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December 31, 2007

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Ms. Ann Cole
Commission Clerk and Administrative Services
Room 100, Easley Building
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, FL 32399-0850

Re: Docket No. 070183-WU


Dear Ms. Cole:

Enclosed for filing, on behalf of the Citizens of the State of Florida, are the original and 15 copies of the Rebuttal Testimony of Andrew T. Woodcock, P.E., M.B.A.

Please indicate the time and date of receipt on the enclosed duplicate of this letter and return it to our office.

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Sincerely,


Stephen C. Reilly
Associate Public Counsel

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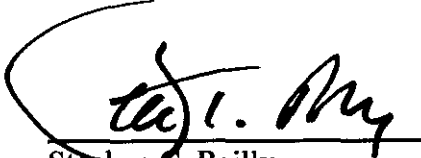
CERTIFICATE OF SERVICE
DOCKET NO. 070183-WU

I **HEREBY CERTIFY** that a true and correct copy of the Rebuttal Testimony of Andrew T. Woodcock, P.E., M.B.A has been furnished by electronic mail and U.S. Mail to the following parties on this 31st day of December, 2007, to the following:

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BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In Re: Proposed adoption of
Rule 25-30.4325, F.A.C., Water
Treatment Plant Used and Useful
Calculations

Docket No. 070183-WU

Date Filed: December 31, 2007

REBUTTAL TESTIMONY
OF
ANDREW T. WOODCOCK, P.E., M.B.A.
ON BEHALF OF
THE OFFICE OF PUBLIC COUNSEL

Respectfully Submitted,

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1 **PREFILED REBUTTAL TESTIMONY OF**

2 **ANDREW T. WOODCOCK P.E., M.B.A.**

3

4 **Q. WHAT IS YOUR NAME AND BUSINESS ADDRESS?**

5 A. My name is Andrew Woodcock. My business address is 201 East Pine St. Suite 1000,
6 Orlando, Florida.

7 **Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?**

8 A. The purpose of my testimony is to respond to the testimonies of Mr. Seidman, Mr.
9 Guastella, Mr. Redemann, Mr. Hoofnagle, and Mr. Jenkins.

10 **Q. WILL YOU DESCRIBE THE STRUCTURE OF YOUR TESTIMONY?**

11 A. Given the number of issues and testimonies I have generally structured my testimony
12 to provide discussion by issue in the general order of the proposed rule. To the extent that
13 there are other issues with respect to individual testimonies, they are addressed toward
14 the end of my testimony. Where necessary, I may cross reference testimonies. As with
15 my direct testimony I refer to Staff's proposed rule as the "proposed rule". Any changes
16 to the proposed rule that I recommend are referred to as "recommendation" or
17 "recommended language".

18 **Q. MR. SEIDMAN IN HIS TESTIMONY IMPLIES THAT A SEPARATE**
19 **CALCULATION FOR HIGH SERVICE PUMPING U&U COMPLICATES A**
20 **RULE THAT IS THE RESULT OF COMPROMISE AND THAT SUCH A**
21 **COMPONENT EVALUATION SHOULD BE CONSIDERED AS AN**
22 **ALTERNATIVE CALCULATION. WHAT ARE YOUR THOUGHTS ON HIS**
23 **POSITION?**

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1 A. As I have stated in my prefiled testimony I do not believe that a separate calculation of
2 high service pumping used and usefulness complicates the rule. High service pumping is
3 a common component in water treatment plants that has a separate and distinct design
4 basis and service requirement from storage. As such, it requires a separate U&U
5 evaluation. Mr. Seidman in his own testimony says that he has taken similar positions in
6 the past. My opinion is that high service pumping is of a sufficient different nature from
7 storage facilities that a separate U&U calculation is warranted.

8 **Q. TO CONTINUE WITH HIGH SERVICE PUMPING, MR. GUASTELLA'S**
9 **TESTIMONY STATES THAT THERE IS ALMOST NO NEED TO CONDUCT**
10 **AN ANALYSIS OF HIGH SERVICE PUMPS BECAUSE IN MOST INSTANCES**
11 **THEY ARE 100% U&U BY OBSERVATION. WHAT ARE YOUR THOUGHTS**
12 **ON THIS APPROACH?**

13 A. The rationale behind Mr. Guastella's statement appears to be that when multiple
14 pumps that are manifolded (piped) together are pumping at the same time there can be
15 increased pressure in the discharge piping that can cause the pumps to operate at less than
16 their rated capacity. This capacity/pressure relationship is a common property of
17 centrifugal pumps in general, not just specific to high service pumps, and is a factor that
18 is considered in the design process. An appropriately designed high service pumping
19 system will actually operate in an envelope of capacity that will vary based on
20 downstream pressure. At high pressures the pumps may deliver slightly less than the
21 rated capacity and at low pressure pumps may deliver slightly more than the rated
22 capacity. The rated capacity of the pumps usually represents the mid-point of the

1 operating envelope and in my opinion is the appropriate capacity to use for U&U
2 analysis.

3 **Q. WHAT IS YOUR OPINION OF MR. REDEMANN'S TESTIMONY OF HIGH**
4 **SERVICE PUMPS?**

5 A. Mr. Redemann states that the cost of high service pumps is minimal compared to the
6 cost of storage and should not be evaluated separately. Regardless of the minimal cost
7 issue, which is a subjective determination, high service pumps are inherently different
8 than storage and are evaluated for U&U in a completely different manner.

9 He also states that a separate evaluation of high service pumping could be made under the
10 alternative calculation provision. I am of the opinion that high service pumps are not a
11 special or unique case. They are a critical component of a water system that is always
12 present after storage

13 **Q. MR. SEIDMAN, MR. GUASTELLA AND MR. REDEMANN TAKE ISSUE**
14 **WITH YOUR CHANGE TO THE PEAK DEMAND FOR WATER TREATMENT**
15 **SYSTEMS WITH STORAGE, STATING THAT YOU HAVE ELIMINATED THE**
16 **FIRE FLOW CONSIDERATION. WHAT IS YOUR RESPONSE TO THIS?**

17 A. I agree with some of the arguments presented. I recommend the following change to
18 my recommended rule change:

19 "2. For utilities with storage, the utility's maximum day demand,
20 excluding excessive unaccounted for water plus a growth
21 allowance based on the requirements in Rule 25-30.431, F.A.C.,
22 and where provided, a minimum of either the fire flow required by
23 local governmental authority or 2 hours at 500 gpm. Fire flow shall

1 be considered to the extent the treatment facilities can replenish
2 fire flow volume over a 24 hour period.”

3 This revised language mirrors the language that is presented in staff’s proposed rule,
4 while recognizing that with storage, water treatment facilities need not meet the peak
5 requirements of fire flow that are addressed by storage and high service pumping.

6 **Q. WHAT IS YOUR RESPONSE TO MR. SEIDMAN’S, AND MR.**
7 **GUASTELLA’S COMMENTS ON YOU ADDING “IF PROVIDED” TO**
8 **PARAGRAPH 1(c) OF THE PROPOSED RULE?**

9 A. It is purely a matter of wording. I am fine with staff’s proposed language of “where
10 fire flow is provided” with regard to this issue in proposed paragraph 1(c).

11 **Q. WHAT ARE YOUR COMMENTS REGARDING MR. REDEMANN’S**
12 **STATEMENTS REGARDING YOUR PROPOSED LANGUAGE DEFINING**
13 **PEAK WATER DEMANDS FOR WATER TREATMENT SYSTEMS?**

14 A. Mr. Redemann states that my definition is not consistent with sound engineering
15 design and then says my proposal is based on FDEP permitting rules. I am of the opinion
16 that FDEP’s requirements are certainly consistent with sound engineering design and are
17 appropriate for U&U calculations.

18 **Q. WHAT IS YOUR RESPONSE TO MR. SEIDMAN’S, MR. GUASTELLA’S**
19 **AND MR. REDEMANN’S CONCERNS ABOUT YOUR RECOMMENDED**
20 **LANGUAGE FOR PROPOSED PARAGRAPH 1(d) REGARDING THE PEAK**
21 **DEMAND FOR STORAGE?**

22 A. Mr. Seidman raises several issues regarding peak demand for storage. His first
23 argument rests with the fact that my recommended 25% plus fire flow volume represents
24 the regulatory minimum being proposed to recover cost and that such a proposal is a

1 disincentive that results in utilities only meeting minimum design standards. In my
2 review of the FDEP rules I would have to disagree with this. Subsection (19) of FDEP
3 Rule 62-555.320, F.A.C., has additional provisions that would allow a utility to use less
4 than 25% of the maximum day demand provided certain demonstrations are met that
5 include the ability of the water treatment facility to replenish storage volume and
6 hydro-pneumatic volume. I believe this criteria to be the regulatory minimum, but is far
7 too complicated to be included in the U&U process. Furthermore, the FDEP rules, while
8 they may be considered regulatory minimums, are established to provide safe and reliable
9 drinking water to the general public and are the basis of design for water systems
10 statewide. It is also important to note that FDEP makes no specific allowances for growth
11 in its storage requirements, which is a part of my recommended U&U calculations.

12 **Q. MR. SEIDMAN ALSO MAKES REFERENCE TO THE FACT THAT YOUR**
13 **RECOMMENDED LANGUAGE DOES NOT INCLUDE AN ALLOWANCE FOR**
14 **EMERGENCY STORAGE IN ADDITION TO FIRE STORAGE. WHAT IS**
15 **YOUR COMMENT ON THIS?**

16 **A.** As Mr. Seidman states in his testimony, establishing emergency volumes is a
17 judgment call. FDEP has many requirements to keep water treatment facilities in service
18 in the event of emergencies, such as auxiliary power and firm capacity requirements. It
19 does not make provisions for emergencies in the design of storage.

20 The impression of Mr. Seidman's testimony on this issue is that more volume is always
21 better, and that is not the case. Too much storage volume that does not get "turned over"
22 in a storage tank can cause water quality problems including loss of disinfection residual
23 or formation of DBPs, which are a regulated category of water contaminants. Therefore,
24 my recommendation is that 25% of maximum day flow, plus an allowance for fire flow,

1 plus the statutory growth allowance is appropriate.

2 **Q. IN HIS TESTIMONY MR. SEIDMAN GOES INTO A DISCUSSION ABOUT**
3 **USING THE MINIMUM FDEP CRITERIA FOR HIGH SERVICE PUMPS**
4 **SPECIFICALLY AND U&U IN GENERAL. WILL YOU COMMENT?**

5 A. I am of the opinion that the requirements of FDEP are the single largest driver of
6 water system sizing in the State of Florida and that many of the concepts and
7 requirements embodied in FDEP rules are appropriate for use in U&U calculations.
8 FDEP requirements may be considered minimum, but in no way should they be
9 considered to be the cheap way out or generally insufficient to provide service to
10 customers. As Mr. Hoofnagle states in his testimony on page 2, beginning on line 13,
11 "DEP sets/establishes standards of practice and care for the industry to ensure water
12 quality. Issues of adequacy of supply are related to this overriding goal of water safety
13 and quality as it might impact operating pressure and such concerns as fire flow."

14 **Q. WHAT IS YOUR OPINION OF MR. SEIDMAN'S AND MR. GUASTELLA'S**
15 **TESTIMONY ON DESIGN DEMANDS VERSUS ACTUAL DEMANDS?**

16 A. It can occur that actual demands are less than design demands. In fact, for a new
17 system with no historic usage as a guideline it would be difficult to predict the exact
18 actual usage. However, in considering this issue I think it is important to consider what
19 portion of the water system is actually being used by the customers and whether it is
20 appropriate for those customers to bear the cost of using less of a system than was
21 originally planned. Keep in mind the customer has no input into the sizing of the water
22 facilities to provide them service. However, they do have control over the amount of the
23 water facilities that they use. An investor owned utility that is sizing water treatment
24 facilities is making a decision with knowledge of the regulatory environment and the

1 concepts of U&U. I am of the opinion that the utility in making these decisions should
2 bear the risk associated with any difference between the design and actual usage.

3 **Q. WHAT IS YOUR OPINION OF MR. SEIDMAN'S AND MR. GUASTELLA'S**
4 **COMMENTS ON THE DOCUMENTATION REQUIREMENT FOR ACCOUNTED**
5 **FOR BUT UNBILLED WATER?**

6 **A.** I concur with Mr Redemann that water is a limited natural resource that must be
7 conserved to assure adequate supply. On page 9 of his testimony, Mr. Redemann states
8 that water utilities should take reasonable steps to avoid excessive losses. On this page he
9 further states that: "The utility is required to maintain records of the amount of water
10 used to maintain the system or lost through line breaks. The fire department should
11 measure or estimate the amount of water used for fire fighting or testing and report the
12 usage to the utility. If water used for maintaining the system or lost through lines breaks
13 is **properly documented**, then it should not be considered unaccounted for usage."

14 (Emphasis added). I concur with Mr. Redemann that water used to maintain the system,
15 water lost through line breaks, or water used to fight fires should not be considered
16 unaccounted for water, so long as these flows are adequately documented. It is crucial
17 that contemporaneous records of amounts of water used for these purposes be maintained
18 by the utility at all times. My recommended paragraph (1)(g) includes this requirement.

19 **Q. MR. REDEMAN IS RECOMMENDING A REWORDING OF THE**
20 **PROPOSED RULE REGARDING UNACCOUNTED FOR WATER IN**
21 **RESPONSE TO MR. GUASTELLA'S TESTIMONY. WHAT IS YOUR OPINION**
22 **OF HIS ALTERATION?**

23 **A.** I can agree with his clarification and make the follow revision to my recommended
24 paragraph (1)(g):

1 “(g). Excessive unaccounted for water (EUW) is unaccounted for
2 water in excess of 10 percent of the amount produced. Any water
3 claimed as accounted for that was used for flushing, fire fighting,
4 and water lost through line breaks must be documented by
5 complete records of these flow losses.”

6 **Q. WHAT ARE YOUR COMMENTS ON MR. SEIDMAN’S AND MR.**
7 **GUASTELLA’S TESTIMONY REGARDING PRUDENCE AND ECONOMIES**
8 **OF SCALE FOUND IN PROPOSED PARAGRAPH (2)?**

9 A. Upon reading Mr. Seidman’s and Mr. Guastella’s testimony I realize that my prior
10 testimony was unclear with respect to these issues, however, that does not change my
11 recommendations to the rule on these issues.

12 **Q. PLEASE EXPLAIN.**

13 A. With respect to prudence of investment the intent of my testimony was to state that
14 prudence of investment is not a U&U **calculation** issue. Pursuant to Chapter 367.081(3),
15 F.S., the Commission has always considered the prudent cost of providing service when
16 fixing rates. Proposed paragraph (2) provides no additional guidance to the Commission
17 regarding the application of prudence to U&U.

18 I agree that Mr. Seidman’s comment that my proposal regarding economies of scale
19 provides no further clarification than the proposed rule. It is for this very reason that I
20 believe it should be considered as an alternative methodology under my recommended
21 paragraph (2) and not part of the primary U&U calculation.

22 **Q. PLEASE DISCUSS MR. SEIDMAN’S, MR. GUASTELLA’S AND MR**
23 **REDEMANN’S COMMENTS REGARDING PROPOSED PARAGRAPH (3) AND**
24 **YOUR RECOMMENDED PARAGRAPH (2)?**

1 A. Mr. Seidman and Mr. Redemann agree with my recommended language that includes
2 service area restrictions, factors involving treatment capacity, well drawdown limitations,
3 and changes in flow due to conservation or a reduction in number of customers as factors
4 that are appropriate for potential alternative calculations.

5 **Q. WHAT IS YOUR POSITION ON MR. SEIDMAN'S, MR GUASTELLA'S AND**
6 **MR. REDEMANN'S TESTIMONY REGARDING ALTERNATIVE**
7 **CALCULATIONS BEING MADE AVAILABLE TO ALL PARTIES?**

8 A. For different reasons Mr. Seidman and Guastella do not provide for other parties to
9 utilize alternative calculations. When adopted, this rule will define the Commission's
10 policy concerning the calculations of the U&U percentages for water for production,
11 treatment, storage and high service pumping. The rule will equally affect all of the
12 parties' and staff's future recommendations to the Commission regarding these subjects.
13 When specific circumstances warrant, the Commission should be permitted to consider
14 alternative U&U calculations, not only from the perspective of the utility, but also from
15 the perspective of staff and intervenors. The alternative calculation provision should be
16 available to all parties, including staff, who can meet the burden of proof as to the
17 appropriateness of the alternative calculation under the specific facts of the case.

18 Mr. Redemann appears to agree with my position on this issue. In his testimony on page
19 18, he proposes new language to proposed paragraph (3) to allow any party to a
20 proceeding to propose and justify an alternative calculation. However, I note in his
21 Exhibit RPR-8 page 2 of 5 that his language removes the word "utility" rather than
22 explicitly stating "any party". I believe that my recommended paragraph (2) which refers
23 to "any party" is clearer on this issue than Mr. Redemann's proposal.

24 **Q. WHAT IS YOUR OPINION CONCERNING MR. SEIDMAN'S TESTIMONY**

1 **THAT THE PROPOSED PARAGRAPH (4) REMAIN TO ELIMINATE TIME**
2 **AND EXPENSE?**

3 A. Automatically considering a system 100% U&U while administratively expedient
4 must be very carefully considered for the reasons I state in my direct testimony. I believe
5 that by including these as an alternative calculation would permit the Commission to
6 consider these arguments when the specific facts of the case require it.

7 **Q. WHAT ARE YOUR COMMENTS ON MR. REDEMANN'S TESTIMONY**
8 **REGARDING U&U OF SYSTEMS THAT ARE BUILT OUT?**

9 A. Mr. Redemann's testimony only partially speaks to the requirements stated in
10 paragraph (4)(b) of the proposed rule. First, his testimony does not explain or describe the
11 necessity of including the term "mature" in the rule. As I have stated in my direct
12 testimony the age of a system does not affect a U&U calculation. Secondly, Mr.
13 Redemann adds to his testimony the system must not only be built out, with no apparent
14 potential for expansion, **but also must be designed prudently**. I agree, and believe that
15 one of the initial steps to determining if a system was prudently designed is to perform a
16 U&U calculation. The way the proposed rule is written a system could be considered
17 100% U&U with no further consideration. Built out systems should be treated no
18 differently than other systems, unless it can be documented that the system has service
19 area restrictions that prevent expansion and that the system was prudently designed. In
20 his testimony in Exhibit RPR 8, page 2 of 5, it appears that Mr. Redemann agrees with
21 my recommended language in proposed paragraph (3) that addresses the issue of service
22 area restrictions. I do not believe the statement needs to be in both proposed paragraph
23 (3) and proposed paragraph (4)(b).

24

1 **Q. WHAT IS YOUR OPINION OF MR. SEIDMAN'S TESTIMONY REGARDING**
2 **THE U&U OF SYSTEMS WITH ONLY ONE WELL?**

3 A. The fact is that FDEP allows small systems to be constructed with only one well and
4 just because a system has only one well doesn't mean that it should be considered
5 automatically 100% U&U with no further analysis. A well could be grossly oversized
6 with respect to the customer demand and the application of this paragraph to the rule
7 would completely ignore that fact and automatically have the customers bear the cost of
8 the unused portion of the well. Mr. Seidman's discussion of instantaneous demand does
9 not address the impact of this rule on the many single well systems that are currently in
10 service. For existing systems, automatically considering a well 100% U&U with no
11 analysis is not likely to improve the service the customers receive, but will definitely
12 affect how much the customers pay for that service.

13 **Q. WHAT ARE YOUR COMMENTS ON MR. REDEMANN'S TESTIMONY**
14 **REGARDING U&U OF SYSTEMS WITH ONLY ONE WELL?**

15 A. I find that his testimony on this does not match with how I read the proposed rule. Mr.
16 Redemann states on page 16, line 18 of his testimony that systems with one well should
17 be considered 100% U&U unless it appears that the well is oversized. The rule as
18 proposed does not include "...unless it appears that the well is oversized". From how the
19 proposed rule reads a one well system is 100% U&U, with no further analysis necessary.
20 It is my opinion that a U&U analysis on a single well system would be necessary to
21 determine if, in fact, the well is oversized.
22

23 **Q. WHAT IS YOUR OPINION CONCERNING MR. HOOFNAGLE'S**
24 **TESTIMONY ON PEAK HOUR VS. INSTANTANEOUS PEAK DEMAND?**

1 A. I can agree that in general small systems experience peak demands that are greater
2 than those of larger systems. It appears in Mr. Hoofnagle's testimony that designing
3 small systems on a peak hour basis instead of an instantaneous peak does not meet
4 FDEP's design standards. I have reviewed FDEP's rules with respect to this issue and can
5 find no criteria or guidance on the use of instantaneous demand over peak hour demand,
6 which makes it difficult to interpret in terms that can be utilized in a U&U calculation. I
7 am of the opinion that the provision for alternative calculations can adequately address
8 this issue, should it occur.

9 **Q. WHAT ARE YOUR COMMENTS ON MR. SEIDMAN'S, MR GUASTELLA'S**
10 **AND MR. REDEMANN'S TESTIMONY CONCERNING PROPOSED**
11 **PARAGRAPH (6)?**

12 A. It seems we are in agreement on all items with the exception of (6)(b) which has to
13 do with basing well capacity on a 12 hour run time. I can find no good reason to justify a
14 12 hour run time on a consistent basis. In my direct testimony, I stated that prudent and
15 efficient well field design would seek to maximize well pumping for a 24 hour period.
16 For this reason, I believe 24 hours is the appropriate default value for the proposed rule.
17 Mr. Seidman's arguments about aquifer recharge, protecting the water resources and
18 environmental responsibility are issues that would be better addressed by the Water
19 Management District and incorporated into a utilities' consumptive use permit for well
20 withdrawal.

21 Mr. Jenkins' testimony speaks well to the complexity of the issues involved in wellfield
22 permitting and the limiting conditions that go into a utility's consumptive use permit. My
23 recommended paragraph (4)(b) will allow for the specific application of any pumping

1 restrictions as determined through the Water Management District's rigorous permitting
2 process. Mr. Jenkins in his testimony states "the bottom line is that there is typically no
3 benefit to operating wells or a well field for a period of 12 hours versus 24 hours in
4 Florida." He goes on to state that there are some cases that operating wells may avoid
5 adverse aquifer impacts. Any pumping restrictions would be included as a permit limiting
6 condition. Since prudent engineering design would consider a well operating on a 24
7 hour basis I believe it should be the default basis of determining U&U.

8 Another thing to keep in mind on this issue is how frequently the well pumps would
9 actually be operating for 24 hours per day. It is important to remember that wellfields are
10 sized on maximum day or peak hour demand criteria which only occur once in a 12
11 month period. Furthermore, with consideration of the largest well out of service the entire
12 installed capacity of a wellfield will never be fully utilized.

13 **Q. MR. REDEMANN ALSO MENTIONS THAT 12 HOURS REFLECTS THE**
14 **GENERAL USAGE PATTERN OF CUSTOMERS. WHAT ARE YOUR**
15 **THOUGHTS ON THIS?**

16 A. Mr. Redeman does not provide any detail on what comprises a 12 hour usage pattern.
17 One could state that water usage generally coincides with the typical waking hours of the
18 general population. However, restrictions that are placed on irrigation have shifted some
19 demands to hours when the general population would be asleep. Regardless of usage
20 patterns, the daily change in demands in a water system do not always correlate to well
21 pump usage times. In fact, for systems with storage and high service pumping daily
22 demand patterns have no direct bearing on wellfield capacity.

23 **Q. WHAT ARE YOUR COMMENTS REGARDING MR. SEIDMAN'S, MR.**
24 **GUASTELLA'S AND MR. REDEMANN'S TESTIMONY ON YOUR**

1 **RECOMMENDED PEAKING FACTORS FOR PROPOSED PARAGRAPH (7)?**

2 A. I firmly believe that there are situations in which utilizing a 2.0 peak demand factor
3 may inaccurately represent the true peak hour demand of the system. However, I do
4 recognize that incorporation of my recommended language on this point provides for a
5 range of values that can be open to interpretation, does not provide for the clarity the rule
6 is attempting to achieve, and could be better handled as an alternative calculation under
7 my recommended paragraph (2). Therefore, I am revising my recommendation to reflect
8 just a 2 peak hour factor in accordance with the proposed rule. Conversely, I recommend
9 adding changes in peaking factors as an additional enumerated specific case that might
10 warrant the use of an alternative U&U calculation under my recommended paragraph (2).

11 **Q. DO YOU HAVE ANY FURTHER COMMENTS REGARDING MR.**
12 **SEIDMAN'S TESTIMONY?**

13 A. I note that we are in agreement on removing proposed paragraphs 7(a) 3. and 7(b) 3.
14 from the proposed rule. I also note that while he recommends retaining paragraph (11) he
15 also agrees with my recommendation to incorporate the same language in proposed
16 paragraph (3), which is my recommended paragraph (2). I do not believe the statement
17 needs to be in two places.

18 **Q. ANYTHING ELSE ON MR. SEIDMAN'S TESTIMONY?**

19 A. No, not at this time.

20 **Q. ANY FURTHER COMMENTS ON MR. GUASTELLA'S TESTIMONY?**

21 A. Yes. My first comment pertains to a statement made on page three, line seventeen
22 regarding water systems being designed to include a safety factor so that when fully
23 developed the capacity of the facilities will be greater than the actual demands. It is my
24 opinion that the safety factor Mr. Guastella refers to is incorporated in my recommended

1 U&U rule in the concept of reliable capacity which allows for the largest capacity unit to
2 be removed from service.

3 **Q. WHAT IS YOUR OPINION REGARDING MR. GUASTELLA'S USE OF ISO**
4 **AND NBFU CRITERIA FOR ESTABLISHING FIRE FLOW ADJUSTMENTS TO**
5 **U&U?**

6 **A.** I am not aware of any design requirement that relies upon these organizations for the
7 sizing of water system capacity. It has been my experience that fire flows in a service
8 area are established by the local governing authority and applied as part of the
9 development review process. In reviewing ISO's Guide for Determination of Needed Fire
10 Flow (Exhibit JFG-1) the preface states that "...ISO provides, statistical, actuarial,
11 underwriting and claims information and analyses; consulting and technical services;
12 policy language; information about specific locations; fraud identification tools..."
13 Nowhere does it state that it is an engineering document for determining fire flow
14 requirements for public water systems. This is a useful document for the fire protection
15 industry and its guidelines may, through local fire departments, make its way into a fire
16 flow requirement. However, local governments establish fire flow criteria.

17
18 **Q. HAVE YOU REVIEWED THE TESTIMONY OF MR. HOOFNAGLE?**

19 **A.** Yes I have.

20 **Q. DO YOU HAVE ANY COMMENTS ON HIS DIRECT TESTIMONY?**

21 **A.** I do not find it surprising that the FDEP would approve a permit application where the
22 facilities exceed their standards, although I do note in his testimony that FDEP standards
23 are established to ensure water safety and quality.

1 Q. DO YOU HAVE ANY OTHER COMMENTS ON MR. HOOFNAGLE'S
2 TESTIMONY?

3 A. I have no additional comments other than what has already been presented herein.

4 Q. HAVE YOU REVIEWED THE TESTIMONY OF MR. JENKINS?

5 A. Yes I have.

6 Q. WHAT COMMENTS DO YOU HAVE REGARDING HIS TESTIMONY?

7 A. I have no additional comments other than what has already been presented herein.

8 Q. DOES THAT CONCLUDE YOUR TESTIMONY AT THIS TIME?

9 A. Yes it does.

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