhibit A, and I would call you to the Purpose  
23 section, the second and third sentences, right on  
24 the front page.

25 A. Okay.

1 Q. Do you see where it's at?

2 A. Yes.

3 Q. Is that regulatory reference to  
4 Ms. Bethel's letter analogous to the reference  
5 contained in 10 CSR 20-8.020 when dealing with  
6 larger treatment facilities, over 22,500 gallons?

7 A. It says for larger flows, 10 CSR  
8 20-8.110-10, CSR 20-8.220 reflect the minimum  
9 acceptable standards.

10 Q. And 10 CSR 20-8.160 would be in that  
11 group of statutes, would it not?

12 A. Correct.

13 (RESPONDENT'S EXHIBIT NO. 33 WAS MARKED  
14 FOR IDENTIFICATION BY THE COURT REPORTER.)

15 BY MR. ELLINGER:

16 Q. I hand you what's been marked as Aqua  
17 Missouri 33.

18 MR. ELLINGER: Commissioner, some more  
19 regulations.

20 BY MR. ELLINGER:

21 Q. Take a look at what's been marked as  
22 Exhibit 33. Are these the regulations referred to  
23 dealing with the larger flows over 22,500 gallons?

24 A. Yes.

25 Q. And it's inside those regulations that



1     you came with up with the 800-gallons-per-square-  
2     foot-calculated number, right, on the clarifiers?

3             A.     Yes.

4             Q.     You talked about taking some effluent  
5     samples and effluent -- influent and effluent  
6     samples from the Quail Valley facility.  Correct?

7             A.     Correct.

8             Q.     And you did talk about taking a  
9     combined joint sample?

10            A.     Correct.

11            Q.     And that was done with the Aqua  
12     Missouri folks.  Right?

13            A.     Yes.

14            Q.     You took a number of samples?

15            A.     Yes.

16            Q.     Were those done with Aqua Missouri  
17     folks present?

18            A.     Some were and some were not.

19            Q.     And with respect to those which were  
20     not, did you get permission from Aqua Missouri to go  
21     onto their facility to take those samples?

22            A.     I called several times and never got a  
23     response, and I took the samples.

24            Q.     So you did not get permission to go on?

25            A.     Correct.

1           Q.     Were you instructed by someone to go on  
2 to that property and take those samples?

3           A.     At the direction of Mr. Storey's  
4 attorney, I took the samples.

5           Q.     Okay. I'd like you to finally to take  
6 a look at -- I believe it's Exhibit 22, I believe.  
7 It's this document from Mr. Mueller.

8           A.     25?

9           Q.     I'm sorry. 25. My mistake.  
10                  Have you seen this document before?

11          A.     Last week in the deposition.

12          Q.     That was the first time you'd seen it?

13          A.     Yes, sir.

14          Q.     You did talk about the initial design  
15 capacity of the facility out there, did you not --

16          A.     Yes, sir.

17          Q.     -- a little bit?

18                  And you indicated you thought it would  
19 have been designed without taking into account  
20 septic tanks being on the system. Is that correct?

21          A.     Yes, sir.

22          Q.     If you'd take a look at the third  
23 paragraph where it says 80 homes with garbage  
24 grinders. Do you see where I'm at?

25          A.     Yes, sir.

1           Q.     I see -- the second sentence says, "All  
2     homes in this subdivision are or will be served by  
3     single family aeration plants, so all effluent will  
4     be partially treated and contain few solids."

5                     Do you see that language?

6           A.     Yes.

7           Q.     Is that the same as septic tanks?

8           A.     Yes.

9           Q.     So Mr. Mueller as an engineer sealed  
10    this document saying the capacity was 80 homes with  
11    septic tanks on it, did he not?

12          A.     At least 80 homes, yes.

13          Q.     But with septic tanks. Correct?

14          A.     Correct.

15          Q.     And his numbers referenced in that  
16    second -- third paragraph -- 80 homes with garbage  
17    grinders. Correct?

18          A.     It's based on standard design criteria.

19          Q.     And the paragraph above, it says, "This  
20    plant will have future expansion capability."

21                     Do you see that?

22          A.     Yes.

23          Q.     So he was engineering it to be expanded  
24    at some point in the future. Correct?

25          A.     I'm not sure what his interpretation

1 is. I might interpret that to mean that the plant  
2 could take additional load in the future beyond  
3 80 homes.

4 Q. Do you see somewhere in there it says  
5 additional beyond 80 homes?

6 A. No, sir.

7 Q. But that is a sealed document,  
8 correct --

9 A. Correct.

10 Q. -- from an engineer?

11 And an engineer's seal, just for  
12 reference to the Commission, means something,  
13 doesn't it?

14 A. It means he stands behind his work.

15 Q. And have any of your reports been  
16 sealed?

17 A. We only got to the draft stage, but I  
18 do stand behind my work.

19 Q. But none of the reports were sealed,  
20 were they?

21 A. Correct.

22 MR. ELLINGER: Thank you.

23 No further questions, Judge.

24 JUDGE JONES: Redirect.

25 MR. LUDWIG: Just a few, Your Honor.

1 REDIRECT EXAMINATION

2 BY MR. LUDWIG:

3 Q. I don't have the benefit of page 2 of  
4 that one letter. That's not it.

5 Could you read -- well, first of all,  
6 paragraph 7 indicates that before the homes could be  
7 connected, they'd have to go through Aqua Missouri?

8 A. Correct.

9 Q. And we haven't gotten past that stage?

10 A. Correct.

11 Q. The meeting we had with DNR wasn't just  
12 the lower-level staffers, was it?

13 A. That's correct.

14 Q. We went up the food chain, if you will?

15 A. That's correct.

16 Q. You've worked with DNR in the past on a  
17 number of projects. Is that a fair statement?

18 A. Yes, sir.

19 Q. Is it also a fair statement that the  
20 lower-level staff will not vary from design  
21 criteria?

22 A. Not without adequate justification.

23 Q. But if you give -- particularly higher  
24 up the food chain you go, if you can give them the  
25 justification, they'll work with you?

1           A.     That's correct.

2           Q.     And when we met with Mr. Galbraith, who  
3     I believe is as high up the food chain as we can go,  
4     he was very receptive to our study and our figures.  
5     Correct?

6           A.     That's correct.

7                   JUDGE JONES: Mr. Ludwig, could you  
8     please speak into the microphone.

9                   MR. LUDWIG: I'm sorry.

10          BY MR. LUDWIG:

11          Q.     The numbers in Mr. Mueller's report,  
12     the 80 homes, is nothing more than extrapolating  
13     backwards with the 3.7 people per home?

14          A.     That's correct.

15          Q.     And, again, that's design criteria;  
16     that's not what is happening in the real world?

17          A.     That's correct.

18          Q.     And as we said earlier, he estimates 46  
19     to 50 pounds BOD. We're at about 20 percent of  
20     that?

21          A.     That's correct.

22          Q.     And that was the real concern that DNR  
23     had about these septic systems, wasn't it?

24          A.     Right. They had no data to show what  
25     the influent load on the plant was. That was one of

1 their questions.

2 Q. And you have studied the influent data?

3 A. We went back and took samples to get  
4 real numbers on what is coming into that plant.

5 Q. And it showed -- even before the septic  
6 tanks were pumped, it showed a fraction of what it's  
7 designed to handle coming into that plant?

8 A. That's correct.

9 Q. Okay. Approximately a third?

10 A. That's correct.

11 Q. And it's gone down now to about  
12 25 percent?

13 A. Slightly lower, yes.

14 Q. All right. As a practical matter, what  
15 are the chances of 32 lots being sold out there at  
16 once and 32 homes built and 32 hookups happening all  
17 at once?

18 A. Not very practical.

19 Q. Like, less than 1 percent or something?

20 A. That's correct.

21 Q. All right. The fact that there were a  
22 couple -- there were only 75 of the 77 homes that  
23 had been built at the time that the water usage  
24 figures were gotten doesn't change significantly the  
25 total number of gallons going into the plant, does

1 it?

2 A. It's not significant.

3 And the real important thing to  
4 remember here is that all of the data that was  
5 recorded by Aqua basically shows that that average  
6 is well below what the nameplate description is on  
7 the permit.

8 Q. And if there were two homes not  
9 operating there, it might be a little -- it might  
10 change the per- home output a little bit if you  
11 divided that 400,000 figure by 77, but if you divide  
12 it by 75, you're still getting an actual per home  
13 number. Correct?

14 A. I mean, 183 gallons a day is based upon  
15 the data we collected. Based upon what Aqua has  
16 submitted over the years, it's 185 gallons per home.

17 Q. Okay. Now, when Ms. Bethel sent this  
18 letter to Mr. Storey, this was when he was still  
19 looking into expanding the plant before you came on  
20 board. Is that correct?

21 A. That's correct.

22 Q. And if we were to believe what  
23 Ms. Bethel said in this letter, by golly, Quail  
24 Valley is over its capacity right now?

25 A. Correct.



1           Q.     Because she goes back to the population  
2     equivalents and the number of residents and all that  
3     stuff and just looks at the design criteria instead  
4     of what is happening at the plant?

5           A.     That's correct.

6           Q.     So she's just -- is there any  
7     indication with 77 homes, when she says 69 homes  
8     would be the capacity, is there anything to back  
9     that up in the real world?

10          A.     I mean, that's based on design  
11     criteria.

12          Q.     Okay. And, again, you've shown it was  
13     70-- I guess 78 homes out there. We're not even  
14     close to the capacity on flow, BOD loading, BOD  
15     effluent or any of the other factors that are  
16     important in treating this water?

17          A.     That's correct.

18          Q.     Apparently Mr. Ellinger had some  
19     confusion about an aeration basin versus a  
20     clarifier. Could you explain to us the difference?

21          A.     The aeration basin is really where  
22     you're treating the organics that are in the  
23     wastewater to break them down so that they will  
24     settle in the next chamber, which is the clarifier.  
25     That's where you separate the solids from the

1 liquid.

2 Q. As I understand it, in your initial  
3 report you thought there was only one clarifier; it  
4 turns out there is two?

5 A. Correct.

6 Q. And based on that, there is, again,  
7 plenty of capacity for more flow and more  
8 clarifying?

9 A. Correct.

10 Q. Okay. And, again, we're talking about  
11 the regulations. Every one of those regulations --  
12 or every one of these things we're talking about,  
13 the regulations say, if you can provide data, you  
14 can -- you can add on to this plant?

15 A. Correct.

16 Q. And I mean add more additional homes to  
17 the plant?

18 A. Correct.

19 Q. If we were to use your report, would  
20 you finalize it and make it a final draft -- or make  
21 it a final report and seal it?

22 A. Yes.

23 Q. And stand behind it?

24 A. Yes.

25 Q. And you're standing behind within a

1 reasonable degree of engineering certainty  
2 everything you've said here?

3 A. Yes.

4 Q. We just never reached that stage?

5 A. Correct.

6 Q. Because Aqua wouldn't cooperate?

7 A. That's correct.

8 Q. That's why we're here?

9 A. Correct.

10 MR. LUDWIG: All right. Nothing  
11 further.

12 JUDGE JONES: You may step down,  
13 Mr. Haug.

14 COMMISSIONER APPLING: Can I ask you  
15 one question, please.

16 THE WITNESS: Yes, sir.

17 QUESTIONS

18 BY COMMISSIONER APPLING:

19 Q. Let's just take for an example that  
20 Aqua and Mr. Storey would agree on your  
21 recommendation.

22 A. Yes, sir.

23 Q. Say they walk out for a break and they  
24 came back in here and say, yes, we're glad to do  
25 this -- and don't have a heart attack back there --

1 but what are we talking about as far as the cost to  
2 have -- I'm not saying who should pay for it,  
3 whether Mr. Storey or whether Aqua should pay.

4 I'm just saying, do you have a feel for  
5 a ballpark figure for what it would cost to do what  
6 you are recommending?

7 A. I guess my recommendation would be to  
8 go ahead and hook up all of the homes that can be  
9 hooked up to the existing collection system and then  
10 go ahead and put in a new collection system, pump  
11 that directly to the treatment plant.

12 And my estimate -- and this is a  
13 ballpark -- but it's somewhere in that \$50,000 range  
14 to put in collection lines and a pump station to get  
15 it to the treatment plant.

16 Q. Okay. And that would kind of satisfy,  
17 and they could take, Mr. Storey, in terms of ten  
18 houses at a time until capacity showed otherwise?

19 A. Correct.

20 COMMISSIONER APPLING: Okay. Thank you  
21 very much, sir.

22 JUDGE JONES: You may step down.

23 Mr. Ludwig, call your next witness.

24 MR. LUDWIG: Your Honor, at this time I  
25 would ask that Exhibits 1 through 16 be admitted. I

1 think we've been using them, and I've never  
2 officially offered them.

3 JUDGE JONES: I feel kind of silly  
4 asking this question, but do you have any objection  
5 to any of those exhibits?

6 MR. ELLINGER: I have no objection to  
7 any of those exhibits.

8 JUDGE JONES: I will note for the  
9 record that Exhibit 2 is not offered. You skipped  
10 that number.

11 MR. LUDWIG: Well, Your Honor, that's  
12 the overhead. That's that big one there. And I  
13 didn't make seven copies of that because I thought  
14 that might be a little bit --

15 JUDGE JONES: I don't know that it even  
16 helps.

17 MR. LUDWIG: I just wanted to explain,  
18 because handing the plats out which are registered  
19 with the Recorder's Office, and some of them are  
20 different scale, trying to piece those together and  
21 figure out what the heck I'm talking about would  
22 have been difficult. This was simply as an  
23 explanatory matter.

24 JUDGE JONES: Okay. So you didn't  
25 intend to offer that?

1                   MR. LUDWIG: Well, I mean, I'll leave  
2     it here if the Commission wants to look at it.  
3     Otherwise, they're going to have to piece these  
4     things together.

5                   JUDGE JONES: No. Take that with you  
6     when you leave.

7                   MR. LUDWIG: Because I know one of them  
8     is to a different scale and it looks wrong.

9                   JUDGE JONES: Well, Exhibits 1 --

10                  MR. LUDWIG: Oh, I'm sorry. 1 through  
11    17, Your Honor. I had one that I didn't -- yeah, 1  
12    through 17.

13                  JUDGE JONES: Mr. Ellinger, any  
14    problems with 17?

15                  MR. ELLINGER: No problem.

16                  JUDGE JONES: Exhibits 1 and 3 through  
17    17 are admitted for the record.

18                  (COMPLAINANTS' EXHIBIT NOS. 1 AND 3  
19    THROUGH 17 WERE RECEIVED INTO EVIDENCE.)

20                  JUDGE JONES: Now you can call your  
21    next witness.

22                  MR. LUDWIG: The Complainants rests.

23                  JUDGE JONES: Okay. Now we'll move on  
24    to Staff.

25                  Please call your witness.

1                   MR. KRUEGER: Staff calls Jerry  
2 Scheible.

3                   Mr. Scheible, will you please raise  
4 your right hand.

5                   (Witness affirmed.)

6                   JUDGE JONES: Thank you, sir. You may  
7 be seated.

8                   DIRECT EXAMINATION

9 BY MR. KRUEGER:

10           Q.     State your name and address for the  
11 record, please.

12           A.     My name is Jerry Scheible. I work for  
13 the Missouri Public Service Commission, P. O. Box  
14 360, Jefferson City 65102.

15           Q.     What are your duties with the Public  
16 Service Commission?

17           A.     I am a utility regulatory engineer in  
18 the Water and Sewer Department, wherein I perform  
19 inspections and review new certificate cases in  
20 water and sewer.

21           Q.     What is your educational background?

22           A.     I have an engineering -- agricultural  
23 engineering degree from the University of Missouri-  
24 Columbia.

25           Q.     Are you licensed as a professional

1 engineer?

2 A. I am indeed in the State of Missouri.  
3 And I also hold a Level D wastewater operator's  
4 certificate from DNR.

5 Q. When did you begin work at the  
6 Commission?

7 A. In 2001, the fall of 2001.

8 Q. Where did you work prior to that?

9 A. For the Department of Natural Resources  
10 in the Water Pollution Control Program.

11 Q. What were your duties there?

12 A. They varied. Most suitable to compared  
13 to what we are doing here today. I spent three  
14 years reviewing wastewater treatment facilities for  
15 municipalities.

16 Q. And what were the dates of that  
17 employment?

18 A. That would have been my last three  
19 years of employment at DNR. So '98 to '01, roughly.

20 Q. Okay. Are you familiar with the DNR's  
21 procedure regarding the issuance of construction  
22 permits?

23 A. Yes.

24 Q. And operating permits as well?

25 A. Yes.



1           Q.     How are those reviewed in the  
2 Department of Natural Resources?

3           A.     Basically an engineer would submit a  
4 construction plan, a permit application, and the  
5 plans and specifications, along with an engineering  
6 report, would be reviewed by an engineer.

7           Q.     Let me interrupt for just a second.

8           A.     Sure.

9           Q.     Are you talking about a construction  
10 permit or an operating?

11          A.     Basically both. It's normally how the  
12 construction -- normally the construction permit  
13 process leads up to the operating permit, and the  
14 main review of the facilities is done during the  
15 construction permit application process.

16          Q.     And what does the DNR look for during  
17 these reviews?

18          A.     The review of capacities, loadings. If  
19 it's a new facility, then the standard design  
20 criteria are used. It's not uncommon to use actual  
21 flow data for expansions and that sort of thing.

22                   MR. KRUEGER: May I approach, Your  
23 Honor?

24                   JUDGE JONES: Yes, you may.

25 BY MR. KRUEGER:

1           Q.     I'd like to show you what's been  
2     admitted as Exhibit 8. Can you identify that  
3     document, please?

4           A.     It's the State operating permit for the  
5     Quail Valley system.

6           Q.     Can you tell from looking at that what  
7     the design criteria -- what design criteria were  
8     used in the design of that system?

9           A.     Not particularly by just looking at it.  
10    It appears that the standard design criteria was  
11    used.

12          Q.     Does that permit impose any limit on  
13    the number of homes that the treatment plant may  
14    serve?

15          A.     It does not.

16          Q.     Does it impose any limit on the number  
17    of people that may be served by the treatment plant?

18          A.     It does not.

19          Q.     Does it impose any limits on the  
20    hydraulic load on the treatment plant?

21          A.     There is a design flow of 22,000  
22    gallons per day, but, again, that goes back to the  
23    original design of the facility. It's not -- it's  
24    not a limit per se.

25          Q.     Are you familiar with notices of

1 violation issued by the Department of Natural  
2 Resources?

3 A. Yes, sir.

4 Q. Does the DNR issue NOV's if a plant is  
5 overcapacity?

6 A. Hydraulically?

7 Q. Yes.

8 A. No, not as far as I know. They do not  
9 issue hydraulic overflow.

10 Q. In what circumstances would the DNR  
11 issue NOV's?

12 A. It would be for if they are unable to  
13 meet their monitoring requirements, most often, as  
14 in this permit, dealing with suspended solids and  
15 BOD.

16 Q. Suspended solids and BOD measured at  
17 what point?

18 A. At the effluent point.

19 Q. At the effluent.

20 Would they issue NOV's for suspended  
21 solids or BOD loading at the influent end?

22 A. No.

23 Q. Are you familiar with the plant at  
24 Quail Valley Lake?

25 A. Yes.

1 Q. And have you visited it?

2 A. Yes, I have.

3 Q. On how many occasions?

4 A. Roughly five I would say, give or take  
5 one or two.

6 Q. For what purpose?

7 A. Perform annual inspections through the  
8 Water and Sewer Department here at the Public  
9 Service Commission.

10 MR. KRUEGER: May I approach, Your  
11 Honor?

12 JUDGE JONES: Yes.

13 MR. KRUEGER: Can you mark that for me?  
14 I think it's B.

15 (STAFF EXHIBIT B WAS MARKED FOR  
16 IDENTIFICATION BY THE COURT REPORTER.)

17 BY MR. KRUEGER:

18 Q. I've handed you a document that's been  
19 marked as Exhibit B. Can you tell me what that is?

20 A. It is my Staff report of investigation  
21 in regards to the case at hand.

22 Q. And did you prepare that report?

23 A. I did.

24 Q. Did you visit the treatment plant there  
25 for the purpose of preparing that report?

1           A.     I did. At one point just to verify  
2     that there were no major changes obvious from the  
3     last time that I had been there performing the last  
4     annual inspection in '05.

5           Q.     Is all of the information in that  
6     report accurate?

7           A.     Yes.

8           Q.     In the report you said that the plant  
9     can serve an additional 32 homes. Is that right?

10          A.     Yes, I believe so.

11          Q.     Do you know any reason why it could not  
12     serve 32 additional homes?

13          A.     I do not know of any reason why it  
14     could not.

15          Q.     What is the significance of the DNR's  
16     design standards?

17          A.     They are basically just exactly that.  
18     They are design standards normally for new  
19     facilities where there is not actual data available.  
20     It's a standard starting point, if you will, for  
21     sizing facilities.

22          Q.     What are the parameters that are used  
23     in the DNR's design standards?

24          A.     Normally it's the 3.7 people per home  
25     as has been discussed today, 75 to 100 gallons per

1 day flow per PE.

2 Q. What about BOD and suspended solids?

3 A. BOD I believe is 0.17 is the standard.

4 However, they do allow 0.22 -- it's milligrams per  
5 liter -- for when garbage grinders are in place.

6 Q. Milligrams per liter is the same as  
7 parts per million. Is that correct?

8 A. Yes.

9 Q. Okay. Now, if there is an existing  
10 plant that is up and running, would you apply those  
11 same standards?

12 A. They certainly can be used, and it's  
13 not uncommon that they would be. However, if  
14 there's actual data available, it would make sense  
15 to use that.

16 Q. What is infiltration?

17 A. Infiltration basically is small amounts  
18 of water that are able to get into the collection  
19 system, whether through small cracks, that sort  
20 of -- that sort of thing.

21 Q. By the collection system you're  
22 referring to the pipes that run from the homes to  
23 the treatment plant?

24 A. That's correct.

25 Q. And what is influent?

1           A.     Inflow would be more of a -- more of a  
2     direct connection or a large opening, a large hole,  
3     if you will, that is actually allowing a flow, a  
4     considerable flow in.

5           Q.     And those two are collectively referred  
6     to as I & I --

7           A.     That's correct.

8           Q.     -- infiltration and inflow?

9                     If there is I & I, what effect does  
10    that have on hydraulic loading at the plant?

11          A.     It would increase the hydraulic loading  
12    at the plant.

13          Q.     Are you able to ascertain whether there  
14    is a significant I & I at Quail Valley Lake?

15          A.     Just from the documents that I've had  
16    an opportunity to review from Aqua Missouri and from  
17    Mr. Haug's report, there does not appear to be a  
18    significant problem with I & I.

19          Q.     Okay. Do you know how much influent  
20    there is at the treatment plant?

21          A.     How much influent going into the plant?

22          Q.     Yes.

23          A.     Not per se, not exactly.

24          Q.     Did you see data about that?

25          A.     I don't recall seeing actual data on

1     that.

2           Q.     Does the operating permit contain any  
3     information that helps in that regard?

4           A.     Just the -- the operating permit -- the  
5     design flow is 22,000 gallons per day is what it is  
6     permitted at.

7           Q.     Is there a flow -- is there a figure  
8     there for actual flow?

9           A.     Yes, there is.  It's 14,400 gallons per  
10    day.

11          Q.     And do you understand that that  
12    represents the actual flow at the treatment plant?

13          A.     That's my understanding, yes.

14          Q.     Do you know how that figure is  
15    determined?

16          A.     It's my understanding that it comes  
17    from the operating authority, in this case, Aqua  
18    Missouri's reports that they send to -- the monthly  
19    monitoring reports that they send to the Department  
20    of Natural Resources.

21                 And in connection -- in connection with  
22    that, when the permit comes due every five years,  
23    they do -- they have to apply for their permit to be  
24    reviewed, and at that point they normally use what  
25    flow data that they have for the monthly monitoring



1 reports to determine that.

2 Q. Now, this permit that we're looking at,  
3 Exhibit 8, is that a renewal of a permit?

4 A. I'm sure, yes, it is. It was renewed  
5 in 2005. It's good until 2010.

6 Q. And how does that actual flow that is  
7 shown on that permit compare with the design  
8 hydraulic capacity of the plant?

9 A. Well, it's considerably less. It's  
10 about 7,400 gallons less. That's not right.

11 Q. In your opinion, would the treatment  
12 plant at Quail Valley Lake be capable of receiving  
13 additional hydraulic load?

14 A. I see no reason why it wouldn't.

15 Q. In your opinion would the treatment  
16 plant at Quail Valley Lake be capable of receiving  
17 additional organic load?

18 A. Again, I see no reason why it would  
19 not.

20 Q. And what is the basis of your  
21 conclusion?

22 A. The fact that I've had an opportunity  
23 to review the monthly monitoring reports, and  
24 they've always been well within their effluent  
25 limitations.

1                   MR. KRUEGER: I believe that's all I  
2 have, Your Honor.

3                   JUDGE JONES: Commissioner Appling, do  
4 you have questions of Mr. Scheible?

5                                 QUESTIONS

6 BY COMMISSIONER APPLING:

7           Q.     Jerry, how are you doing?

8           A.     Just fine, sir.

9           Q.     Taking the Staff report and  
10 investigation dated July 25th, 2007 that was  
11 submitted by yourself, the last two paragraphs of  
12 that report, would you very quickly paraphrase those  
13 two paragraphs for me?

14          A.     The last two paragraphs of the entire  
15 report?

16          Q.     Yes.

17          A.     Basically the first -- the first of the  
18 last two, basically sum-- in further summarizing it,  
19 the ReSource Institute report that was provided by  
20 Mr. Haug uses actual data that has been taken out in  
21 the field by either himself or by Aqua Missouri and  
22 utilizing the information that he's gathered and --  
23 and analyzing it for what he submitted it as, there  
24 appears to be no reason why there is not adequate  
25 capacity for additional connections at the facility.

1                   We've seen nothing from Aqua Missouri  
2     that would prove otherwise, at least definitely at  
3     the point of this report.

4                   As far as the very last paragraph, this  
5     was put together with the input of my supervisor,  
6     Jim Merciel, and our Department manager, Dale  
7     Johansen at the time, and they were able to give me  
8     some additional history from -- on this -- on the  
9     company and how companies -- how this company and  
10    developers have interacted over the years.

11                  And it seems to be a trend that the  
12    burden of proving whether there is or is not  
13    capacity available at one of their treatment plants  
14    typically gets put back on the developer to bear  
15    that cost.

16                  And the Water and Sewer Department  
17    feels that it really should be the other way around.  
18    There should be a means that Aqua Missouri is doing  
19    their own analysis of their own treatment plant to  
20    determine if there is indeed or indeed not capacity  
21    at the plant rather than putting that burden on the  
22    developer.

23                  Q.     What is Staff's bottomline  
24    recommendation on this case?

25                  A.     In this case we feel that there

1 certainly is no reason why connections cannot be  
2 being made at this time and possibly in the past,  
3 and there doesn't appear at this point to be a  
4 certain number that we can just say -- it's hard to  
5 do that with wastewater, to just pick a magic number  
6 and say, yeah, this is -- it can handle exactly this  
7 many or not exactly this many. Put one more home on  
8 it and it would be overloaded.

9               So it would be our recommendation that  
10 we can definitely allow additional connections, and  
11 obviously, as you would in any case, monitor the  
12 performance of the plant to make sure that Aqua does  
13 not indeed get into any kind of trouble with meeting  
14 their limits.

15           Q.     Were you in here this morning when  
16 Aqua's counsel said that this case should really not  
17 be in front of the Public Service Commission?

18           A.     Yes, I was.

19           Q.     What are your comments to that?

20           A.     It's a difficult one for me to answer.  
21 I would say Jim Merciel would be able to answer that  
22 better.

23               I do feel that there is a concern with  
24 the -- with the way the system works. Whether or  
25 not Mr. Storey physically presented an application

1 to the company, I understand that that did not  
2 happen, but it is my understanding that the reason  
3 it did not happen is because he was informed by the  
4 company that there was no point in him applying for  
5 it because it would not be approved. And I think  
6 that that is part of the problem that needs to be  
7 addressed.

8 Q. The last question. What would be your  
9 recommendation to get this back on track? So how  
10 this could be developed out there and Aqua Missouri  
11 would not be damaged that much?

12 A. I think that that is no problem with  
13 going forward as Mr. Storey has suggested.

14 I might add that this cost of adding  
15 the additional collection system that's been  
16 discussed, I believe Mr. Haug mentioned a guess of  
17 around \$50,000. That cost would be on Mr. Storey as  
18 part of doing the main extension agreement. That  
19 wouldn't be a cost to Aqua Missouri.

20 So if he pays to have the main  
21 extension, there really is no added cost to Aqua  
22 Missouri whatsoever. They just have added revenues  
23 of being able to bill additional customers.

24 COMMISSIONER APPLING: Thank you, sir.

25 JUDGE JONES: Now we have questions

1 from Mr. Ludwig.

2 MR. LUDWIG: Very few, Your Honor.

3 CROSS-EXAMINATION

4 BY MR. LUDWIG:

5 Q. Mr. Scheible, you note in your report  
6 that you have seen no data from Aqua to contradict  
7 anything that Mr. Haug has put together?

8 A. Yes, sir.

9 Q. And you indicate -- of course, you said  
10 now at the time of your report back in July you  
11 hadn't seen any. Have you stayed in touch with  
12 Mr. -- with Keith Krueger as this case has  
13 developed?

14 A. Yes, I have.

15 Q. And did Keith indicate to you that Aqua  
16 has presented any data to date to contradict  
17 anything Mr. Haug has done?

18 A. I have not aside from an engineer  
19 report produced by Randy Clarkson.

20 Q. And did that have any data in it, or  
21 did it fall back on the design criteria?

22 A. It was mostly based on -- mostly, if  
23 not entirely, based on design criteria.

24 Q. And his conclusions are based on other  
25 plants?

1           A.     I believe that's correct.

2           Q.     Okay.  So to answer my question, you  
3 still haven't seen any data to contradict anything  
4 that Mr. Haug has set forth in his report and his  
5 conclusions?

6           A.     That would be true.

7           Q.     Therefore, do you see any reasonable  
8 basis that Aqua would have turned down our request  
9 for ten additional hookups as set forth in  
10 Mr. Haug's letter on September 14th?

11          A.     If that did indeed happen -- you know,  
12 I don't have the benefit.  I was not there  
13 obviously.  If it had been -- if ten connections had  
14 been requested, I see no reason why that could not  
15 have been allowed.

16          Q.     No reasonable basis for denying that?

17          A.     Correct.

18          Q.     And as you just responded to  
19 Commissioner Appling, there is no cost to Aqua to  
20 Mr. Storey hooking up additional homes, is there?

21          A.     The only cost that there could be,  
22 which I should have mentioned, would be a slight  
23 increase in electricity because they would probably  
24 need to run their blowers more at the plant, but  
25 that would be minimal.

1           Q.     Which is more offset by the additional  
2 income they will bring in from each --

3           A.     Certainly.

4           Q.     -- hookup?

5           A.     Certainly.

6           Q.     In other words, they don't charge a  
7 thousand dollars a month for however many hookups  
8 are out there; they charge each person so much a  
9 month?

10          A.     That's correct.

11          Q.     And so basically hooking up additional  
12 homes is pure profit to them?

13          A.     I don't know if I'd go that far.

14          Q.     Pretty close?

15          A.     It definitely is more revenues for  
16 them, yes.

17          Q.     All right. We're not doing this in a  
18 vacuum either, are we?

19                 In other words, they've got their  
20 monthly reports going to DNR every month where  
21 they're testing the permitted aspects of the plant,  
22 the BOD and the TSS. Right?

23          A.     Yes.

24          Q.     And if those numbers start to get out  
25 of line, there are a number of things that can be



1 done. No more hookups. They can turn the aerators  
2 on in the septic tanks. Correct?

3 A. Yes.

4 Q. And that would decrease the loading to  
5 the plant by about another 50 percent, wouldn't it?

6 A. I haven't done any of the calculations  
7 for that per se, but it should indeed reduce the  
8 loading to the plant.

9 Q. Okay. You made a comment that -- and  
10 you were talking about that the permit on the front  
11 portion of that, it has 14,400 is actual flow, and  
12 you indicated that comes from Aqua's reports?

13 A. That's correct.

14 Q. And you said, they use flow data when  
15 they apply for -- when there is a new permit.

16 Now, did you mean DNR uses that flow  
17 data or Aqua uses that flow data or both?

18 A. I would have to say it's both. I mean,  
19 it's -- I don't know at what point DNR would say  
20 that the design flow would need to be increased on  
21 the permit without data that is coming from the  
22 company.

23 Q. I'm talking about the 14,400.

24 A. The actual flow?

25 Q. Yes.

1                   Is that something that to your  
2     knowledge Aqua puts on their permit is the actual  
3     flow?

4           A.     Yes, that's my understanding.

5           Q.     On their permit application?

6           A.     Yes, that's correct. That's my  
7     understanding.

8           Q.     All right. And that determines -- the  
9     higher that number, I take it they pay a little bit  
10    higher or there is graduated fees probably that they  
11    pay to DNR?

12          A.     There is -- there is graduated fees  
13    for -- depending on the flow.

14          Q.     All right. So it's a little  
15    disingenuous for them to come into this hearing and  
16    claim, well, that's not an accurate flow number?

17          A.     That should be -- that should be  
18    accurate at least as of February of '05, yes.

19                   MR. LUDWIG: Thank you. I have nothing  
20    further.

21                   JUDGE JONES: Mr. Ellinger, cross.

22                   I tell you before you get started, I  
23    plan on stopping at 3:00. If you think you'll go  
24    beyond 3:00, we'll go ahead and take a five-minute  
25    break now.

1                   MR. ELLINGER: Why don't we take it  
2 now.

3                   JUDGE JONES: Okay. Let's take a  
4 five-minute break and start at five until 3:00.

5                   (A RECESS WAS TAKEN.)

6                   JUDGE JONES: We're back on the record  
7 with WC-2007-0303, and we're ready for  
8 cross-examination by Aqua Missouri of Staff's  
9 witness Jerry Scheible.

10                  MR. ELLINGER: Thank you, Judge.

11                               CROSS-EXAMINATION

12 BY MR. ELLINGER:

13               Q.     Good afternoon, Mr. Scheible.

14               A.     Good afternoon.

15               Q.     I do have a few questions about your  
16 report.

17                       While you were conducting your  
18 investigation, did you ever make contacts with Aqua  
19 Missouri about your investigation?

20               A.     I did not.

21               Q.     Did you review the Department of  
22 Natural Resources' regulations in preparing your  
23 report of investigation?

24               A.     Yes.

25               Q.     Would that be 10 CSR 8-020?

1           A.     That sure sounds right.

2           Q.     And that would be the small facility  
3 regulation for wastewater treatment. Is that  
4 correct?

5           A.     Yes.

6           Q.     And that regulation has been  
7 promulgated by the Department of Natural Resources.  
8 Is that your understanding?

9           A.     Yes.

10          Q.     And you used to work at the Department  
11 of Natural Resources, didn't you?

12          A.     Yes.

13          Q.     And that is the document -- or excuse  
14 me -- the rule and regulation that people outside  
15 the Department of Natural Resources rely on when  
16 working on wastewater treatment facilities, is it  
17 not?

18          A.     For design purposes, yes.

19          Q.     And if you have numbers that match with  
20 the numbers in the regulation when you apply to the  
21 Department, that makes it much easier to get a  
22 permit, does it not?

23          A.     It sure doesn't hurt anything, yeah.

24          Q.     If you have numbers that exceed the  
25 permit -- or the regulation numbers and you apply

1 for a permit, it's more difficult, is it not?

2 A. I don't know if I'd say more difficult.

3 It may require -- it may require additional time of

4 DNR -- DNR staff to review it.

5 Q. It's either going to require more time

6 with the staff or it's going to require more time

7 going into the permit from the company side, would

8 it not?

9 A. That's true.

10 Q. One way or the other?

11 A. Or both, yes.

12 Q. Or both.

13 DNR regulations, the one we referred to

14 earlier, does provide some capacity numbers for

15 design purposes, does it not?

16 A. Yes.

17 Q. And that's the 3.7 persons per

18 residence for a residential area. Is that correct?

19 A. Yes.

20 Q. It also provides for between 75 and

21 100 gallons per person for day for residential

22 areas?

23 A. Yes.

24 Q. And a company that relies on those

25 numbers is relying upon the Department's regulations

1 with respect to wastewater treatment, are they not?

2 A. Since that's the quote from the  
3 regulation, I'd say that's true.

4 Q. Okay. And I think in your report you  
5 talked about reviewing the report of ReSource  
6 Institute's Wastewater Facilities Report?

7 A. Yes.

8 Q. Are you familiar with that document?

9 A. Yes.

10 Q. Would you take a look at Exhibit 8?

11 A. The operating permit?

12 Q. Yes.

13 A. Yes. I have it right here.

14 Q. Did you look at the operating permit in  
15 the process of preparing your report?

16 A. Yes, I did.

17 Q. Okay. And I note that it says design  
18 population equivalent is 296. Do you see that?

19 A. Yes, I do.

20 Q. And is it your understanding that 296  
21 is based upon the Department of Natural Resources'  
22 regulation?

23 A. It could be. I'm not sure I'm quite  
24 understanding the question.

25 Q. Do you know how the population --

1 design population equivalent of 296 is reached?

2 A. How it was originally arrived at during  
3 the permitting process?

4 Q. Yes.

5 A. It would have -- most likely would have  
6 come from the engineering report for whoever filled  
7 out the original application for a construction  
8 permit.

9 Q. Okay. And if you took 22,000 gallons  
10 per day and you divide it by 75 gallons per person  
11 and you divide that by 3.7, would it surprise you  
12 that it comes up with 296 people?

13 A. That would not surprise me.

14 Q. Which represents 80 homes?

15 A. Right.

16 Q. Is that your understanding?

17 A. Yes.

18 Q. It's your understanding that there are  
19 80 homes that have been either -- I think there are  
20 78 homes that have submitted applications for  
21 service and have been approved and are connected.  
22 Is that your understanding?

23 A. That's my understanding, yes.

24 Q. And there are two more connections that  
25 have not been connected at this point at Quail

1 Valley. Is that your understanding?

2 A. From what I've heard today, that's my  
3 understanding.

4 Q. Are you familiar with Aqua Missouri's  
5 tariff?

6 A. I have reviewed it. I don't have it  
7 memorized.

8 Q. I don't think anybody has it memorized.  
9 Have you had an opportunity to review  
10 it in the course of preparing your report  
11 investigation?

12 A. I'm certain I referred to it.

13 Q. Okay. So you did review it?

14 A. Yes.

15 Q. Okay. Do you know anywhere in Aqua  
16 Missouri's tariff where it provides that a developer  
17 should request excess capacity in the future for a  
18 plant?

19 A. Are you asking if it says that in the  
20 tariff anywhere?

21 Q. Yes.

22 A. I'm not aware that it says that.

23 Q. Are you aware of anything in the tariff  
24 that says that Aqua Missouri is supposed to preclear  
25 capacity at its plants?



1           A.     I'm not aware that it says that.

2           Q.     Well, when somebody wants to connect to  
3 a plant, does the tariff provide for a process?

4           A.     Yes, I believe it does.

5           Q.     And that process consists of a person  
6 files an application for service, do they not?

7           A.     Yes, that is the process that is laid  
8 out.

9           Q.     Are you aware of any person filing an  
10 application for service at Quail Valley and having  
11 been denied?

12          A.     I'm not aware of any, no.

13          Q.     Now, if there is a developer as opposed  
14 to an individual homeowner, there is a slightly  
15 different procedure in the tariff, is there not?

16          A.     Yes.

17          Q.     And that talks about the developer has  
18 to enter into a developer agreement. Is that  
19 correct?

20          A.     Yes.

21          Q.     And a developer agreement provides that  
22 they will put up the money to do the studies; they  
23 will put up the money to pay for any construction  
24 that is required; they will put up the money to  
25 ensure the permitting fees, et cetera, are made so

1     that they can connect their extra homes. Is that  
2     what the tariff says?

3             A.     I'm not sure if that's exactly how it's  
4     worded.

5             Q.     Well, how would you understand the  
6     tariff to be?

7             A.     Without looking at it, I really  
8     couldn't say right now.

9                     MR. KRUEGER: Your Honor, I'd object to  
10    the question because the tariff speaks for itself.

11                    JUDGE JONES: That's true, but I don't  
12    think the question has been asked and has been  
13    answered. We can take official notice of the  
14    tariff.

15                    MR. ELLINGER: Well, that's what I was  
16    going to ask at this point, Judge. I was going to  
17    offer it as an exhibit or if you'd prefer just to  
18    take official notice of it.

19                    JUDGE JONES: Yeah, I'd rather do that.

20                    MR. ELLINGER: Can I provide a copy of  
21    it to the witness?

22                    JUDGE JONES: You can.

23                    MR. ELLINGER: Mark, do you want a  
24    copy?

25                    MR. LUDWIG: Sure.

1                   MR. ELLINGER: Do we need to mark that  
2 as an exhibit, Judge, or would you prefer just to --

3                   JUDGE JONES: No, you don't have to  
4 mark it as an exhibit since it's not going to be  
5 offered or admitted.

6 BY MR. ELLINGER:

7           Q.     Is that a copy of the tariff in front  
8 of you, sir?

9           A.     Yes.

10          Q.     Okay. If I could walk you through a  
11 couple of things real quick.

12                   Rule 1 contains the definitions in the  
13 tariff. Do you understand that?

14          A.     Yes. I think that's right anyway.

15          Q.     Excuse me?

16          A.     Yes, it does.

17          Q.     Okay. And it defines applicant, it  
18 defines application for service, does it not,  
19 Rules 1(a) -- excuse me -- 1(b) and 1(c)?

20          A.     I'm looking through the legal  
21 description here.

22          Q.     It's a big legal description.

23          A.     It's a big legal description.

24                   There we go. Okay.

25          Q.     Are you on the right page now?

1           A.     On definitions, yes.

2           Q.     Do you see the definition there for  
3 applicant?

4           A.     Yes.

5           Q.     And then the next definition is  
6 application for service?

7           A.     Yes.

8           Q.     And that's a written request by  
9 potential customer requesting sewer service. The  
10 application form will be prepared by and available  
11 from the company. Do you see that?

12          A.     That is what it says, yes.

13          Q.     So is that the process that is used  
14 when a person, an individual, wants to have sewer  
15 service?

16          A.     As far as -- as far as I know, yes.

17          Q.     And if you turn back two more pages,  
18 Rule 1(1) defines developer. Do you see that?

19          A.     Yes, I do.

20          Q.     And that just means somebody who owns  
21 two or more lots. Right?

22          A.     Yes.

23          Q.     Now, there are processes -- and I don't  
24 want to go through the whole tariff because that  
25 would take us far too long. But there are processes

1 in here for how people get applications filed and  
2 get service approved by the company. Correct?

3 A. Yes.

4 Q. And as far as -- I think you testified  
5 no one has ever, that you're aware of, been denied  
6 who has filed an application. Correct?

7 A. That's correct. I'm unaware.

8 Q. Are you aware of any developer who has  
9 been denied who has filed a developer's agreement?

10 A. I'm not aware of any.

11 Q. Okay. Are you familiar with the  
12 request by the Complainant to add 32 homes -- 32  
13 connections -- excuse me -- to this facility?

14 A. I'm familiar in that that's what this  
15 complaint is about.

16 Q. And you understand that not -- a  
17 substantial number of those homes do not have sewer  
18 main to them currently?

19 A. That's correct.

20 Q. Before any connection can be made with  
21 those homes that have no sewer main, is it your  
22 understanding that an application for extension  
23 would have to first be filed?

24 A. Yes.

25 Q. And to the best of your knowledge, has

1     that application ever been filed?

2             A.     I'm not aware if it has or has not.

3             Q.     Now, after that application is filed,  
4     and let's say it's adopted by the company, there  
5     still has to be construction.    Correct?

6             A.     That's correct.

7             Q.     And in the course of construction, you  
8     have to obtain a construction permit from the  
9     Department of Natural Resources.   Correct?

10            A.     That's correct.

11            Q.     Now, the Department of Natural  
12    Resources is going to conduct its own inquiry into  
13    what the capacity of the system is at that time, are  
14    they not?

15            A.     The Department of Natural Resources  
16    would not go out and perform its own investigation.  
17    It would rely on data that an engineer would present  
18    to them.

19            Q.     Okay.   But they're going to conduct  
20    that investigation at that time based upon whatever  
21    is submitted to them?

22            A.     They would review whatever is submitted  
23    to them, yeah, and make comments on them, yes.

24            Q.     And if they had concerns about an  
25    issue, they may ask the engineer to come back and

1 document things. Right?

2 A. Certainly.

3 Q. And they may end up disagreeing with an  
4 engineer's conclusion and not agree to issue a  
5 construction permit. Is that correct?

6 A. That's correct.

7 Q. But as long as you have the 3.7 homes  
8 and you base all your calcu-- excuse me --  
9 3.7 persons per residence, you base all of your  
10 calculations on that, you shouldn't have much  
11 problem on the capacity side?

12 A. I wouldn't expect there to be any  
13 problem.

14 Q. But that's not the case here today, is  
15 it?

16 A. That's -- apparently that's the case.  
17 You're correct, yes.

18 Q. Now, developers -- getting back to what  
19 we were talking about there. Developers have to  
20 enter into a contract to have extension of service  
21 if they want to have -- if they need additional  
22 capacity for the development. Is that correct?

23 A. As is laid out in the tariff, that's  
24 correct.

25 Q. And that's Rule 12 of the tariff, is it

1 not? 12(b) to be more specific. It's pretty far  
2 back. The tariff unfortunately is not numbered.

3 Sheet SRR 43, if that helps.

4 A. Okay. Rule 12 you're referring to?

5 Q. 12(b).

6 A. 12(b).

7 Q. Sub 1. Which again is on Sheet SRR 43.

8 A. Okay.

9 Q. And it says the developer shall enter  
10 into a contract -- see Exhibit B -- with the  
11 company.

12 A. That's correct.

13 Q. Do you see that?

14 A. Yes.

15 Q. And that contract that it's referring  
16 to is what's kind of been talked about as a  
17 developer agreement. Is that your understanding?

18 A. Yes.

19 Q. And that relates to whether it requires  
20 additional lines or whether it requires additional  
21 capacity of the plant. That's the document a  
22 developer has to fill out. Correct?

23 A. That's correct.

24 Q. And they have to make an application to  
25 have that document and they have to prepare



1 estimates on what the costs will be and then move  
2 forward if approved by everybody and do construction  
3 or the company can do the construction and the  
4 developer will pay for it. Is that your  
5 understanding?

6 A. I think that's pretty much the gist of  
7 it without going back through and reading it again.

8 Q. Okay. And there is no developer  
9 agreement that's been signed in this case. Correct?

10 A. None that I'm aware of.

11 Q. You're not aware of anybody having  
12 applied for a developer agreement?

13 A. That's correct.

14 MR. LUDWIG: You mean since the  
15 original?

16 BY MR. ELLINGER:

17 Q. Are you aware of anybody applying for a  
18 developer agreement since the very original  
19 development back in early --

20 A. '92 is when it was. That's true.  
21 That's true. I'm sorry. Yes. I'm not aware of one  
22 since then.

23 Q. But since, let's say, 2002 to the  
24 present, you're not aware of anybody requesting a  
25 developer agreement?

1           A.     I am not aware of one, no.

2           Q.     And you're not aware of anybody being  
3     denied service since 2002 to the present?

4           A.     Not in response to an application, no.

5           Q.     Okay.  You talk some about actual data  
6     when you're looking at capacity.  Do you recall that  
7     brief discussion?

8           A.     Yes.

9           Q.     Actual capacity is kind of a moving  
10    target, isn't it?

11          A.     Actual capacity of a treatment plant?

12          Q.     Yes.

13          A.     I would say that's a fair statement,  
14    yes.

15          Q.     It depends on how many people you've  
16    got today and how much flow is generating and that  
17    can be different tomorrow and all that changes  
18    around?

19          A.     It mainly depends on what the quality  
20    of the effluent coming out of the end of the plant  
21    is.

22          Q.     So since that capacity, since all those  
23    numbers are kind of variable and you move around,  
24    the Department of Natural Resources came up with  
25    these nice, finite criteria, 3.7 homes -- or

1 3.7 persons per residence, so you'd have some  
2 stability. Is that right?

3 A. That's what the Department adopted.  
4 I'm not sure if they came up with that number.

5 Q. Do you know where that number came  
6 from?

7 A. I do not.

8 Q. Okay. But when you look at that  
9 3.7 number and then you hear somebody talk about a  
10 census, a census is a snapshot on one day, isn't it?

11 A. I assume that's true, yes.

12 Q. If you have 229 people today and  
13 tomorrow two houses sell and two big families move  
14 in, you might have a larger number. Right?

15 A. That's very possible, yes.

16 Q. And the homes in the subdivision,  
17 they're larger homes, aren't they?

18 A. They seem to be compared to mine, yeah.

19 Q. They're not little one-bedroom  
20 bungalows?

21 A. No, they're not.

22 Q. I think there is a swimming pool out  
23 there?

24 A. Yes, there is.

25 Q. Those are all things that encourage

1 families to want to live in a community of that  
2 type. Right?

3 A. I would think so, yes.

4 Q. So when you see a subdivision that is,  
5 what, roughly 20 plus years old and you see -- and  
6 have large houses and you see a few houses that have  
7 one person living in them, is it your experience  
8 normal that that will start to turn over and more  
9 people move into the neighborhood?

10 A. I really don't have any experience to  
11 address that.

12 Q. Okay. Do you think that's part of the  
13 reason why the Department of Natural Resources might  
14 use that 3.7 number, because things move in and out  
15 of neighborhoods?

16 A. I assume that could have as much reason  
17 to do with it as anything.

18 Q. Okay. In your report, which I believe  
19 is Exhibit B, is that correct?

20 A. Yes.

21 Q. On the next-to-the-last page, the top  
22 it says, "On March 27, I contacted appropriate MDNR  
23 representatives . . ."

24 A. Yes.

25 Q. Do you see that?

1           A.     Uh-huh.  Yes.

2           Q.     And I see you talked to them regarding  
3     the treatment plant's compliance with the monthly  
4     effluent limits?

5           A.     Yes.

6           Q.     Is that the only part of the discussion  
7     you had with DNR?

8           A.     I don't recall off the top of my head  
9     if we talked about anything else.

10          Q.     Who did you talk to at DNR?

11          A.     I do not know the lady's name right  
12     now.

13          Q.     Okay.  Was it somebody out of the Macon  
14     office?

15          A.     No.  It was here in Jefferson City.

16          Q.     Did you talk to them at all about  
17     whether their opinion in Quail Valley was additional  
18     connections could be made above the 80?

19          A.     I did not.

20                 Actually, the person that I spoke to  
21     merely maintained the database that held the  
22     information.  So I would not expect her to have any  
23     knowledge of that whatsoever.

24          Q.     Would that -- would the Department of  
25     Natural Resources' position with respect to

1 additional connections be relevant to what the  
2 capacity of the plant is?

3 A. Ultimately, yes. I mean, we won't be  
4 getting a construction permit to build the main  
5 extension that is going to be required without  
6 DNR's -- without a construction permit from them,  
7 so, yes.

8 Q. You had also mentioned at some point  
9 that hooking up new homes basically gave them more  
10 revenue, Aqua Missouri more revenue. Do you recall  
11 that in response to Mr. Ludwig's question?

12 A. I think that's basically what I said,  
13 yes.

14 Q. Hooking up more homes also entails more  
15 risk, does it not?

16 A. In theory it could, I suppose. With  
17 added loading there is a chance that -- not  
18 necessarily in every case, but there is a chance  
19 that as you -- as you near capacity, it may be more  
20 difficult to operate, it's possible, yes.

21 Q. And if there is a violation of the  
22 permit levels with respect to the effluent, whose  
23 responsibility is it to fix that?

24 A. That would be Aqua Missouri.

25 Q. And you used to work at the Department

1 of Natural Resources. They fine people for doing  
2 that, don't they?

3 A. They can.

4 Q. And whose responsibility would it be to  
5 pay the fine?

6 A. Aqua Missouri.

7 Q. So if this Commission were to enter an  
8 order saying 32 homes should be connected and Aqua  
9 Missouri must connect them and it ultimately results  
10 in a permit violation, Aqua Missouri is on the hook  
11 for that, aren't they?

12 A. In theory, that would be correct.

13 Again, as has been mentioned today,  
14 32 homes aren't going to be built out there in the  
15 next year. It would allow for opportunity to -- to  
16 account for any kind of -- of those kind of  
17 operational concerns as -- as any kind of situation  
18 like that would approach.

19 Q. Well, I look in your report, and it  
20 says, "Staff has concluded that the ultimately  
21 requested 32 additional connections to the Quail  
22 Valley sewer system should be approved and allowed."

23 Do you see that language in your  
24 report?

25 A. Yes.





1 be connected. What you're saying is up to 32 could  
2 be connected, but you'd want to monitor it as those  
3 connections occurred?

4 A. That was not particularly anticipated  
5 by my report to say -- to allow for monitoring. I  
6 would assume that that would be the case, I guess.

7 Q. Okay. So even though your report  
8 doesn't specifically say that, that's what you  
9 intend your report to say is that monitoring would  
10 be a component of allowing hookups?

11 A. I think they go hand in hand.

12 Q. And let's say all of the homes that  
13 have sewer main in front of them are connected, and  
14 I believe that's 12 that are unconnected right now,  
15 if memory serves me. With respect to the other 20,  
16 those are in the unplatted area that we've talked  
17 about some today.

18 If that required plant capacity  
19 expansion, whose responsibility would that plant  
20 capacity expansion be?

21 A. It would depend -- at this point the  
22 way the tariff reads, it would depend on who is  
23 requesting the services.

24 Q. Okay. If the developer is trying to  
25 sell those lots to build on them or sell them to

1 someone else and have them build on them, someone is  
2 going to have to request service, are they not?

3 A. Yes. At some point, yes.

4 Q. And if that service request by the  
5 developer exceeds the current capacity of the plant,  
6 whose responsibility is it to create the additional  
7 capacity?

8 A. If the request for service is made by a  
9 developer, then it would be the developer's  
10 responsibility if capacity was indeed necessary.

11 Q. You made a comment earlier about  
12 turning -- I think Mr. Ludwig asked you a question  
13 about turning the aerators on and having additional  
14 pretreatment. Do you recall that?

15 A. Yes.

16 Q. Do you know if Aqua Missouri has  
17 control over those aerators on the individual septic  
18 tanks?

19 A. To my knowledge they -- they do not  
20 have control.

21 Q. The septic tanks are controlled by the  
22 homeowners and the Homeowner's Association. Is that  
23 correct?

24 A. That's my understanding, yes.

25 Q. Aqua Missouri, however, is responsible

1 for any treatment issues that arise at the final end  
2 of the treatment process?

3 A. That's true.

4 Q. Okay. You had said that you've had the  
5 opportunity to review the tariff. Correct?

6 A. Yes.

7 Q. Do you see any violation of the tariff?

8 A. Not the way the tariff currently reads,  
9 no.

10 Q. Have you had an opportunity to review  
11 the statutes that control water and sewer treatment  
12 facilities in Missouri?

13 A. I have.

14 Q. Do you see any violation of any  
15 statute?

16 MR. KRUEGER: Objection, calls for a  
17 legal conclusion.

18 JUDGE JONES: Objection sustained.

19 BY MR. ELLINGER:

20 Q. In the course of executing your duties  
21 as an engineer -- I believe it's utility engineer is  
22 the proper title?

23 A. Utility regulatory engineer.

24 Q. -- utility regulatory engineer, are you  
25 required at times to interpret statutes in the

1 course of your normal course of business?

2 JUDGE JONES: You're now going to turn  
3 him into an expert. He needs to go to law school  
4 for three years like all the rest of us and pass the  
5 bar. So go to a different line.

6 MR. ELLINGER: All right. You can't  
7 blame a guy for trying.

8 BY MR. ELLINGER:

9 Q. I'd like to go to your last paragraph  
10 on page 3 of 3 of your report, please.

11 A. Okay.

12 Q. There are a few questions about that.  
13 And I think that your response was that this was  
14 information -- this language was put in at the  
15 request of your supervisor. Is that correct?

16 A. I wouldn't go so far as at the request.  
17 It was with their contribution, with my questioning  
18 to them.

19 Q. Did they come to you and provide this  
20 information?

21 A. I'm not sure I understand what you're  
22 asking me.

23 Q. Well, did you go to them and say I'd  
24 like the background and history of how Aqua Missouri  
25 deals with other companies or did they come to you

1 and say -- tell you what Aqua Missouri has done?

2 A. No. It was -- I obviously asked for  
3 their input on just about everything that I do, and  
4 this was no different than any other case. So, yes,  
5 I asked for their input.

6 Q. That paragraph doesn't seem to have any  
7 reference or relevance to how many connections can  
8 be added at Quail Valley, does it?

9 A. No, it does not.

10 Q. It doesn't have anything to do with the  
11 capacity at Quail Valley, does it?

12 A. No, it does not.

13 Q. It has nothing to do with whether the  
14 developer filed an application or not, does it?

15 A. No, it does not.

16 Q. And who did you talk to about that?

17 A. Jim Merciel --

18 Q. Okay.

19 A. -- and Dale Johansen.

20 Q. And Mr. Johansen no longer works for  
21 the Water and Sewer Department. Is that correct?

22 A. That's correct.

23 Q. My final questions relate to some  
24 questions that I think Mr. Ludwig asked you about  
25 the permit and the fees on the permit.

1                   Do you recall that brief set of  
2     questions?

3           A.     I do.

4           Q.     Is it your understanding that the fee  
5     paid to renew a permit is based on the design flow?

6           A.     I really do not know whether it's the  
7     design flow or the actual flow. I could not say.

8           Q.     Well, if it was the design flow, then  
9     the actual flow is kind of irrelevant what number  
10    gets put down, isn't it?

11          A.     Irrelevant to what?

12          Q.     To the amount of fee.

13          A.     To the fee. I guess it would be  
14    irrelevant to the fee, yes.

15                 MR. ELLINGER: No further questions,  
16    Judge.

17                 Thank you.

18                 JUDGE JONES: Redirect, Staff.

19                 MR. KRUEGER: Thank you, Your Honor.

20                 I'm not sure that I offered Exhibit B,  
21    and I would like to offer that at the present time.  
22    That's the Staff's Exhibit B.

23                 JUDGE JONES: I don't think you did.

24                 Any objection to Exhibit B?

25                 MR. LUDWIG: Not here, Your Honor.

1                   MR. ELLINGER: Judge, I would object to  
2 the last paragraph, page 3 of Exhibit B, on the  
3 basis of Mr. Scheible's testimony, that it has  
4 nothing to do with the issues that are presented in  
5 this case; to wit, the only issues presented in this  
6 case are the capacity of the system and whether an  
7 application for service was submitted and/or denied.

8                   JUDGE JONES: Which paragraphs were  
9 those again?

10                  MR. ELLINGER: It's the last paragraph  
11 on page 3. At the top it says page 3 of 3 pages.

12                  MR. KRUEGER: Well, Your Honor, I think  
13 it is Aqua Missouri's responsibility to provide safe  
14 and adequate service, and that responsibility  
15 includes extending service to everybody that is  
16 within their service territory that they're  
17 reasonably able to do, and I think that's what this  
18 paragraph is directed to.

19                  MR. ELLINGER: And that's not an issue  
20 in this case, Judge.

21                  In the complaint there is a statement  
22 of issues that's been filed. It's been agreed upon  
23 by the Complainant and by the Respondents. There  
24 has been no objection to those issues.

25                  JUDGE JONES: You do agree that this

1 addresses the issue as framed by Mr. Krueger?

2 MR. ELLINGER: Excuse me, sir?

3 JUDGE JONES: You do agree that this  
4 paragraph addresses the issue as framed by  
5 Mr. Krueger?

6 MR. ELLINGER: No, I don't believe that  
7 it does address that issue.

8 JUDGE JONES: You even disagree --

9 MR. ELLINGER: I would even disagree  
10 with his conclusion. But on top of that, even if  
11 you assume that it fell in that category, which I  
12 completely disagree with, assuming it did fall in  
13 that category, that's still irrelevant to the issues  
14 in this case.

15 I think that this talks about things  
16 that have no relevance to Quail Valley, have no  
17 relevance to the issues that are on the table today.

18 MR. LUDWIG: Your Honor --

19 MR. ELLINGER: It's editorializing for  
20 lack of a better term.

21 MR. LUDWIG: May I interject anything  
22 here, Your Honor?

23 JUDGE JONES: Yes, you may, Mr. Ludwig.

24 MR. LUDWIG: Thank you.

25 Your Honor, this sort of provides a



1 little confirmation of the background as we've  
2 presented it to you and to this Commission, in that,  
3 you know, they said, no, you can't have hookups and  
4 we go out and hire an engineer for a study and then  
5 an engineer for another study, and they've been  
6 fighting us every step of the way, and it's exactly  
7 what this paragraph says.

8 It confirms maybe not the issue  
9 ultimately to be decided, but it also confirms how  
10 we got here and is relevant on that.

11 MR. KRUEGER: Your Honor, I think the  
12 obligation of the company is to provide safe and  
13 adequate service to the people in the area that it  
14 serves, and it should not be the responsibility of  
15 the customers or the developer to go out and prove  
16 that the capacity is sufficient or insufficient.

17 I think that should be the  
18 responsibility of the company, and I think that is  
19 what this is trying to determine.

20 JUDGE JONES: Mr. Ellinger, this seems  
21 to be jurisdictional in a sense, in that Aqua  
22 Missouri should provide safe and adequate service.

23 That's required under the statute,  
24 isn't it?

25 MR. ELLINGER: Well, there has never

1    been a complaint that they haven't, and the  
2    complaint I think frames the jurisdiction of this  
3    Commission.

4                   JUDGE JONES:  Well, it's not a  
5    complaint of whether their service has been  
6    inadequate up to this point, but to provide adequate  
7    service could also mean provide service to the lots,  
8    the additional lots.  Which doesn't mean they should  
9    or shouldn't.  It just means that that's a  
10   jurisdictional question.

11                  MR. ELLINGER:  Well, I think the  
12   jurisdictional questions in this case are simply was  
13   there a violation of the tariff, which this doesn't  
14   address, was there a violation of the statute, which  
15   this doesn't address, was there a violation of an  
16   order of this Commission or decision of this  
17   Commission, which this doesn't address, or any of  
18   the underlying issues that are in the filed  
19   complaint raised by the Complainants.

20                  This goes beyond all this issues.  This  
21   doesn't address any of those issues.

22                  JUDGE JONES:  That's my point.  It's  
23   not -- it may not be a violation.  I don't know.  It  
24   may or may not be a violation of a statute.  It may  
25   be more of compulsory in nature rather than

1     punitive, I guess, for lack of a better word.

2                     Do you understand what I'm saying?

3                     MR. ELLINGER: I understand what you're  
4     saying, Judge, but 386.390, which is the statutory  
5     provision that allows complaints to be filed, in  
6     this Commission's regulation, which I think both of  
7     them have been offered as exhibits, both say that  
8     the only way you can file a complaint is if there is  
9     a violation, that it uses that term. And in the  
10    absence of an alleged violation, there is no  
11    jurisdiction. That goes to the jurisdictional  
12    argument. This goes beyond any of those issues.

13                    JUDGE JONES: It says in 393.130 that  
14    every water corporation shall furnish and provide  
15    such service instrumentalities and facilities as  
16    shall be safe and adequate and in all respects just  
17    and reasonable.

18                    That's pretty broad language.

19                    MR. ELLINGER: It is --

20                    JUDGE JONES: Just and reasonable could  
21    mean to serve the demand of an expanding  
22    development, would it not?

23                    MR. ELLINGER: The Complainant in this  
24    case doesn't raise that as an issue.

25                    JUDGE JONES: Well, it may not be an

1 issue --

2 MR. ELLINGER: Which makes it beyond  
3 the scope of this hearing.

4 JUDGE JONES: That may not specifically  
5 be delineated on the issues listed as drawn up by  
6 the parties, but the Commission still has an  
7 obligation to enforce that statute, doesn't it --

8 MR. ELLINGER: It does --

9 JUDGE JONES: -- regardless of what  
10 you-all think is the issue?

11 MR. ELLINGER: And, Judge, the  
12 statutory scheme, the regulatory scheme, makes  
13 provision for the Commission Staff to file a  
14 complaint if they think part of a statute or tariff  
15 is not being complied with.

16 They have not done that in this case.  
17 The Complainant has filed a complaint and that --the  
18 elements of that complaint are the sole issues that  
19 are before this Commission.

20 JUDGE JONES: Okay. Well, I'm going to  
21 exclude this last paragraph but not for the reasons  
22 that you argue, Mr. Ellinger.

23 I'm excluding it because I think that  
24 this last paragraph does go to jurisdiction, but I  
25 don't think Mr. Scheible's report can report that.

1 I think it should be reported in a brief by his  
2 attorney.

3 MR. ELLINGER: Thank you, Judge.

4 JUDGE JONES: Okay. With that in mind,  
5 Exhibit B is admitted into the record.

6 (STAFF EXHIBIT B WAS RECEIVED INTO  
7 EVIDENCE, WITH THE EXCLUSION OF THE LAST PARAGRAPH.)

8 MR. KRUEGER: Thank you, Your Honor.

9 REDIRECT EXAMINATION

10 BY MR. KRUEGER:

11 Q. Now, Mr. Scheible, you are recommending  
12 that the Commission allow -- or direct Aqua Missouri  
13 to provide 32 additional connections. Is that  
14 correct?

15 A. Yes, that's correct.

16 Q. Are you recommending that the  
17 Commission order that the plant not be expanded?

18 A. No, I'm not.

19 Q. As the permittee of the Department of  
20 Natural Resources, what is Aqua Missouri obliged to  
21 do?

22 A. Treat the wastewater that it receives  
23 to meet the limitations set forth on their operating  
24 permit.

25 Q. And under their operating permit, if

1     they exceed those limitations, whose responsibility  
2     is it to see that additional capacity is provided?

3             A.     The operating authority.

4             Q.     Which is?

5             A.     At this point it would be Aqua  
6     Missouri.

7                     MR. KRUEGER:   Okay.   Thank you.   That's  
8     all of the questions I have.

9                     JUDGE JONES:   Okay.   You may step down,  
10    Mr. Scheible.

11                    Did you have any questions?

12                    You may step down.

13                    Mr. Krueger, you may call your next  
14    witness.

15                    MR. KRUEGER:   Jim Merciel.

16                    JUDGE JONES:   Mr. Merciel, will you  
17    please raise your right hand.

18                    (Witness affirmed.)

19                    JUDGE JONES:   Thank you.   You may be  
20    seated, sir.

21                                    DIRECT EXAMINATION

22    BY MR. KRUEGER:

23             Q.     Good afternoon.

24             A.     Good afternoon.

25             Q.     State your name and address for the

1 record, please.

2 A. James A. Merciel, Jr.

3 Q. And your address?

4 A. Oh, I'm sorry. 200 Madison Street,  
5 Jefferson City, Missouri 65101.

6 Q. 102?

7 A. Okay. 102.

8 Q. Okay. I'm sorry.

9 A. No. The address is 101.

10 Q. You gave the street address, didn't  
11 you?

12 A. Yeah.

13 Q. The Post Office box is 102.

14 A. Correct.

15 Q. By whom are you employed and in what  
16 capacity?

17 A. I'm employed by the Missouri Public  
18 Service Commission. I work in the Water and Sewer  
19 Department. My title is Assistant Manager -  
20 Engineering.

21 Q. And what are your duties as Assistant  
22 Manager - Engineering?

23 A. Well, I do the engineer part of the  
24 Department's work. That entails reviewing and  
25 handling certificate cases when companies begin

1 service. We handle customer complaints of a  
2 technical nature. I also handle sale cases. You  
3 know, that's most of it.

4 We do inspections of our facilities,  
5 which is all informal. I supervise the guys who do  
6 some of the inspections and work on some of the  
7 types of cases that we -- that we work on.

8 Q. How long have you been employed by the  
9 Commission?

10 A. Thirty years.

11 Q. What is your educational background?

12 A. I have a bachelor of science degree in  
13 civil engineering from the University of Missouri at  
14 Rolla, graduated in 1976. I'm a registered  
15 professional engineer.

16 Q. Are you familiar with Aqua Missouri?

17 A. Yes, I am.

18 Q. Are you familiar with the facilities at  
19 Quail Valley Lake?

20 A. Somewhat familiar. I've been there but  
21 it's been a long time ago.

22 Q. Did you participate in the preparation  
23 of the Staff report that has been admitted as  
24 Exhibit B?

25 A. Yes, I did.



1           Q.     And did you hear the testimony of  
2     Mr. Scheible and Mr. Haug here today?

3           A.     Yes, I did.

4           Q.     Based upon your knowledge of this  
5     facility and of the testimony given by Mr. Scheible  
6     and Mr. Haug, are you able to form an opinion as to  
7     whether the sewage treatment plant at Quail Valley  
8     Lake is over capacity or not?

9           A.     From the data that I've seen and  
10    studying this, it appears that it is not over  
11    capacity. It does have a capacity for -- for -- my  
12    calculation was 33 customers. I think Mr. Haug had  
13    a slightly higher number than that, but in the  
14    ballpark.

15          Q.     For 33 additional homes to be  
16    connected?

17          A.     Yes.

18          Q.     And is it necessary to construct any  
19    additional facilities to serve those customers?

20          A.     It doesn't appear to me that it is from  
21    a treatment capacity. Now, we've been talking about  
22    the sewage collection system, and to be honest, that  
23    issue was not brought to my attention for whatever  
24    reason until last week, and I haven't really looked  
25    at the collection system. So I don't have an

1 opinion on that at this point.

2 But from a treatment capacity, it  
3 appears that the facility can handle the additional  
4 customers.

5 Q. Are you familiar with Aqua Missouri's  
6 tariff?

7 A. Yes, I am.

8 Q. And have you reviewed it before coming  
9 here today to testify?

10 A. Yes.

11 Q. If there is additional capacity  
12 available in the sewage treatment plant as it now  
13 exists, do you find any provision in the tariff that  
14 would allow Aqua Missouri to refuse to make the  
15 capacity available to the developer?

16 A. I don't -- I don't believe the tariff  
17 allows that -- such refusal, and certainly it would  
18 not be reasonable to make such a refusal.

19 Q. Why not?

20 A. Well, if the capacity is there and it's  
21 available for use. Now, when I say that -- well,  
22 let me just go ahead and say, I think there are  
23 some -- I think this tariff needs some improvement,  
24 and that's been an issue that the Staff has tried to  
25 push for a long time.

1                   When we say if there is capacity  
2     remaining at a treatment facility, in some cases a  
3     developer might have paid for that capacity. So  
4     should other individuals or other developers be able  
5     to use that capacity? That's a question that this  
6     tariff does not -- does not address well.

7                   Now, in this case Mr. Storey was the  
8     original developer, and, of course, we're arguing  
9     whether the capacity is there or not. If it is,  
10    he's the developer that is going to be using it.  
11    What if it was a different developer, what if it was  
12    someone across the highway or next door? They'd be  
13    in the service area. Should that developer use  
14    capacity that Mr. Storey constructed? And this  
15    tariff does not address that.

16           Q.     Okay. Do you find any provision in the  
17    tariff that would require a developer such as  
18    Complainant Mr. Storey to pay anything extra to hook  
19    up additional homes that can be served by the  
20    facilities that already exist there?

21           A.     No, there is no such provision.

22           Q.     Do you find any provision in the tariff  
23    that would require a developer to prove to the  
24    company that the existing facilities are not  
25    adequate?

1           A.     Well, not -- not directly.

2                     But, again, that's -- that seems to be  
3     an argument that this tariff allows to -- to  
4     prevail, is -- is when a developer comes to the  
5     company and there is a treatment plant, where the --  
6     perhaps the capacity is questionable, we get into  
7     these arguments, how much capacity is left.

8                     And the developer ends up going out,  
9     doing an engineering study, and the company may or  
10    may not accept it.

11                    I don't think it should be on the  
12    developer to do that type of work. I think  
13    treatment capacity should be invisible to the  
14    developer. The company should be responsible for  
15    it.

16           Q.     But is there anything in the tariff  
17    that requires a developer to prove to a company that  
18    existing facilities --

19           A.     Well, not -- not on the proof. There  
20    is a provision in the tariff for the developer to  
21    pay for capacity. I don't know that it gets into  
22    the developer requiring to make the proof.

23                    But, again, the way the tariff is  
24    worded -- this is 12(b) where -- give me a moment to  
25    find where we're at.

1                   Now, I can't find it. There is a  
2     provision that requires the developer to pay for  
3     capacity for the subdivision development.

4                   The tariff itself doesn't use the word  
5     "proof." It doesn't say the developer needs to  
6     prove the capacity. But -- I wish I could find what  
7     I was looking for here.

8           Q.     Are thinking about page SRR -- Sheet  
9     SRR 43, Rule 12(b)?

10          A.     Okay. The Rule 12(b), it's like a  
11     header paragraph here. This rule shall govern the  
12     construction of new treatment facilities and/or  
13     extension of new collecting sewers requested by  
14     developer in areas within the company's service  
15     area.

16                  Now, this rule does say new treatment  
17     facilities. We interpret that to mean new capacity.

18                  There might be an existing facility  
19     there, as there is in this case, but, you know, if  
20     the new treatment facility does not have the  
21     capacity, then there would be additional.

22                  But, yes, yeah, this is the rule that  
23     I'm -- that I'm thinking of.

24          Q.     Okay.

25          A.     It -- and the answer to your question,

1 it doesn't say the developer has to prove the  
2 capacity, but with this rule here, this is the type  
3 of argument that we find ourselves dealing with more  
4 and more.

5 Q. Okay. My question went to whether it  
6 is the developer's responsibility to prove that  
7 there is or is not a need for the capacity and not  
8 to the responsibility for paying the construction  
9 cost of the additional capacity that is built?

10 A. Okay. The answer is no.

11 Q. Okay. Are you familiar with the DNR's  
12 design rule 10 CSR 20-8.020?

13 A. Um, I am. I should say I'm somewhat  
14 familiar with it. I don't work with it on a daily  
15 basis, but I am somewhat familiar.

16 MR. KRUEGER: Okay. May I approach,  
17 Your Honor?

18 JUDGE JONES: Yes, you may.

19 BY MR. KRUEGER:

20 Q. I've handed you a copy of that rule,  
21 which has been --

22 A. It was a tariff you just handed me.

23 Q. Sorry about that.

24 I'd like to call your attention to  
25 Rule 8.020, paragraph 11, which is several pages

1 back. I'm not sure exactly what page it's on.

2 MR. ELLINGER: Page 9.

3 THE WITNESS: Is it page 9?

4 Okay. Page 9, middle column.

5 MR. KRUEGER: No. It's a different 11  
6 that I'm referring to.

7 MR. ELLINGER: Sorry.

8 THE WITNESS: There are several 11s in  
9 there.

10 MR. KRUEGER: I cannot find it.

11 BY MR. KRUEGER:

12 Q. I'm going to represent to you that  
13 there is a rule which provides in part, wastewater  
14 treatment plants shall be designed to provide for  
15 the estimated population and flows to be 15 or  
16 20 years hence.

17 Do you remember ever seeing that?

18 A. Yeah, I believe that is in here. I  
19 couldn't point you right to it without -- without  
20 going through this though.

21 Q. Based on your knowledge of the rule and  
22 DNR regulations and your experience as a  
23 professional engineer --

24 A. Here. I beg your pardon. The rule we  
25 had on page 9, it is located there. Page 9, the

1 middle column.

2 Q. Okay.

3 A. That's the one.

4 Q. I'm sorry. I was looking at the 11  
5 that was over in the left-hand column. Okay. That  
6 is the provision there that I have read to you.

7 Now, based on your knowledge of the  
8 rule and of the DNR regulations and your experience  
9 as a professional engineer, do you have an opinion  
10 as to what practice Aqua Missouri should follow in  
11 designing the facilities at Quail Valley Lake?

12 A. Well, the regulation says what it says.

13 I will say that utilities often have a  
14 very challenging task to try to determine what the  
15 population forecast is, with fluctuations in the  
16 economy or local economies. You know, you might  
17 have a housing boom and might have a new subdivision  
18 that really takes off, and it might grow for a few  
19 years and then sit there without doing much for  
20 maybe 20 years or more.

21 So I do think Aqua Missouri needs to  
22 look into the future and take this into  
23 consideration, but it kind of needs to be in tune  
24 with the service area, a place like Quail Valley.

25 Right now there is whatever, 30 or



1 40 lots being contemplated. Well, who knows how  
2 fast it's going -- how long it's going to take?

3 But, you know, the company does need to  
4 be in tune with what the developers are doing, what  
5 other developers are doing. You know, there could  
6 be adjacent development around this place.

7 And it needs to have kind of a feel for  
8 what is going on in the service area real estatewise  
9 and that sort of thing.

10 So this -- this is probably a  
11 simplified guide, but it's -- I wouldn't call this a  
12 hard and fast rule.

13 Q. Okay. Do you know of other small sewer  
14 companies that have requirements and similar  
15 procedures regarding expansion, where the developer  
16 is required to demonstrate the need for additional  
17 facilities?

18 MR. ELLINGER: Judge, I'm going to  
19 object at this point. This goes beyond the scope of  
20 the complaint in this case. We're talking about  
21 other sewer companies that are not an issue at Quail  
22 Valley.

23 MR. KRUEGER: I think it has to do with  
24 the reasonableness of the tariff, Your Honor.

25 JUDGE JONES: Of the what? Of the

1 tariff?

2 MR. KRUEGER: Yes.

3 JUDGE JONES: Tariffs should be  
4 reasonable in and of itself, shouldn't it? I mean,  
5 presumed reasonable.

6 I'm going to sustain the objection.

7 MR. KRUEGER: That's all of the  
8 questions I have.

9 JUDGE JONES: Commissioner Appling, do  
10 you have questions?

11 QUESTIONS

12 BY COMMISSIONER APPLING:

13 Q. Mr. Merciel, how are you doing?

14 A. I'm doing fine, Commissioner.

15 Q. I may not say the right thing here, but  
16 bear with me, but I promise you a couple of things.  
17 There is some things I won't say. So bear with me.

18 I've seen three engineers here today,  
19 yourself -- you're an engineer. Right?

20 A. Yes, sir.

21 Q. Okay. Jerry Scheible is an engineer?

22 A. Yes, sir.

23 Q. And Mr. Haug was an engineer.

24 And each one of you have said that  
25 capacity for this Quail Valley is -- at least you

1     said 33 additional homes could be hooked up to the  
2     service out there.

3                     And Mr. Storey builds this plant, even  
4     though he built it some time ago. And it has the  
5     capacity. And everybody is saying that if you have  
6     the capacity, then he's got to go and pay for what  
7     he's already paid for, it seems to me.

8                     I need your help here to put me back on  
9     the road here if I'm wrong. If he's paid for the  
10    capacity and he's hired an engineer to come in here  
11    and testify, and which I've heard three testify that  
12    he does have the capacity out there, then why are we  
13    here arguing about it?

14                    It doesn't make any -- something is  
15    wrong with the picture. Now, maybe it's because I'm  
16    a country boy and I've been hunting squirrels all my  
17    life. But the point about it is, what is the  
18    problem here, Staff?

19                    A.     Well, as you've, in my opinion,  
20    correctly observed, at least three of us believe  
21    there is capacity and there should be additional  
22    homes connected.

23                    If I may be so bold, I think the tariff  
24    is unreasonable. I don't think Mr. Storey should  
25    have to prove the capacity. I think that should be

1 the company doing it.

2 And we can get into how that is funded  
3 and all the rest of it. But for developers to have  
4 to deal with specific capacity on a treatment  
5 facility I don't think is reasonable, and it's not  
6 working well.

7 And as this company grows and you get  
8 more expansions and more and more developers coming  
9 in, we're going to be getting into plant  
10 consolidation some day, and I think this tariff is  
11 impractical. I think it needs improvement.

12 And I really believe that that is the  
13 heart of the problem. That may not be the issue  
14 that was raised in the case, but I believe that is  
15 what the problem is.

16 I'm also observing that the company is  
17 relying heavily on original design criteria, and I  
18 really don't have an argument with those numbers.

19 But as we've also gone over today,  
20 there is some actual flow data and actual BOD, and  
21 the septic tanks do make a difference.

22 This is an unusual system. The  
23 collection system is not unusual. The treatment  
24 facility is not unusual. But you don't usually see  
25 these two types of systems combined together.

1                   So what we have is a treatment plant  
2     that is at hydraulic capacity, or near hydraulic  
3     capacity, but it's underloaded on its organic  
4     capacity, and that's because of the septic tanks.

5           Q.     I want to make sure that everybody  
6     understands me. I'm not here trying to dump a big  
7     load on who should pay or who shouldn't pay. That's  
8     not the issue so much for me.

9                   But it would seem to me that our  
10    responsibility as regulators is to help the  
11    Department of Economic Development grow Missouri and  
12    develop in real estate and other things here.

13                   And we seem to be bumping up against  
14    the wall right now while somebody else is telling us  
15    you can't do this, and for one, as a commissioner, I  
16    don't agree with that.

17                   And tell me, what would be the correct  
18    way to fix what we need to fix here in order to get  
19    this back on track?

20           A.     A long-term fix or are you talking  
21    about just this case?

22           Q.     A long-term fix. I'm not going to be  
23    around for the short term. I'm going to be gone  
24    pretty soon. So I would like to see a long-term fix  
25    here.

1                   And don't get me wrong. I'm not  
2     arguing about Aqua or whatever the case is. I'm  
3     just saying that somewhere in this system legally  
4     and commonsensewise have to prevail.

5                   Now, that doesn't mean that Mr. Storey  
6     doesn't go back into his checking account and pay  
7     some of the responsibility here, but for him to pay  
8     again another \$50,000 when the capacity is already  
9     there, as you have testified, and he pays for it  
10    again and gets no benefit from it and Aqua walks in  
11    and for the long term draws the benefit from it,  
12    something that about that for a country boy like me  
13    is just absolutely -- it doesn't hold water, and it  
14    certainly doesn't hold sewage. Okay?

15                  A.     Okay. Well, my answer, actually, to  
16    say short-term, I agree. It appears to me that  
17    there is capacity, and there is not a need to expand  
18    the plant at this point in time. That's what it  
19    appears by the numbers.

20                  Now, I think it's reasonable --  
21    somebody testified about -- about taking this in  
22    increments. I think that's reasonable.

23                  I hope it would not be difficult to do  
24    in coordinating that with developing and land sales.  
25    I could see there could be a problem there.

1                   But long term, as I said before, I  
2   don't think the developers should be involved with  
3   treatment plant capacity. I think that should be  
4   strictly -- strictly done by the company on a  
5   service -- surface area wide basis -- not surface --  
6   service area wide basis, not subdivision by  
7   subdivision.

8                   And after thinking about this for a  
9   couple of years now, I think the best way is for the  
10   company to use a combination of its own funds, such  
11   as equity, and a contribution by each customer, what  
12   we commonly call CIEC charge. And I can put that in  
13   numbers.

14                  Treatment capacity for a residential  
15   customer is going to be something on the order of  
16   \$3,000. That's just based on some number, probably  
17   like between 10 and \$15 per gallon to build a  
18   treatment plant. It varies because you do have  
19   various usages among customers.

20                  But if it costs \$3,000 to build a plant  
21   for a customer, maybe the company should invest,  
22   let's just say, \$1,200 and the customers have a CIEC  
23   of \$1,800.

24                  Okay. So what you do when there is a  
25   plant expansion like this, the developer is coming

1 along. I want to connect 30 lots. So he pays that  
2 CIEC upfront for those 30 lots, 1,800 by 30,  
3 whatever that number is, and the company gets it.

4 The company doesn't have to build a  
5 plant right away; but when they do, they can take  
6 that money and take their own equity and build  
7 plant -- the type of plant they want, when they  
8 think they need it and build a plant to serve the  
9 customers that are coming online.

10 It doesn't matter if Ed Storey is the  
11 developer, if somebody else is the developer. You  
12 have 10 or 15 individuals. It doesn't matter who  
13 the customers are. But when the plant is needed, it  
14 gets built by the company, and they use their own  
15 engineering and their own judgment to do it  
16 prudently.

17 And you don't have to argue about how  
18 much capacity is left or whether a developer ought  
19 to pay for it. It's just strictly in the control of  
20 the company.

21 And if that is how it worked -- that's  
22 how other companies do it. And if they did it that  
23 way, we wouldn't be here with this case today.

24 COMMISSIONER APPLING: Those are all of  
25 the questions I have. Thank you.



1                                   QUESTIONS

2       BY JUDGE JONES:

3           Q.     So, Mr. Merciel, you were just talking  
4       about something that you'd like to see, not what is?

5           A.     That is correct.

6           Q.     And let me ask you: Your opinion about  
7       the capacity of the plant, is it based on what  
8       you've read from Mr. Scheible and Mr. Haug?

9           A.     Yes. It's -- actually, even our Staff  
10      report, that that's based in large part on  
11      Mr. Haug's data, the data that was collected, which  
12      is my understanding is his own, as well as Aqua  
13      Missouri's. So it was review of that technical  
14      data.

15                   JUDGE JONES: All right. Now we'll  
16      move on to cross-examination from Complainants.

17                   MR. LUDWIG: I'll just have a few  
18      questions.

19                                   CROSS-EXAMINATION

20       BY MR. LUDWIG:

21           Q.     Mr. Merciel, you said that you reviewed  
22      the data that was in Mr. Haug's report. Correct?

23           A.     Yes, sir.

24           Q.     And a lot of that was Aqua's data?

25           A.     It's my understanding, yes.

1           Q.     Have you seen any data that contradicts  
2     any of the data that Mr. Haug uses as referenced in  
3     his report?

4           A.     I have not.

5           Q.     Have you been told that any data  
6     exists, even a year and a month or so after that  
7     letter was submitted by Mr. Haug, that contradicts  
8     it?

9           A.     No, not other than DNR's design  
10    criteria.

11          Q.     All right. And that's -- again, that's  
12    what you design a plant for?

13          A.     That's right. That's what you design  
14    it for.

15          Q.     But the regulations allow you to look  
16    at real data to determine what the actual capacity  
17    is at that plant as it's operating?

18          A.     That's correct.

19          Q.     All right. And I take it that -- do  
20    you supervise Jerry Scheible?

21          A.     Yes, sir.

22          Q.     I take it, then, you reviewed and  
23    approved his report before he submitted the Staff  
24    Report of Investigation?

25          A.     Yes, I was one of the reviewers.

1           Q.     Okay.  And did you agree with his  
2     conclusions?

3           A.     Yes.

4                     I probably should re-review them here.  
5     I do agree with it.  I reviewed them before, so I  
6     know that I do.

7           Q.     Well, I assume you did because he still  
8     has a job.

9           A.     Right.

10          Q.     All right.  And you think it's  
11     reasonable to have this Commission grant  
12     Mr. Storey's complaint for 32 additional hookups?

13          A.     Given that we're here, yes.  I do agree  
14     that this case shouldn't be here, but that goes  
15     beyond the scope of this particular issue.

16          Q.     Well, in an ideal word, Aqua Missouri  
17     would look at their own data and say we have excess  
18     capacity here?

19          A.     Well, that too, yes.

20          Q.     You made a comment that the loading of  
21     this plant is not even near capacity as far as the  
22     BOD and TSS and that sort of thing, the treatment  
23     capacity?

24          A.     The -- right, the BOD loading, yes.

25          Q.     But you said something about it's

1 getting close to capacity on hydraulic loading. I  
2 don't --

3 A. I said hydraulic. I did use the term  
4 close to capacity. The number -- the number I  
5 picked for hydraulic was 15,000 gallons per day, and  
6 the plant is designed for -- I've seen 22,000. I've  
7 seen 21,500. That's close. I'm not sure which is  
8 the right number.

9 But I think I did say it's getting  
10 close to hydraulic capacity. Probably in some days  
11 it is. It might even exceed that on some days.

12 The point I was making when I said that  
13 was -- was the hydraulic capacity is up there, but  
14 the biological capacity is nowhere near capacity.

15 Q. And I think the permit on the front  
16 that was recently renewed shows that the actual  
17 hydraulic loading is about 14,400 gallons a day.  
18 Did I hit that number right?

19 A. I don't know if I saw that in the  
20 permit.

21 Q. It's right there on the front of the  
22 permit.

23 A. This one here?

24 Q. Yes.

25 A. Okay. It does say that on this permit.

1 Q. So it's at about two-thirds?

2 A. Yes.

3 Q. Okay. And there may be days when it's  
4 higher and there may be days when it's lower --

5 A. Absolutely.

6 Q. -- but that's the average. Correct?

7 A. That somebody determined, yes.

8 Q. All right. We're here because there  
9 was a letter written by Mr. Haug requesting ten  
10 additional lots back in September of 2006, with  
11 more -- with options -- with the option to add more  
12 later, assuming that the continued monitoring of the  
13 plant showed it could handle it.

14 You're familiar with how we got here.  
15 I think you've seen Mr. Haug's letter.

16 A. Generally, yes. Yes.

17 Q. Do you think it was reasonable to not  
18 give us those ten hookups back in September of 2006?

19 A. Based on the data I've seen, I think --  
20 I think it should have been done.

21 Q. All right. In your opinion is Aqua  
22 violating their -- whether it's regulatory or part  
23 of the tariff -- their obligation to provide safe  
24 and adequate service when the plant capacity shows  
25 that it's not even -- or the operation shows it's

1 not even close to capacity and yet they won't add  
2 additional hookups?

3 MR. ELLINGER: I'm going to object  
4 again.

5 JUDGE JONES: Sustained.

6 BY MR. LUDWIG:

7 Q. Even if this body grants our complaint  
8 and says we can have 32 additional hookups, Ed is  
9 still going to have to go to DNR and get a  
10 construction permit if, in fact, he needs to put in  
11 more collection lines to go to the plant. Correct?

12 A. That's correct, which in this case he  
13 would absolutely have to do that.

14 Q. So if the Commission grants 32, Aqua  
15 Missouri doesn't have any need to throw their hands  
16 up and go, oh, my God, we're going to be  
17 overcapacity, because DNR is still there?

18 A. That is true.

19 Q. Let me ask you this: The addition of  
20 collecting lines for this 16 lots that don't have  
21 lines to them, that's Mr. Storey's responsibility?

22 A. Yes.

23 Q. He has to pay for that?

24 A. Yes.

25 Q. Would it be foolish to go through the

1 permit process with DNR for that and then start to  
2 spend the money to put those lines in if you don't  
3 have an agreement from Aqua Missouri that they're  
4 going to let you hook those lots up when you get the  
5 lines in?

6 A. Well, yes, it would. He does need to  
7 work with the company.

8 MR. LUDWIG: All right. I believe  
9 that's all I have, Mr. Merciel. Thank you.

10 JUDGE JONES: Cross-examination from  
11 Aqua Missouri.

12 MR. ELLINGER: Thank you, Judge.

13 CROSS-EXAMINATION

14 BY MR. ELLINGER:

15 Q. Good afternoon, Mr. Merciel.

16 A. Good afternoon.

17 Q. I have a few questions to ask you  
18 quickly.

19 I think earlier you had said something  
20 about your calculations came out to being 33 homes  
21 that could be connected. Do you recall that?

22 A. Yes.

23 Q. Okay. And several questions down that  
24 road. The first thing I'd like to do is ask you to  
25 take a look at Petitioners' Exhibit No. 12 --

1           A.     Okay.

2           Q.     -- which is the letter from ReSource  
3     Institute to Tena Hale Rush.

4           A.     Would that be in the stack somewhere?

5           Q.     It's somewhere in that stack.

6           A.     There it is.

7           Q.     There it is.

8                     Do you have that in front of you, sir?

9           A.     Yes, I do.

10          Q.     Okay. And in talking about how you  
11     came up with the calculations -- in fact, all of  
12     your calculations, you talk about relying upon on  
13     Mr. Scheible's and also Mr. Haug's report. Do you  
14     recall saying that?

15          A.     Yes.

16          Q.     Is this the report that you're talking  
17     about?

18          A.     This was -- yes, I believe it was.

19          Q.     Okay. And you were in the room earlier  
20     for Mr. Haug's testimony, I believe?

21          A.     Yes.

22          Q.     And you understand that he never issued  
23     a report?

24          A.     Well --

25          Q.     It's his testimony he never signed a



1 report?

2 A. Well, he didn't sign and seal a report.  
3 I think this is -- a lot of stuff hasn't been  
4 finalized. This is all of the work in progress.

5 Q. I think there is an exhibit that you  
6 have in front of you that was his draft report that  
7 he previously testified he never did sign, and that  
8 was his only report and it was an unsigned report.  
9 Have you seen that document before?

10 A. You mean a different unsigned report  
11 than this one?

12 Q. That -- an actual report, a document  
13 called a report, that says draft on it. Have you  
14 seen that document?

15 A. Not that I recall.

16 Q. All right.

17 A. I might have but I don't recall.

18 Q. I notice -- again, you talked about a  
19 report, Mr. Scheible's report, talks about  
20 Wastewater Facilities Report, and uses those terms  
21 in quotations, Wastewater Facilities Report.

22 Are you familiar with that term?

23 A. Yes. In the Staff's report you mean?

24 Q. Yes. On page 3 of the Staff's report,  
25 in the second paragraph, ". . . has reviewed

1 ReSource Institute's "Wastewater Facilities  
2 Report . . .".

3 A. Okay.

4 Q. Do you see that?

5 A. I see it.

6 Q. Do you see a document titled, quote,  
7 Wastewater Facilities Report, close quote?

8 A. Well, I have to say, no, I don't see it  
9 offhand here.

10 Q. Okay. Exhibit 12, the letter from  
11 Mr. Haug to Ms. Hale Rush, that does not say, quote,  
12 Wastewater Facilities Report, does it?

13 A. Well, the letter does not.

14 Q. Would you like to look at the  
15 attachments?

16 A. Yeah, I'm doing that.

17 I would have to say you're correct, it  
18 doesn't say that.

19 Q. Okay. When you're making your  
20 calculations of 32 homes that could be connected,  
21 what number of residents per house did you use?

22 A. Well, I didn't. I didn't.

23 What I did was reviewed the flow data  
24 that is on this -- I'll go ahead and call it report,  
25 behind the letter. I didn't actually use the

1 calculator, but I used 15,000 gallons per day.

2 Q. Okay.

3 A. And then made the assumption that the  
4 existing, I believe it's 77 homes, is producing that  
5 15,000 gallons per day. So that 15,000 you have --  
6 you have 7,000 gallons of available hydraulic  
7 capacity. So just -- I just percentaged that up  
8 from the 77 homes.

9 Q. Okay.

10 A. It will vary on how many people are in  
11 each house.

12 Q. So the only two factors you looked at  
13 were the number of homes and the flow per homes?

14 A. Well, to come up with that number, I  
15 mean, I looked at BOD and I did several gyrations of  
16 numbers, but that seemed to be the controlling one  
17 was the hydraulic flow.

18 Q. Are you familiar with the term "peaking  
19 factor"?

20 A. Yes.

21 Q. What does that mean?

22 A. Peaking is your -- well, there is  
23 actually two peaks when you look at water and sewer.  
24 One is you have what is called average day, and that  
25 is your average daily flow throughout the year -- or

1 usually a one-year period. You have a peak day  
2 which is about 1.5 times the average day, and then  
3 you have peak hour, which is usually about 2.5 times  
4 the average day.

5 And that varies. This is more --  
6 really more for water plant design. But those  
7 numbers vary a little bit. But the same would be  
8 true of sewer. Not so much the peak day because  
9 peak day has to do with outside water use, such as  
10 lawn watering and car washing.

11 But the peak hour, that's when people  
12 are fixing meals and taking showers, water that does  
13 go into the sewer.

14 Q. And did you include a peaking factor in  
15 your calculations?

16 A. No. The treatment plant design is  
17 daily flow, and that's what I looked at.

18 Q. Should you include a peaking factor  
19 when you make calculations as to what the capacity  
20 of a treatment plant is?

21 A. Not when you compare it to daily flow.

22 Q. But ultimately --

23 A. I will say some plants, if -- if  
24 some -- if a particular plant has a problem with  
25 peaks, there are methods of doing equalization.

1 That is necessary on some treatment plants. It  
2 might be a tank, or some facilities have, like, a  
3 pump station. A larger city, just the flow going  
4 through town that equalizes the flow. So there is  
5 such a thing as equalization if that peaking is a  
6 problem.

7 Q. Okay. And if peaking turns out to be a  
8 problem and it causes a permit violation, Aqua  
9 Missouri is responsible for that. Correct?

10 A. Aqua Missouri is ultimately  
11 responsible, yes.

12 Q. And if all these 32 connections are  
13 added on and there is a violation because those  
14 32 connections are connected, Aqua Missouri is going  
15 to be responsible for remedying that violation.  
16 Correct?

17 A. Aqua Missouri is responsible. That's  
18 why I don't think developers should be involved in  
19 plant design.

20 Q. In the calculation of the 32 homes, did  
21 you look at the capacity of the clarifiers at the  
22 treatment facility?

23 A. I didn't look at plant components.

24 Q. Okay.

25 A. I did not do that.

1           Q.     So you only basically took a  
2     mathematical calculation of flow -- what you viewed  
3     as the average flow per day, divided by the number  
4     of homes currently, to come up with the number of  
5     gallons per day per home and then divided that into  
6     22,000?

7           A.     That's correct. Use the design flow  
8     and the actual flow and -- and I should say some  
9     assumed actual flow. That's not -- you know, even  
10    that nobody would be subject to debate. But, yes,  
11    that's what I did.

12          Q.     And you heard Mr. Haug even testify  
13    that when you're doing engineering, you need to make  
14    sure you build in some cushion, for lack of a better  
15    term?

16          A.     That's true. You do that for  
17    stormwater and for customers coming and going.

18          Q.     How much cushion did you build into  
19    your 33 based on your calculations?

20          A.     I did not. I'm using actual flow here.  
21    So whatever cushion is probably already there.

22          Q.     No cushion?

23          A.     Right.

24          Q.     Okay.

25          A.     Or no additional cushion.

1           Q.     Now, you had this discussion about  
2     capacity and how developers ought not to be involved  
3     in looking at capacity. Do you remember that  
4     discussion?

5           A.     Yes, I do.

6           Q.     Okay. There is a DNR regulation that  
7     provides population equivalents and flow per house  
8     in calculating capacity for treatment facilities, is  
9     there not?

10          A.     Yes.

11          Q.     And if the company relies upon the DNR  
12     numbers, can it rely on that to determine what its  
13     current capacity of a plant is?

14          A.     Again, you're talking about design  
15     numbers, and -- and actual -- actual flow and actual  
16     sewage specifications can be different than what  
17     the -- what the design is.

18                 If you don't know what you're -- if  
19     you're building a new facility and you don't have  
20     data, which ordinarily you don't, then you usually  
21     use those design numbers.

22          Q.     So when a company knows what its  
23     capacity is based upon the properly promulgated  
24     rules and regulations of the Department of Natural  
25     Resources, you're saying they don't know what their

1 capacity is?

2 A. Well, not -- not -- not just by  
3 counting customers. The design contemplates the  
4 customers using the -- first -- well, first of all,  
5 it contemplates the customers as being 3.7 people at  
6 100 gallons per person.

7 Q. Or 75. Isn't that correct?

8 A. Well, sometimes -- I thought the  
9 regulation said 100, unless that changed in the last  
10 few years. It used to be 100.

11 Q. Go ahead.

12 A. 370 gallons per customer on a treatment  
13 plant is what was -- what's been used for many  
14 years.

15 But anyway, again, that's the design  
16 flow. If you have customers that are actually using  
17 less than that, then your plant design capacity is  
18 the same but your -- you can -- your customers  
19 aren't -- aren't producing the sewage that was  
20 contemplated in the design.

21 Q. And if your census numbers had more  
22 people move into those homes in the subdivision and  
23 your flow increases, then you have to go back and  
24 recalculate everything again. Right?

25 A. If that happened, you might have to.



4           A.     Well, it could be a moving target. I'd  
5     agree with you. In theory it is a moving target.  
6     Now, whether that's really substantial.

7                   If each customer out there -- if one --  
8   if one more person moved into each home, you'd have  
9   a big impact on the treatment plant. Now, I don't  
10 think that's going to happen, but if it did, then,  
11 yeah, that would be a moving target that your  
12 company would have to deal with.

13 Q. And that would be Aqua Missouri's  
14 responsibility?

15           A.     It would, sure would.

16 Q. And I presume there is some costs to  
17 going out and doing a census of all of the people in  
18 the subdivision and going out and calculating your  
19 flows and measuring to determine a different  
20 capacity than using the DNR regulation?

21           A.     Well, I don't know that you have to do  
22   a census unless you're trying to evaluate what -- in  
23   a case like this, I think it's reasonable to do  
24   that.

25 But I think the company needs to watch

1    what is coming into its treatment plant and how it's  
2    performing.

3                   In one -- in one manner of speaking you  
4    don't have to worry about how many customers are on  
5    it.  You need to see what is coming to the plant.

6                   And if -- if it is approaching  
7    capacity, if you're starting to bump your limits,  
8    and there is days where it's -- maybe you're even  
9    having a washout of the plant, then the company  
10   might need to start considering improvements or  
11   expansions.

12           Q.     But as long as you're not having  
13   problems with the plant, shouldn't you be able to  
14   rely upon the promulgated rules of the Department?

15           A.     If you're not having problems with the  
16   plant, you probably have more capacity and you can  
17   handle additional customers.

18           Q.     So what you're saying is that no  
19   company is ever going to really know what the  
20   capacity of the plant is, but they're responsible  
21   for always knowing what the capacity of the plant  
22   is?

23           A.     Yes, I am saying that.  It is.  And  
24   that's one of the dilemmas in a case like this, you  
25   know, what is the capacity of the plant, how many

1 more customers can it take. And you can -- I mean,  
2 there -- there are assumptions. And it's not just a  
3 hard and fast number that you're going to land on.  
4 It's a difficult thing for this Commission to have  
5 to determine.

6 Q. It seems to me that from your  
7 discussion and from your questions from Mr. Ludwig,  
8 this Commission shouldn't determine the capacity;  
9 ultimately capacity should be determined by the  
10 Department of Natural Resources and will be?

11 A. Well -- well, I think -- I think --  
12 well, I'm more inclined to say the company should be  
13 determining the capacity.

14 The Department of Natural Resources is  
15 concerned about the effluent going into the stream.  
16 It's the company's responsibility to operate the  
17 plant and build plant in order to meet those  
18 effluent requirements.

19 Q. But to do a construction permit to add  
20 on the homes that are requested in this case, the  
21 Department of Natural Resources is going to conduct  
22 a review of the capacity of the plant, are they not?

23 A. Well, they will probably do that.

24 Q. Okay. And ultimately their decision as  
25 to what the capacity of the plant is will become

1 binding?

2 A. And I think it's the company's  
3 responsibility to work with the Department of  
4 Natural Resources, not a developer, to accomplish  
5 that.

6 Q. But ultimately the Department of  
7 Natural Resources' decision will be a binding  
8 decision, will it not, as to what capacity is at the  
9 plant?

10 A. Well, I -- I -- I'm not sure. I guess  
11 it is in the form of enforcement, if you're not  
12 meeting the effluent. That's where they would  
13 really get excited.

14 Q. Well, if the Department of Natural  
15 Resources says the capacity of this plant at Quail  
16 Valley is 90 homes -- let's just say that's the  
17 number. They look at everything and they come up  
18 with it. Mr. Storey files a construction permit to  
19 go up to 110 homes.

20 Is he going to get his construction  
21 permit as is?

22 A. If he can convince the Department of  
23 Natural Resources otherwise, I guess he could. If  
24 they're really going to be sticklers on the 90, then  
25 probably not.

1 Q. Okay.

2 A. You know, I don't know if that's going  
3 to be the case or not.

4 Q. And then at that point they made their  
5 decision and the only way you're going to get  
6 additional connections is -- assuming you can't move  
7 them by data, is to expand capacity of the plant.  
8 Is that correct?

9 A. That would be correct in that  
10 situation.

11 Q. And whose responsibility would it be to  
12 expand the facility of the plant?

13 A. The company's.

14 Q. And that's -- understanding that it's  
15 the developer who is causing the additional capacity  
16 issue?

17 A. Well, under the tariff the developer  
18 has some financial responsibility. I firmly believe  
19 it's the company's responsibility to handle --  
20 handle the plant situation.

21 Q. But it's the developer's responsibility  
22 to pay for that excess capacity caused by his lots?

23 A. Under the tariff, yes, plant by plant  
24 and subdivision by subdivision. The danger there is  
25 the company has a blank check from the developer.

1           Q.     To the best of your knowledge have  
2     there been any applications for service denied at  
3     Quail Valley?

4           A.     I don't know of any.

5           Q.     To the best of your knowledge, has any  
6     developer agreement at Quail Valley been denied?

7           A.     That I -- I'm not really sure. We'd  
8     have to probably haggle over what constitutes a  
9     developer request.

10                   I think Mr. Storey is clearly wanting  
11     service. I would agree that there is not a  
12     developer agreement that is signed.

13           Q.     But the tariff provides for provisions  
14     to apply for service. Is that correct?

15           A.     It does, yes.

16           Q.     Are you familiar with the term  
17     "preclearance"?

18           A.     Yes.

19           Q.     What does preclearance mean?

20           A.     Well, frankly, we don't use it around  
21     here very much, or at least I don't.

22                   I think that, my understanding, it  
23     means you get -- you get plant in the ground and you  
24     make investment and you know you're going to get it  
25     in the rate base.

1           Q.     And when you're talking about adding  
2     all this extra -- potentially building a plant with  
3     extra capacity in it to account for future  
4     development, is that extra capacity normally  
5     included in rate base?

6           A.     It normally is.  It needs to be  
7     prudently -- the -- well, the capital funds need to  
8     be prudently expended.  If you -- if you build a  
9     plant and you don't really need one, it could well  
10    be excluded from rate base.

11          Q.     And with respect to rate base, as a  
12    Staff member of the Public Service Commission, do  
13    you recommend that companies come in and get a  
14    guarantee of how much rate base return they will get  
15    on a plant before it is constructed?

16          A.     It usually does not work that way.

17          Q.     So they have to make the investment at  
18    their risks and then prove it later whether it's  
19    reasonable or not?

20          A.     That's correct.

21          Q.     Okay.  Are you familiar with  
22    Mr. Krogstad, the engineer who prepared an expansion  
23    plan for the treatment facility?

24          A.     I've seen his name, and I think there  
25    were some papers in the context of this that -- that

1     were around, maybe an original --

2             Q.     Do you understand that Aqua Missouri  
3     worked with Mr. Krogstad to prepare all of those  
4     documents and prepare a plan?

5             A.     I don't know it firsthand. I think  
6     I've heard the testimony about that today.

7             Q.     Okay. Unfortunately, Commissioner  
8     Appling left, but he asked a question earlier,  
9     talking about \$50,000 for main extension -- or  
10    \$50,000 was the number he was talking about.

11            A.     Yeah.

12            Q.     That's to extend the mains, is it not?

13            A.     Correct. He was talking about the  
14    pipelines in front of the houses.

15            Q.     And that is always going to be the  
16    responsibility of, in this case, the developer, is  
17    it not?

18            A.     That's clearly the developer, or it  
19    could be individual customers.

20            Q.     But it's not going to be the company's  
21    responsibility?

22            A.     Correct.

23            Q.     Mr. Haug's letter of September 14th,  
24    the one that is Petitioners' Exhibit 12.

25            A.     Yes.



1           Q.     Prior to September 18, which is the  
2     date I have stamped on this copy it says it was  
3     received -- is that the date stamped on your copy  
4     also?

5           A.     Right. September 18th is received.

6           Q.     That's the date I see.

7           A.     Yes.

8           Q.     Prior to that date are you aware of  
9     anybody who has presented any formal calculations as  
10    to what the capacity of the Quail Valley wastewater  
11    treatment plant was?

12          A.     I -- I had not seen any prior to the  
13    context of this case. So before this date, no, I've  
14    not.

15          Q.     So that was to the best of your  
16    knowledge the first time an actual number of  
17    capacity has ever been raised with respect to Quail  
18    Valley, aside from the permitted 80 homes?

19          A.     Well, as far as I know, yes.

20                   MR. ELLINGER: No further questions,  
21    Judge.

22                   JUDGE JONES: Redirect, Mr. Krueger.

23                   MR. ELLINGER: Thank you, sir.

24                   MR. KRUEGER: Thank you, Your Honor.

25                   REDIRECT EXAMINATION

1 BY MR. KRUEGER:

2 Q. Mr. Merciel, we've talked quite a bit  
3 about design criteria or the design standards. For  
4 what purpose does DNR utilize those design  
5 standards?

6 A. Well, it would be my understanding  
7 that's the starting point for doing the design of  
8 facilities. It's just part of the design guide, and  
9 those are the numbers they want to see you design  
10 engineers use.

11 Q. And so it's used in connection with  
12 applications for construction permits?

13 A. Yes.

14 Q. Also, operating permits?

15 A. Yes, probably so. I think -- I'm not  
16 real clear how much difference there is on you have  
17 a construction permit and that leads to the  
18 operating permit. And, again, those numbers would  
19 be used if -- unless there is some better to show.

20 Q. Do the design standards have any use  
21 after the operating permit has been issued?

22 A. Well, they could have. You can still  
23 use those in evaluating where you're at with plant  
24 capacity.

25 Q. In determining whether additional

1 capacity is required?

2 A. You could. If -- if -- I think in a  
3 case like this we've -- we've seen some fairly  
4 extensive studies of what the actual flow and actual  
5 loading is. You don't always see that.

6 You might have a subdivision where --  
7 where maybe -- maybe a plant is needed to be  
8 doubled -- or the subdivision is being doubled in  
9 size. There could be obvious cases of a need for an  
10 expansion.

11 And you wouldn't necessarily go to --  
12 go to actual data. You just go ahead with the  
13 design criteria.

14 Q. We've talked about flow data and we've  
15 talked about daily flow and average daily flow.

16 Is that actually the flow over a  
17 24-hour period?

18 A. Daily flow is, yes.

19 Q. Okay. And have there been measurements  
20 of the daily flow?

21 A. It's my understanding there has not  
22 been. There have been more or less what you call  
23 grab samples, and they could have been at various  
24 times during the day.

25 But daily flow you would typically use

1 a totalizer -- I guess you could have somebody take  
2 hourly readings or something like that. You could  
3 do it manually. But with equipment today, you would  
4 use a totalizer to measure flow on a continuous  
5 basis.

6 Q. So the numbers that we've seen are just  
7 instantaneous readings. Is that right?

8 A. Yes.

9 Q. And so the -- would you expect the  
10 actual flow over a 24-hour period to be more or less  
11 than that?

12 A. Well, let's see.

13 The answer to the question, that  
14 depends on the time of day that the readings were  
15 taken and --

16 Q. And let me just ask you then, how does  
17 time of day affect that?

18 A. Well, your plant flows are going to be  
19 highest in the morning when people are getting up  
20 and taking showers, and then you'll have another  
21 peak when people are coming home from work in the  
22 evening, you know, and into the evening as people  
23 are doing dinner and doing activities around the  
24 house and taking showers and baths, you know, before  
25 bedtime. So those are your -- you have those two

1 daily peaks.

2                   Your low flow times are going to be  
3 early hours in the morning, like, say, three o'clock  
4 in the morning, and also in some subdivisions just  
5 in the middle of the day, say, two o'clock in the  
6 afternoon or ten o'clock in the morning.

7                   There is probably going to be some  
8 people home with some usage, but it's going to be a  
9 fairly low flow, depending on the subdivision. Some  
10 places have more stay-at-home families than others.

11           Q.     And how much of a limitation is the  
12 hydraulic loading that is used in design?

13                   An instant -- if the flow exceeds the  
14 design flow instantaneously, what kind of problems  
15 does that cause?

16           A.     Well, I would contend the plant is  
17 built -- built to take the -- you know, certain  
18 amount of peak flows. But the risk is, if -- well,  
19 let me speak generally.

20                   If the plant is overcapacity, if you  
21 have too many gallons per minute flowing through it,  
22 you don't have the detention time, you know, for  
23 treatment, and you do risk stirring up, so to speak,  
24 the solids and -- and sludge in the plant, and you  
25 can send -- send sludge out the -- out the effluent.

1                   So if you really have a strong peak, it  
2     could do that during the peak times.

3                   If you have a plant that has that  
4     problem that peaks and that's the only problem it  
5     has, then that's where you get into the flow  
6     equalization. You might want to take measures to  
7     equalize flow, to hold some of the flow back during  
8     the high flow times, and so that your plant has more  
9     of a constant flow throughout the day.

10           Q.     If the capacity of this plant was  
11     designed for 22,000 gallons per day, would it cause  
12     you alarm to find that there was an instantaneous  
13     reading of 30,000 gallons per day flow?

14           A.     I would say not.

15           Q.     Why not?

16           A.     Well, it was just an ordinary peak.  
17     Now, you know, the question is -- you'd probably  
18     want to -- to answer the question, you'd want to  
19     take a grab sample of the effluent while you're  
20     getting that peak and see what you're getting out  
21     the pipe, out the effluent. That would be how you  
22     would answer that question. But I would -- I would  
23     expect to see less fluctuation on a subdivision  
24     plant.

25           Q.     Do you know any reasons why the usage

1 per capita would have decreased from 100 gallons per  
2 capita per day to some lesser figure over the years?

3 A. Oh, not specifically, other than, you  
4 know, people are more conscious about water  
5 conservation and that sort of thing. Families are  
6 probably a little smaller.

7 I think we had some census figures that  
8 maybe fewer people living in a -- you know, people  
9 per house and that type of a basis might be a little  
10 bit less -- well, that's not the per capita. But  
11 I'd say water conservation could be a factor.

12 Q. And what do people do to conserve  
13 water?

14 A. Well, we have low-flow toilets  
15 nowadays. The tank is 1.6 gallons instead of about  
16 four or five or whatever they used to be. Quite a  
17 bit less. You have water-saving shower heads.  
18 People are encouraged to conserve water. And, you  
19 know, the water company puts out literature on how  
20 to water lawns efficiently.

21 And water rates has probably something  
22 to do with it too. Water rates are going up with  
23 the Drinking Water Act and everything. And so  
24 people kind of have an incentive to use a little bit  
25 less water.

1           Q.     And so would it surprise you to find  
2     that the actual usage per capita per day has  
3     actually declined over years?

4           A.     It wouldn't really surprise me.

5           MR. KRUEGER:  No other questions.

6           JUDGE JONES:  Okay.  It's 4:35.  I  
7     don't think you'll be able -- you have three  
8     witnesses.  Right?

9           MR. ELLINGER:  That's correct.

10          JUDGE JONES:  I don't think we'll be  
11     able to do direct, cross and redirect.  So why don't  
12     we just stop now, so we can pick up a good new  
13     chapter tomorrow morning at 9:30.

14          MR. ELLINGER:  9:30.

15          (THE HEARING WAS ADJOURNED UNTIL  
16     TUESDAY, OCTOBER 30, 2007 AT 9:30 A.M.)

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## I N D E X

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11

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16

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17

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## EXHIBIT INSTRUCTIONS:

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Retained by the Public Service Commission.

1 STAFF'S EXHIBITS INDEX

2 MARKED REC'D

3 Exhibit A  
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4 10 CSR 20-8.010 182:16 182:16

5 Exhibit B  
Staff Report of Investigation  
6 Prepared by Jerry Scheible, P.E. 239:15 288:6

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8 COMPLAINANTS' EXHIBITS INDEX

9 Petitioner's Exhibit No. 1  
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10 Petitioner's Exhibit No. 2  
Blown-Up Overhead Photograph with  
11 Houses \*

12 Petitioner's Exhibit No. 3  
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13 Ed Storey from Milton E. Leeds,  
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14 Petitioner's Exhibit No. 4  
Real Estate Agreement dated  
15 August 13th, 2002 \* 233:18

16 Petitioner's Exhibit No. 5  
Four Pages of Application for Service  
17 Aqua Missouri \* 233:18

18 Petitioner's Exhibit No. 6  
Addendum to Declaration of Covenants  
19 and Restrictions \* 233:18

20 Petitioner's Exhibit No. 7  
Curriculum Vitae of Gregory G. Haug,  
21 P.E. \* 233:18

22 Petitioner's Exhibit No. 8  
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23 Aqua Missouri, Inc. \* 233:18

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3	Petitioner's Exhibit No. 9	
4	Letter dated March 7, 2006 to	
5	Ed Galbraith, Missouri Department of	
	Natural Resources, from	
5	Gregory G. Haug, P.E.	* 233:18
6	Petitioner's Exhibit No. 10	
7	Letter dated June 9, 2006 to	
8	Ed Storey from Gregory G. Haug, P.E.	
9	Influent Testing Results	* 233:18
10	Petitioner's Exhibit No. 11	
11	Letter dated September 5, 2006 to	
12	Ed Storey from Gregory G. Haug, P.E.	
13	August 21, 2006, Influent Testing	
14	Results	* 233:18
15	Petitioner's Exhibit No. 12	
16	Letter dated September 14, 2006 to	
17	Tena Hale Rush from Gregory G. Haug,	
18	P.E. with Tables 1 through 3	* 233:18
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20	Quail Valley Wastewater Treatment Plant	
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27	Quail Valley Lake Subdivision WWTP	
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4	First Amended Complaint	*
5	AMO Exhibit No. 21	
6	Letter dated September 1, 2005 to	
7	Edward Storey from John Hoke, with	
8	handwriting on it; Water Quality	
9	Review Sheet (WQRS) Request Form	*
10	AMO Exhibit No. 22	
11	Letter dated March 7, 2005 to Tina	
12	Hale-Russ from Wilbur D. Krogstad, P.E.	*
13	AMO Exhibit No. 23	
14	Letter dated November 10, 2004 to	
15	Ed Storey from Don Friede, enclosed	
16	sketches	*
17	AMO Exhibit No. 24	
18	Construction Permit to Capital	
19	Utilities, Inc.	*
20	AMO Exhibit No. 25	
21	Letter dated May 27, 1992 To Whom It	
22	May Concern from E. A. Mueller, P.E.	*
23	AMO Exhibit No. 26	
24	Missouri Revised Statutes, Chapter 386,	
25	Public Service Commission,	
26	Section 386.390	*
27	AMO Exhibit No. 27	
28	4 CSR 240-2 - Department of Economic	
29	Development	*
30	AMO Exhibit No. 28	
31	Sewer Extension Agreement - Developer	
32	Extension Number: S92-003	*
33	AMO Exhibit No. 29	
34	(Draft) Wastewater Facilities Report	
35	Wastewater Treatment Plant Expansion	*
36	AMO Exhibit No. 30	
37	Warranty Deed by Corporation	*

1                   RESPONDENT'S EXHIBITS INDEX (CONT'D)

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3   AMO Exhibit No. 31  
4   Letter dated May 5, 2006 to Edward  
5   Storey from Keith B. Forck, P.E.           200:9  
6   \*\* 201:24

7   AMO Exhibit No. 32  
8   Letter dated September 1, 2004  
9   to Edward Storey from Brenda Bethel,  
10   P.E.   215:25

11   AMO Exhibit No. 33  
12   10 CSR 20-8 Natural Resources           219:13

13                   \* Premarked by counsel  
14                   \*\* Re-marked

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## CERTIFICATE OF REPORTER

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I, Patricia A. Stewart, RMR, RPR, CCR,  
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Patricia A. Stewart

CCR No. 401