BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

ALOHA UTILITIES, INC.,

Petitioner/Appellant,

Docket No. 010503-WU

vs.

THE FLORIDA PUBLIC SERVICE COMMISSION,

NOTICE OF ADMINISTRATIVE APPEAL

Respondent/Appellee.
_____/

NOTICE IS GIVEN that ALOHA UTILITIES, INC., Appellant, appeals to the District Court of Appeal, First District, the order of the Florida Public Service Commission rendered June 29, 2005 (Order No. PSC-05-0709-FOF-WU), a conformed copy of which is attached. The nature of the order is a Final Order Setting Water Quality Goal and Requiring Testing and Reporting.

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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished via U.S. Mail to the following on this 28th day of July, 2005:

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BEFORE THE PUBLIC SERVICE COMMISSION

In re: Application for increase in water rates for Seven Springs System in Pasco County by Aloha Utilities, Inc.	DOCKET NO. 010503-WU ORDER NO. PSC-05-0709-FOF-WU ISSUED: June 29, 2005

The following Commissioners participated in the disposition of this matter:

BRAULIO L. BAEZ, Chairman
J. TERRY DEASON
RUDOLPH "RUDY" BRADLEY
CHARLES M. DAVIDSON
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On behalf of himself.

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On behalf of the Citizens of the State of Florida.

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On behalf of the Commission.

FINAL ORDER SETTING WATER QUALITY GOAL AND REQUIRING TESTING AND REPORTING

BY THE COMMISSION:

I. Background

In this rate proceeding for Aloha Utilities, Inc.'s (Aloha or utility) Seven Spring's System, this Commission found that the "overall quality of service provided by Aloha is unsatisfactory." Order No. PSC-02-0593-FOF-WU, issued April 30, 2002, in Docket No. 010503-WS, In re: Application for increase in water rates for Seven Springs System in Pasco County by Aloha Utilities, Inc., p. 20 (Final Order). When we made that decision, we determined, among other things, that steps had to be taken to combat the "black water" problem. One of these steps was the requirement that:

> The utility shall make improvements starting with Wells Nos. 8 and 9, and then to all of its wells, to implement a treatment process designed to remove at least 98% of the hydrogen sulfide in the raw water. Such improvements to all of the utility's wells shall be placed into service by no later than December 31, 2003.

Final Order, p. 30. When Aloha appealed the Final Order to the First District Court of Appeal, the requirement to make improvements to the wells was stayed. Order No. PSC-02-1056-PCO-WU, issued August 5, 2002, p. 9. When the Court affirmed our decision, the due date for the well improvements became February 12, 2005.

On June 9, 2004, Aloha moved to modify the requirements of the Final Order, requesting that the requirement to remove 98% of hydrogen sulfide from the raw water be replaced with a requirement that Aloha make improvements as needed to meet a goal of 0.1 mg/L (milligrams per liter) of sulfides in its finished water as that water leaves the treatment facilities of the utility, and that this standard be implemented no later than February 12, 2005. We proposed to approve Aloha's request by Proposed Agency Action Order No. PSC-04-0712-PAA-WS (PAA Order), issued July 20, 2004.

V. Abraham Kurien, Harry Hawcroft, and Edward Wood (the Customers) filed a timely petition protesting several, but not all, provisions of the PAA Order. The Office of Public Counsel (OPC) also intervened.

Based on this partial protest of the Customers, we issued a Partial Consummating Order, Order No. PSC-04-0831-CO-WS, on August 25, 2004, which consummated the portions of the PAA Order that were not protested and recognized the portions of the PAA Order contested by the Customers. An administrative hearing was conducted on March 8, 2005. The issues raised by the customers in their protest are addressed below. Aloha raised the legal issue, which is also addressed below.

This Commission is vested with jurisdiction over the subject matter by the provisions of Chapter 367, Florida Statutes (F.S.), including Sections 367.011(2) and (3), 367.081(2), 367.111(2), and 367.121(1)(a), (c), and (d), F.S.

II. Rulings

We considered several preliminary matters at the outset of the hearing on March 8, 2005. The motions and our rulings on each are set out below.

On March 1, 2005, Aloha filed a Verified Motion to Disqualify and Recuse Public Service Commission From All Further Consideration of This Docket. No oral argument was heard. The motion was denied because the allegations contained in the motion were not legally sufficient under Section 120.665, F.S., to demonstrate bias, prejudice, or interest in the proceeding as they were too tenuous and speculative.

Aloha also filed a Motion for Summary Final Order on March 1, 2005. After hearing oral argument, we denied the motion.

At the hearing, Aloha made an *ore tenus* motion to dismiss Dr. Kurien as a party. After the order was entered granting Dr. Kurien intervention, he moved out of Aloha's service territory. After hearing oral argument, this motion was granted. However, Dr. Kurien was allowed to testify as an expert witness.

Aloha's counsel also made an *ore tenus* motion at the hearing for modification to the Prehearing Order, which we treated as a motion for reconsideration of the Prehearing Order. After hearing oral argument, this motion was denied.

On March 1, 2005, Aloha filed an Expedited Motion for Continuance. After hearing oral argument, this motion was denied.

Commission staff filed a motion to quash subpoenas and for protective order on March 4, 2005. After hearing oral argument, this motion was granted.

III. Stipulation

The parties stipulated that this docked should remain open pending final disposition of the refund requirement for the appeals period, and this stipulation is approved.

ISSUES OF FACT, LAW, AND POLICY

IV. Goal vs. Maximum Contaminant Level and Location of Testing

The customers raised the issue of whether the 0.1 mg/L criterion specified in the Proposed Agency Action Order should be expressed as a goal or a Maximum Contaminant Level (MCL) and at what point compliance should be assessed.

A. Summary of Parties' Arguments

1. Aloha's Arguments

Aloha argues that Witness Kurien's "use and interpretation of the phrase 'maximum contaminant level' stands in stark contrast to the testimony in this case and to the utilization of that same phrase in Florida law." Citing Chapter 403, F.S., the testimony of witnesses Porter, Levine, and Sowerby (staff's DEP witness), and DEP v. Belleau, 96 ER FALR 86 (Final Order, 1996), Aloha argues that an MCL is a term of art and alleges as follows:

1. For an MCL, a given substance must never exceed a given level, while a goal is something to be strived for to the extent possible both from a technical and economic standpoint;
2. TBWA recognizes the 0.1 mg/L standard as a goal;
3. EPA and DEP set MCLs for substances that pose a health related risk of sufficient magnitude such that the cost of compliance is justified;
4. The process these agencies go through to set an MCL is very involved, complicated, and time consuming (can take years);
5. A cost benefit analysis is undertaken and involves utility representatives, state regulatory agency staff, water users, and many others who are assembled and who engage in a detailed analysis of the feasibility of setting an MCL;
6. Even DEP has not chosen to establish an MCL which did not originate from the EPA;
7. If DEP felt there was some inadequacy in a current primary or secondary water standard, it would be trying to do something about it and that DEP is not contemplating imposing or establishing any standard with regard to total sulfides;
8. To establish an MCL, a more reliable measurement method would need to be developed;
9. Establishment of an MCL, would mean that if that level were exceeded, it would be a violation of Chapter 403 and that proof of violation of a given MCL is proof of pollution.

Based on all the above, Aloha states that the TBWA standard is just what it says it is, a goal, and that this Commission "should not stray even further into the realm of water quality regulation and attempt to establish an MCL for total sulfides which would only apply to a single utility in the entire state of Florida." In Aloha's Post Hearing Memorandum, the utility argues that the burden of proof pursuant to Section 120.57, F.S., is upon the petitioner, and that any decision of this Commission must be based on competent substantial evidence. Aloha argues that the only pre-filed direct testimony on this issue supporting an MCL was provided by witness Kurien and that he erroneously referred to maximum contaminant level, standard, goal, compliance level, and action level, interchangeably.

Aloha argues that the only reasonable and meaningful point of measurement is at the plant site as the water first enters the distribution system. It is at that point the utility has complete control over the water and can identify and adjust treatment at wells failing to meet the established goal. Witness Porter notes that, while TBWA does strive to attain the same standard

throughout its transmission system, its obligation ceases once its water enters the distribution system of a member government, which Aloha maintains is analogous to Aloha's plant sites. He believes that water samples collected for testing should be gathered at the plant sites where sampling and test procedures can be closely controlled. Witness Porter maintains that field tests, such as those conducted at domestic meters would be highly impractical and would lead to unacceptably low accuracy and precision because the water from Aloha's plant sites is intermixed and there is no direct correlation between what a particular water plant is doing, and the water quality at a customer's home. He noted that if a water sample were tested in the distribution system, it may be two or three days old, and if it failed to meet the standard, the only conclusion is that a problem exists. It does not show where the problem is. To further complicate the issue, the water in the distribution system will already have been disinfected using chloramines, and he argues that the water cannot be retreated for sulfides.

2. Customer/OPC Arguments

In regard to whether the 0.1 mg/L standard should be stated as a goal, an MCL, or a performance standard, the Customers state that it is immaterial as long as that standard is "complied with at the point of delivery to the customers with actions taken to correct deficiencies as soon as such failure of compliance is detected."

OPC also agrees that whether the terms goal, standard, maximum contaminant level, compliance level, or action level is used is not important. OPC argues that the important point is that the TBWA requires action if total sulfides exceed 0.1 mg/L. OPC notes that other utilities have taken action to significantly reduce black water and rotten egg smell "without strict measurement and conformity with standards for total sulfide and elemental sulfur levels, such as membrane technologies (Dunedin Municipal Utility), aeration and biological oxidation (Pasco County Utility), and manganese green sand and potassium permanganate oxidation (Port Richey Utility), along with more appropriate adjustment of pH levels."

OPC argues that the above-noted methods have been proven to be more successful in reducing copper corrosion, and that both the hydrogen peroxide and chlorination methods "are reversible oxidative methods that can result in reformation of total sulfides and the production of elemental sulfur." Therefore, if Aloha is to use an oxidative method, OPC argues that there must be "strict adherence to more stringent standards that lower the levels of these substances that have been considered to be significant factors in the production of black water and rotten-egg smell."

With regard to the point of compliance, the Customers argue that the critical question is not whether Aloha can meet the standard at the treatment facility, but whether "these methods are sufficiently robust to keep the water stable till it reaches the customers' homes, sometimes 2-4 days later . . . and can maintain that stability in domestic plumbing for at least a reasonable time period after delivery."

In the joint Post Hearing Statement filed by Mr. Hawcroft and Mr. Wood (Joint Customer Statement), the Customers argue that the flushing records of Aloha itself show that the water at

the customers' meter is not "clean, clear and safe" as claimed by Aloha. Citing witness Kurien's Exhibit VAK-19 (part of Exhibit 23), the Customers argue that not only has the water been shown to be a "black, yellow, milky and rusty to brown" color, but also the chlorine residuals have been zero which negates Aloha's engineer's claim that the chlorine residual levels have been met.

The Customers further argue that Aloha's unwillingness to test at the customers' meters demonstrates that it is unable to "guarantee that the 'finished water' has not undergone deterioration of quality while still in the distribution system." Therefore, the Customers disagree with Aloha's premise that the deterioration occurs only in the customers' pipes. The Customers argue that in one instance of the treated water tested at the inflow to the main tank, the sulfide level had gone from "a level of less than 0.01 mg/L of total sulfides at the well sites" to a level of 0.12 mg/L and thus "demonstrates that such deterioration can occur and does occur even in the transmission system." Noting that Aloha argued that the above-noted water was only partially treated, the Customers claim that "Aloha must also concede that when total sulfides levels are very high in Well 9 and only a stoichiometrically inadequate amount of chlorine can be added" because of the maximum capacity of the chlorinator at that well, then the water from that well is only partially treated when it enters the distribution system.

The Customers conclude that the "widespread inability to provide stability of water in the transmission and distribution system points to either an inherent weakness in the current method, namely its easy reversibility and tendency to produce elemental sulfur, and/or the inadequacy of facilities that result in inability to add the necessary amount of oxidant or the inadequate maintenance of facilities and the distribution system."

OPC further notes that Aloha has repeatedly claimed that its responsibility ends at the outlet side of the water meter pursuant to Section 25-30.210, Florida Administrative Code (F.A.C.). Because Aloha owns all the piping up to that point, OPC argues that "by all common sense standards and the norms of commercial transactions," the testing to verify whether the product meets quality standards should be at the point of delivery, i.e., the outlet on the customer side of the meter.

Citing Exhibit 5, an excerpt from the Phase II Report of the Technical Review undertaken by witness Levine, OPC argues that the need to test the water after it has traveled through the distribution system is confirmed by the finding that sulfide reformation occurred. Although OPC admits that the process allowing reformation may not be clearly understood, it notes that there is the presence of sulfur reducing bacteria in the water and that, as has already been identified by the utility's consulting engineer, the reformation process may be related to turbidity induced by colloidal sulfur which may lower disinfection efficiency. OPC agrees with the Customers that the finding of 0.12 mg/L of total sulfides in the inflow pipe to the storage tank demonstrates that the sulfide reformation can occur prior to the customers' piping.

Citing the same flushing reports as the Customers, OPC states "that finished water is not adequately treated before discharge into the distribution system or . . . the processing method is easily reversible." Also, OPC argues that "[i]f a chlorine booster is necessary to treat water

further in the ground storage tank (which has no water softener or water conditioner) before the water left the same day, then "the chlorine decay in Aloha's water is much higher than documented by monthly operation reports (MORs) submitted to the FDEP."

OPC concludes its argument on this issue by noting that the TBWA agrees to maintain the 0.1 mg/L standard up to the point of connection with its customers (member government utilities), and to sample the water at least four times annually. By maintaining the standard up to the point of connection with the member government utilities, OPC argues that the TBWA thereby takes responsibility for maintaining the standard throughout its transmission and distribution system, and that Aloha should do the same.

B. Commission Analysis

Utility witness Porter testified that the standard for total sulfides as established by TBWA, to which OPC had already agreed, was developed as a goal and not an MCL. He explained that a goal is a target to be strived for, as opposed to an MCL which is a maximum concentration that cannot be exceeded. Witness Porter also testified that an MCL is arrived at after stringent testing and intense study and typically applies to some health risk.

Staff witness Sowerby explained that the promulgation of an MCL is an involved process, including a review of contaminants, health studies, laboratory tests, and cost/benefit. He said that in his twelve years with the Florida Drinking Water Program, establishment of an MCL has not been attempted that did not originate with the EPA.

Witness Kurien noted that he based his terminology on a Tampa Bay Water Authority (TBWA) reference, in which the terms goal, MCL, and standard appear to be used interchangeably. His recommendation is that the regional standard adopted by TBWA is an appropriate standard. His concern is that some objective measurement be established that would require some remedial action by Aloha if the level specified is not met.

Because the term "MCL" is a legal term of art used by the EPA and the DEP only after intense study and review, we find that the standard of 0.1 mg/L of total sulfides in the finished water shall be stated as a goal.

As regards the point of compliance, there are several potential locations for the point of compliance with the goal, including: (1) the finished water as that water leaves the treatment facilities of the utility and enters the distribution system as proposed by Aloha (plant sites), (2) within the distribution system (field sites), and (3) at the point of the water's entry into the domestic system at the domestic meter as proposed by the Customers (customers' meters). For the purposes of discussion, we will refer to the wells as plant sites to better capture the concept of the connection between the water source and the transmission/distribution system.

Testimony by witness Sowerby indicated that the majority of tests performed on drinking water are conducted from samples taken at the entry point to the water distribution system, although the DEP would not object if a utility were to sample more than the minimum

requirements. Samples which are taken in the distribution system would include chlorine residual, disinfection by-products, and coliform bacteria. Those things may change throughout the distribution system, whereas most of the other water quality parameters would not.

OPC maintains that, consistent with the TBWA standard, testing should be done when the water leaves the utility's system, or at the customers' meters. Witness Kurien believes it is imperative that the utility deliver water to the customers that does not exceed the performance standard or goal for total sulfides at the point of connection with the customer. He contends that this position is consistent with TBWA striving to achieve its goal of 0.1 mg/L throughout its transmission/distribution system to the point of connection with its member governments. TBWA's point of delivery is the connection with member governments and Aloha's point of delivery in its transmission and distribution system is the outlet side of the customer meter. His concern is that there could be uncontrolled conditions in the distribution system that could result in the formation of black water and rotten egg smell that would enter the customers' homes from the domestic meter and that testing at the entry to the distribution system will not capture these problems.

Witness Kurien recognized the difficulty of testing at the meter. He notes that water from eight different wells pumps into Aloha's water system. Four wells pump into a storage tank, and the other four wells pump directly into the water system. In addition, Aloha will be purchasing water from Pasco County (County). However, he maintains that the only meaningful way to measure compliance with a standard is by testing at the outlet side of the domestic meter in the distribution system area of each plant site. Witness Kurien notes that, in one of witness Levine's tests, treated water from a well on its way to a storage tank showed an increase in hydrogen sulfide level from 0.01 to 0.12 mg/L. He has concerns that this same phenomenon might be occurring in other parts of Aloha's distribution system where the water does not go into a storage tank but directly into the transmission system. He also testified that there is evidence that shows a significant difference between the free chlorine at the treatment facility and at the remote sampling point, indicating significant consumption of free chlorine residual within the transmission and distribution system. Reformation of total sulfides is a possible explanation for this change in chlorine residual.

We find that the TBWA philosophy of striving to attain a goal of not greater than 0.1 mg/L of total sulfides in its system applies only to the point of connection with member governments because that is the portion of its system over which TBWA has ownership and control. Therefore, it is reasonable that TBWA would not be sampling within a member government's transmission and distribution system. Aloha's transmission and distribution system are facilities over which Aloha has control. Rule 25-30.231, F.A.C., requires each utility to operate and maintain in safe, efficient and proper condition all the facilities and equipment used in connection with the distribution, regulation, measurement and delivery of water service to the customer up to and including the point of delivery into the piping owned by the customer. Rule 25-30.210(7), F.A.C., defines point of delivery for water systems as the outlet connection of the meter for metered service. We find that this is consistent with the TBWA measurement points.

We also believe that the changing characteristics of Aloha's water, as testified to by witness Kurien from his review of witness Levine's tests, merit concern. Based on the evidence presented, it appears that the problem with the current chlorination process is that the oxidizing process produces either elemental sulfur or a sulfate, and the total sulfur load remains in the treated water. Further, based on the dissipation of chlorine to chloride, and the action of sulfur reducing bacteria, sulfur or sulfate can be converted back to sulfides, which will then react with the customers' copper pipes to form "black water" (copper sulfide). It is already established in this docket that some customers are receiving discolored or black water in their homes. The treatment provided by Aloha through chlorination, coupled with the tests performed by Aloha at its plant sites, show compliance with DEP regulations. However, because Aloha customers continue to experience black water and rotten egg smell, it is logical to conclude something more is needed to further address the black water complaints.

We believe that the Customers are merely asking that the finished water delivered to their pipes, to the extent possible, be sufficiently stable so as to not immediately begin reacting with their pipes. Based on the past ten-year history with "black water," we find that this expectation is reasonable. We also believe that Aloha's argument that testing at points within the system will make it difficult to identify which well is causing the failure has merit, but find that the utility shall be held responsible for what happens while the water is within its facilities.

However, there are several problems with the Customers' request that Aloha perform duplicative tests at the outlet side of 16 different customer meters each month at a point most distant from each of the plant sites. First, there is no way to test the water at a customer's meter without either cutting into the line in front or back of the meter and putting in some kind of draw-off valve or faucet. This would require Aloha to continually go onto the property of different customers and dig, and possibly tear up their yard and erect what might be unsightly faucets or hose bibs. This might lead to even worse relations between Aloha and its customers. Second, to minimize customer dissatisfaction with this intrusion, Aloha could seek customer volunteers, but obtaining 16 suitably located customer volunteers each month might be difficult, if not impossible. Finally, because of the positioning of the wells and their interconnections, it is hard to determine the source of the water when more than one source might be nearby.

We note that Aloha has 30 bacteriological test sites distributed throughout the utility's service area so that the utility can monitor what is happening on a bacteriological basis in its system as required by DEP. Moreover, as testified to by witness Levine, water can be drawn off and tested for hydrogen sulfides at these sites. These test sites are already being used by Aloha and would cause little or no inconvenience to either Aloha or its customers.

Therefore, the water quality shall be measured at the plant sites to ensure that the water going into the distribution system meets the goal, and the goal for the plant sites shall be 0.1 mg/L of total sulfides. In addition, as a compromise between the utility and the customers, compliance with the goal shall be assessed at selected bacteriological test sites already set within the distribution system. This will eliminate the need to install new tap sites. We also recognize that water introduced into Aloha's system from the County may impact the level of total sulfides in the water delivered to customers. Witness Porter notes that the County refused to incorporate

the obligation to meet 0.1 mg/L goal in its purchased water contract with Aloha. He also noted that there is no space at the interconnection sites to treat the purchased water, even if re-treatment was feasible. Therefore, once Aloha begins taking water from the County, Aloha shall test that water monthly, and the goal for the tests out in the field shall be the greater of the County total sulfide level or 0.1 mg/L. The goal for the tests at Aloha's plants shall remain at 0.1 mg/L of total sulfides, regardless of the level of sulfides in the water purchased from the County.

Summary

The reference to sulfide in the "finished water" of 0.1 mg/L shall be stated as a goal, with specific actions to be taken if that goal is not consistently reached. Compliance shall be measured at two locations: (1) at the plant sites consistent with the TBWA goal, and (2) at selected field (bacteriological test) sites located out in the distribution system to address the customers' concerns about re-conversion, with the goal being the higher of the TBWA goal or the County level. Those locations are described in detail below.

The goal for the plant sites shall be 0.1 mg/L of total sulfides. In order to determine whether Aloha is meeting the goal of 0.1 mg/L of total sulfides at the plant sites, the finished water shall be tested as it first enters the distribution system, after it has been treated at the plant sites. For those wells where the water enters storage tanks prior to entering the distribution system, the finished water shall be tested after the storage tanks and final treatment, as the water first enters the distribution system, which sites will be referred to as the plant sites.

In order to determine whether Aloha is meeting the goal at the bacteriological test sites (field sites), Aloha shall test at the bacteriological test sites which are distributed throughout the utility's service area and are currently approved by DEP for compliance with coliform levels. Also, we note that the major problems with "black water" and rotten-egg smell are concentrated in the southern half of Aloha's Seven Springs division. For the purpose of determining compliance, in each round of testing, a majority of the field tests (six or more out of ten) shall be taken in this southern area. As previously discussed, there are a number of concerns with using customer meters to test for total sulfides; and we find that taking a sampling of the bacteriological test sites is the better solution.

Finally, the water purchased from the County shall be tested monthly at the point of interconnection with Aloha's distribution system. These test results will be used to establish the goal for the field test sites if the level of total sulfides in the County water exceeds 0.1 mg/L. We will refer to this testing site as the interconnection site.

By the previous Final Order issued in this docket, we found Aloha's quality of service to be unsatisfactory. Failure to substantially obtain the goal of 0.1 mg/L of sulfide in the finished water (or the higher level of the County water at the field sites if the purchased County water has a higher level) shall constitute continued provision of unsatisfactory quality of service which is not in the public interest. Aloha shall also be put on notice that meeting the goal agreed to by the parties does not relieve Aloha from ultimately addressing the black and smelly water complaints.

We shall retain the option to take additional action as appropriate in the future to address customer complaints, even if Aloha is meeting the 0.1 mg/L goal.

V. Removal vs. Oxidation or Conversion

The customers raised the issue of whether Aloha should be required to make improvements such that the sulfide present in the water should be removed as opposed to oxidizing or converting it. Aloha divided its argument into: 1. Credentials of Witness Kurien; and 2. Substantive Argument.

A. Credentials of Witness Kurien

1. Aloha's Arguments

Aloha argues that the only testimony or evidence in the record in support of the position that hydrogen sulfide should be removed rather than converted is provided by witness Kurien. Although we denied Aloha's motion to strike the testimony of witness Kurien, Aloha argues that this "ruling neither confers upon the witness the status of an expert, nor does it establish the weight that should be given to his testimony." As regards witness Kurien's expertise, Aloha listed 22 instances where Dr. Kurien did not have expertise. Aloha further contends that witness Kurien's credentials as a medical doctor have no "relationship whatsoever to the relevant issues in this proceeding." Moreover, Aloha argues that there is no evidence that witness Kurien's undergraduate degree in chemistry from the University of Mysore in India is "accredited by the State of Florida or the United States Department of Education pursuant to Section 817.567(1), Florida Statutes." Based on this complete lack of demonstrated expertise, Aloha states that witness Kurien's testimony at "TR 156-158, 161, TR 165-168, and 171-173 must be afforded no weight, as the entirety of those pages constitute testimony of Witness Kurien about water hydraulics, water distribution, water processing, water testing, water plant design, water plant operation and maintenance and engineering, water chemistry, and the financial aspects of all the above." Also, Aloha argues that witness Kurien's testimony found at TR 270-281 and TR 340-356 is opinion testimony outside his expertise and must be afforded little or no weight.

On the other hand, Aloha argues that the credentials of its two experts, witness Levine and witness Porter, are substantial. Witness Levine demonstrated that she has "more than 30 years of training and experience in areas related to engineering, biological and environmental science, water chemistry and environmental engineering, including a PhD in environmental engineering." Witness Porter's testimony showed that he had "32 years of experience in the operation, management, design and troubleshooting of water treatment facilities and having taught 14 years in the area at a community college (TR 284)." Where witness Kurien's testimony conflicts with Aloha's two experts, Aloha argues that "Witness Kurien's positions can be given little, if any, weight whatsoever."

2. OPC's Arguments

In OPC's Post Hearing Statement (OPC's Statement), OPC first addressed Aloha's attack on the credentials of witness Kurien. Citing the cases of Long v. State, 622 So. 2d 536 (Fla. 1st DCA 1993), review denied, 629 So. 2d 133 (Fla. 1993)(construed section 817.567, F.S., applies to only intentional misstatements), and Strang v. Satz, 884 F. Supp. 504 (S.D. Fla. 1995)(found that construed section 817.567, F.S., prohibiting people from claiming to hold academic degrees or titles unless such degrees were conferred by accredited institutions violated the First Amendment in that it was not narrowly tailored to achieve a substantial government interest). OPC argues that Aloha's statement "that Witness Kurien 'cannot say he has an undergraduate degree in chemistry under Florida Law' is completely contradicted" by those two cases.

3. Commission Analysis

As ruled on at hearing, witness Kurien, through working on this problem some 12 hours a day for 3 and 1/2 years for an estimated 8-10,000 hours of study, "has certainly acquired" the expertise to be able to give expert testimony in this proceeding. Pursuant to Section 90.702, F.S., this Commission found that witness Kurien has demonstrated that he has the knowledge, skill, training, and education to testify as an expert. Therefore, we find that we may give whatever weight we deem appropriate to witness Kurien's testimony.

B. Substantive Issues

1. Aloha's Arguments

As regards the substantive issue, Aloha argues that witness Kurien's testimony and theory that the elemental sulfur remains in the water subsequent to oxidation and converts back to total sulfides or reacts with the customers' pipes to form "black water" (copper sulfide) is based on complete and uncorroborated hearsay contained in Exhibits 8 and 9. Moreover, Aloha argues that even in Exhibit 8, the 1991 article by Troy Lyn, Mr. Lyn only "suggests a correlation could exist between black water and the presence of sulfur," and that the "article itself relates to the relationship of turbidity . . . to chlorination of water containing total sulfides." Aloha concludes that "the article presents no proof that the mere presence of elemental sulfur will or can result in black water."

Finally, as regards turbidity being an indicator of the presence of elemental sulfur and lower disinfection efficiency, Aloha points to the testimony of Aloha witness Porter stating that there was "absolutely no indication of disinfection inefficiency," and that in fact the opposite was true, with Aloha's disinfection process operating efficiently.

Based on all the above, Aloha argues that witness "Kurien's proposal that removal rather than conversion of total sulfides is necessary and appropriate is wholly unsubstantiated and rebutted," and that we must find that witness Kurien has failed to carry his burden. Or, even if he has carried his initial burden, Aloha argues that the underlying basis for his theory has clearly been rebutted. Therefore, Aloha states that we "should not require Aloha to implement a specific

treatment alternative which is clearly contrary to the longstanding" Commission practice against micro-management as stated in the PAA Order, at p. 38.

2. Customers' Arguments

The Customers argue that "Aloha has not provided any evidence to show that the method that it uses now and intends to use in the future is capable of producing 'finished water' that remains stable in the distribution system." Although Rule 62-555.315(5), F.A.C., does not apply to Aloha's wells, the Customers argue that it should still be considered. The Customers state that for the control of copper corrosion and black water, the rule's "guidelines emphasize the need to remove elemental sulfur from finished water if chlorination alone is used to process water and the hydrogen sulfide level in source water is higher than 0.3 mg/L." The customers recognize as a legal reality that the rule does not apply to Aloha's existing wells. However, they suggest that, because Aloha's wells contain more hydrogen sulfide than this threshold level of 0.3 mg/L, at least intermittently, as a "scientific and practical reality," the rule is instructive.

The Customers also argue that Aloha's two witnesses, as well as other water processing experts, concur that the presence of elemental sulfur in the finished water can diminish chlorine's disinfection capability, and can be associated with black water and a rotten-egg smell due to the activity of sulfur reducing bacteria. Also, the Customers disagree with Aloha's statement that the deterioration of the water quality is exclusively confined to the domestic plumbing and exacerbated by the removal of chlorine by water softeners.

Therefore, the Customers argue that it is essential that either almost all of the hydrogen sulfide (98%) should be removed as required by the Final Order, or the elemental sulfur should be removed if Aloha continues to use oxidation and does not use removal methods coupled with pH adjustments used by neighboring utilities. The Customers argue that the whole purpose of the Final Order in requiring the removal of 98% of the hydrogen sulfide from the raw water was to reduce the incidence of problems with black water and rotten-egg smell. The Customers do not believe that the use of oxidation alone will be sufficient to alleviate their problems.

3. OPC's Arguments

OPC reiterates and agrees with the arguments expressed by the Customers above, and especially with the use of the guidelines contained in Rule 62-555.315(5), F.A.C., and the hazards of using oxidation alone without associated removal of elemental sulfur to correct the black water and rotten-egg smell problems. OPC notes that at the time the Final Order was issued on April 30, 2002, the two methods being considered for use to significantly reduce black water and associated complaints were packed tower aeration and the MIEX resin method. Under these methods, the total sulfur load was reduced because the hydrogen sulfide was either expelled or extracted from the source water.

OPC recognizes that the hydrogen peroxide oxidation method is a more complex and sophisticated oxidation method than chlorination. However, it argues that "[u]nless continuous monitoring of hydrogen sulfide levels are undertaken at all wells and in the water purchased

from Pasco County Utility and stoichiometrically calculated doses of hydrogen peroxide are injected into the source water, it would appear to be impossible to reduce the concentration of elemental sulfur to minimal levels." OPC states that this does not preclude Aloha from using the hydrogen peroxide method, but does require "the insertion of an extremely low level of elemental sulfur as an additional standard, or the inclusion of elemental sulfur within the total sulfide goal of 0.1 mg/L as a performance standard."

Therefore, OPC concludes that we "should require removal of sulfides to a level not to exceed 0.1 mg/L in finished water delivered at the point of entry into the domestic system if this can be done economically." Noting that Aloha had provided estimates of high cost systems in a previous proceeding, OPC states that Aloha should be directed "to submit alternative proposals for lower cost methods of removing at least a portion of the sulfides from its water," and "prioritize treatment proposals and indicate where the most improvement could be obtained for the least cost."

4. Commission Analysis

At the June 29, 2004 Agenda Conference, we considered Aloha's Motion to Modify Order No. PSC-02-0593-FOF-WU (Final Order) issued April 30, 2002, which required removal of 98% of the hydrogen sulfide from Aloha's water. Although the Final Order was upheld by the First District Court of Appeal, the parties agreed that we should modify that provision of the Final Order because the original standard of 98% removal was deemed unattainable on a system-wide basis. We are concerned that Aloha now wants to go to a different type of oxidation process using hydrogen peroxide and that this hydrogen peroxide methodology does not appear to have much of a proven track record when it comes to treating water for the removal of total sulfides.

Historical Perspective. There is indication, both in the Final Order and in witness Kurien's and witness Porter's testimony, that it is the southern half of Aloha's Seven Springs division, around Wells 8 and 9, that is having the most problem with black water, and that the problem seemed to become a major problem shortly after those wells were placed on line. On page 29 of the Final Order, this Commission found:

> As an initial step to combat the "black water" problem, we note that shortly after Wells Nos. 8 and 9 were placed into service in late 1995, the complaints on "black water" sky-rocketed. OPC witness Biddy suspects that Wells Nos. 8 and 9 have hydrogen sulfides spikes. Also, those wells are the closest to the subdivisions experiencing the worst "black water" problems. Although Aloha's Seven Springs water system is totally interconnected, we believe than any solution to the "black water" problem must begin with Wells Nos. 8 and 9.

We believe that nothing has changed since that finding. Pursuant to the Final Order, the improvements were originally to be in place by December 31, 2003, and, because of the appeal and partial stay, that requirement was moved back to February 12, 2005. And yet, even as of the time of the March 8 administrative hearing, Aloha's witnesses indicated that no improvements

had been put on line for any wells. As noted by Aloha's counsel, the Partial Consummating Order required Aloha to "make improvements to its wells 8 and 9 and then to all its wells as needed to meet a goal of 0.1 mg/L of sulfides in its finished water . . . by no later than February 12, 2005."

Aloha's counsel argues that Aloha is currently meeting the 0.1 mg/L standard and was meeting this standard without any improvements even prior to February 12, 2005. Both the testimony of witness Levine and witness Kurien show that improvements are needed to Wells 8 and 9, whether it be removal, use of the hydrogen peroxide methodology, or upgrading the current chlorination methodology employed by Aloha. Witness Levine admitted that the chlorination "system as it currently exists . . . is in need of upgrading." Moreover, witness Kurien thought Well 9 particularly was "under-engineered" and the chlorination capability at that well was just not sufficient to handle the level of total sulfides found in that well.

Aloha requested the change in the standard in June, 2004 and the PAA Order proposing to approve the change was issued July 20, 2004. Up to the time of the issuance of the Partial Consummating Order on August 25, 2004, Aloha should have known that pursuant to the Final Order it had until February 12, 2005 to make improvements to Wells 8 and 9 designed to reduce the black-water and rotten-egg smell problems – some five and one/half months.

Specific treatment methodology. No witnesses disputed Aloha witness Porter's testimony that if removal of total sulfides is desired, it will be an extremely costly project, costing over $10 million. Based on a study completed in 2002 by witness Porter on the cost of conversion, he agreed that implementation of that process would likely result in at least a 100% increase in Aloha's rates. As stated in the PAA Order, oxidation would represent a significantly less expensive method of treatment. Aloha's estimated costs from that PAA Order are:

Treatment Option	Conceptual Capital Cost	Conceptual O&M Cost	Estimated Rate Impact
Packed Tower Aeration	$14,500,000	$3,100,000	261.95%
H2O2 Oxidation – Rental	$3,500,000	$390,000	43.85%
H2O2 Oxidation – Purchase	$4,000,000	$340,000	44.40%
Ozone Oxidation	$6,900,000	$520,000	72.99%
H2O2 Oxidation/Membrane – Rental	$11,800,000	$580,000	108.09%
H2O2 Oxidation/Membrane – Purchase	$12,300,000	$530,000	108.64%

During the hearing, Aloha witness Porter also noted that these figures were based on 2002 costs and the impact of inflation and shortages of certain materials could increase these estimates significantly.

While he declined to recommend a specific treatment, witness Kurien expressed reservations concerning the hydrogen peroxide process. He believes the method simply converts the sulfides to another form of sulfur and causes the sulfur load in the water to remain the same. Processing methods using chlorination and hydrogen peroxide are reversible oxidative methods that can result in the sulfides being reduced to either elemental sulfur or sulfate, but which may

be able, because of sulfur reducing bacteria and the dissipation of chlorine to chloride, to reform into sulfides. Therefore, the risk of reconversion to sulfides remains. Witness Kurien included, as Exhibit VAK-9 (Ex. 9) to his direct testimony, excerpts from a 1992 study which indicated that the oxidation of total sulfides can produce large amounts of elemental sulfur. The presence of elemental sulfur increases the turbidity of the water and can result in black water. If conditions that determine water quality change (from the time the water enters the distribution system until it arrives at the customers' meters), then there could be the reformation of hydrogen sulfide with its rotten-egg smell and tendency to react with the customers' copper pipes to form copper sulfide (black water). Witness Levine, in her Phase II Report, found that the sulfur in the water could be a problem within the transmission system of Aloha. Witness Sowerby also noted that elemental sulfur, under the right conditions, can be converted (or chemically reduced) back to sulfides leading to potential problems with black water.

Witness Kurien also noted that with Aloha's current treatment system, the level of total sulfides exceeded the stoichiometrical level of chlorine that could be added to the water, and as a result, elemental sulfur was always produced. The presence of elemental sulfur can cause problems because it can act as a hiding place for bacteria, which act on both elemental sulfur and sulfate to convert them back into sulfides. Witness Kurien maintains that with oxidation, there will always be some elemental sulfur, but that use of the hydrogen peroxide treatment methodology would allow the elemental sulfur to precipitate out and be filtered off. Based on a project undertaken by witness Levine in Hillsborough County, witness Kurien suggests that witness Levine is familiar with the process requirements. Therefore, witness Kurien suggests that if oxidation is the method chosen by Aloha, either the elemental sulfur should be filtered out, or a standard for elemental sulfur should be imposed to lessen the amount going into the domestic water supply consistent with witness Levine's findings in the Hillsborough study.

We note that there appears to be no simple tests for elemental sulfur, but the presence of sulfur might be ascertained by scanning with an electron micrograph. Witness Kurien agreed that there is currently no accepted test for elemental sulfur. However, he suggested testing the turbidity of the water before it is processed and again after it is processed, with the difference in the turbidity being indicative of the level of elemental sulfur present.

Witness Levine testified that a pilot test using hydrogen peroxide is being conducted and she was "pushing the limits" to determine what caused the adverse reactions to try to prevent them. While these tests are still occurring, so far, the results have shown no reversion to hydrogen sulfides. She also states several times that the goal of the testing is to produce stable water which does not experience reconversion. She anticipated several more months of tests before the exact treatment methodology will be refined for implementation on a system basis. Additionally, Aloha is being required to convert to the use of chloramines in place of chlorination for disinfection due to a similar change in treatment by TBWA. Because Aloha may purchase water from the TBWA system through the County, treatment methodologies must be consistent. Witness Levine sees benefits from the switch to chloramination, since both liquid chlorine and ammonium hydroxide raise the pH of the water, causing diminished likelihood of sulfide odor. The odor comes from total sulfides in a nonionized form. One of the results of using hydrogen peroxide for treatment is the addition of an oxidation step to stabilize the water.

It is important to make sure that the water is stable and whatever form the sulfur is in does not result in reversion or reaction.

Although it is clear that improvements are needed, it is also unclear what those improvements should be. OPC and the customers argue that if the hydrogen peroxide methodology is used, then it should also be coupled with the requirement for the removal of the elemental sulfur which will be formed by the oxidative process. However, we note that Aloha has hired two experts with over 30-years experience each addressing this type of problem. Therefore, we find that Aloha shall be allowed to follow the recommendations of these experts as long as some meaningful improvements to Wells 8 and 9 are made by October 1, 2005. Based on the record, if the utility opts for a treatment which converts rather than removes total sulfides, it shall provide an analysis to the Commission within 60 days of the issuance of this Order on elemental sulfur filtration options as described below.

Report Parameters. The analysis of the options for elemental sulfur filtration shall address all options that have been tested or implemented for water treatment systems for the control of hydrogen sulfide. For each filtration method or approach, at a minimum, the following information shall be provided:

1. A detailed description of the method;
2. A description of any additional equipment necessary to implement the method;
3. An estimate of the cost of the implementation of the method, including equipment and any periodic maintenance necessary to ensure proper performance of the method;
4. The name of the entities that have tested or implemented the method and a brief description of the utility (size, private or public, location and any other facts which would have a bearing on the use of the method);
5. The nature of the problem filtration was employed to address;
6. The results achieved by the methods and whether the entity implemented the process on a full or partial basis for daily operations; and
7. If the entity tested but chose not to deploy the method as a part of its treatment process, explain the rationale for rejecting its use.

We note that Docket No. 050018-WU, In re: Initiation of deletion proceedings against Aloha Utilities, Inc., for failure to provide sufficient water service consistent with the reasonable and proper operation of the utility system in the public interest in violation of Section 367.111(2), Florida Statutes, has been opened and that there is some question whether some of the subdivisions will remain in Aloha's territory. Considering the possibility of appellate proceedings, there is little likelihood the deletion proceeding will be resolved in less than a year and it appears that Aloha's current customers will remain Aloha's customers for well over a year, even if we ultimately decide to delete the territory. Moreover, Aloha's own expert admits improvements are necessary to Wells 8 and 9. Witness Levine states that the goal of the testing is to ensure that the water remains stable under different scenarios. It is also clear from witness Levine's testimony and previous research work that she is familiar with the impact of elemental sulfur and potential remedies for addressing the issue. Therefore it should not be a significant

additional burden for her to apply her previous findings in refining the methodology that will be employed by Aloha.

In conclusion, consistent with our past decisions, we will not order a specific treatment methodology. The hydrogen peroxide treatment or other upgrade proposed by Aloha shall be given a chance to work. However, if Aloha opts for a treatment which converts rather than removes total sulfides, it shall provide an analysis to this Commission within 60 days of the issuance of this Order on elemental sulfur filtration options as described above.

VI. Specific Testing Locations, Frequency and Number of Tests, and Required Reporting

In their protest, the Customers questioned whether compliance with the goal or standard should be determined based upon samples taken at least once a month at a minimum of two sites at domestic meters most distant from each of the multiple treatment facilities with such sites rotated to provide the greatest likelihood of detecting any departure from the maximum levels permitted. Earlier in this Order, we found that Aloha should be required to attain the goal for total sulfides in the finished water by testing Aloha's finished water at the utility's plant sites and at the field (bacteriological test) sites. Also, when Aloha begins purchasing water from the County (County), the goal for the field sites shall be set by testing the County water at the interconnection point and will be the higher of either the County total sulfide level or the 0.1 mg/L level. In this section of the Order, we address: (1) the frequency of the testing; (2) the number of tests and specific locations that should be used to determine compliance; and (3) the reporting requirements.

A. Summary of Parties' Arguments

1. Aloha's Arguments

Aloha argues that testing the water at the "domestic meters most distant from each of the multiple treatment facilities and at multiple and ever changing locations" is nonsensical, provides useless information, and is "not analogous to the Tampa Bay Water Authority's standard and method of measurement." Aloha argues that such a test would "have absolutely no relationship to the treatment facilities upon which the location of those tests are based," tell you nothing, be useless, provide much less benefit to the customers, and be unprecedented in the industry. Aloha argues that both its witnesses Levine and Porter testified that the purpose of the test "was to provide feedback and process control to the treatment undertaken by the Utility."

Further, Aloha argues that field tests, such as those conducted at domestic meters, would be highly impractical and would lead to unacceptably low accuracy and precision. Witness Porter explained how the water from Aloha's wells is intermixed and that there is no direct correlation between what a particular water plant is doing and the water quality at a customer's home. He noted that if a water sample were tested in the distribution system, it may be two or three days old, and if it failed to meet the standard, the only conclusion is that a problem exists. It does not show where the problem is. To further complicate the issue, the water in the distribution system will already have been disinfected using chloramines, and the water cannot

be retreated for sulfides. He suggests that tests, if performed anywhere other than the plant sites, should be undertaken by a commercial laboratory.

Aloha argues that testing as proposed by witness Kurien "would incorporate tests of water from various sources, including water purchased from the County, over which Aloha has no control." Aloha alleges that "there are no tests required of any utility . . . that analyzes total sulfides at the individual retail customer meter." Utility witness Porter believes that water samples collected for testing should be gathered at the plant sites where sampling and test procedures can be closely controlled. He asserts that the best place to perform the test is at the point where the water enters the distribution system. Aloha notes that TBWA is a wholesale provider of water who provides large quantities to its member governments and does not provide water to any individual customers. Aloha also states that its proposed method of testing would be more equivalent to the TBWA standard and that witness Kurien's contention that testing at the end of the system would be more equivalent is without merit.

In conclusion, Aloha argues that the "training and expertise of over 30 years each in water treatment analysis, engineering, testing, etc." of its two experts "is clearly far superior to the extremely limited amount of knowledge and experience of witness Kurien in these areas." Based upon all the above, Aloha argues that "the clear and great weight of evidence demonstrates that witness Kurien's proposal for the location and frequency of testing for compliance is inappropriate, unnecessary and unsupported by competent or substantial evidence," and that we "must reject witness Kurien's proposal to impose those unprecedented, unworkable and useless testing proposals."

2. Customers' Arguments

Aloha's water comes from eight plant sites, and, in the future, Aloha may purchase additional finished water from the County with no guarantee that the County's water will meet the goal of 0.1 mg/L of sulfide in the finished water. The Customers are requesting that there be two tests for each well (16 total tests) at the outlet side of the domestic meter most distant from each well, and that these tests be taken monthly and rotated. However, the Customers recognize the need for flexibility, and state that they are willing to consider adjustments as long as they are "consulted before any change is made."

The Customers further note that the frequency and number of tests "is a function of the method of processing used, the excellence of process control and the efficacy of system management which in turn includes adequacy of facilities and the maintenance of hygiene in the infrastructure that distributes processed water." Although the Customers state that the decisions regarding these tests would normally "be the province of the utility," the Customers note that the "history of Aloha's unwillingness to address these responsibilities . . . so that delivered water remains stable in domestic plumbing will always remain a red flag for its customers . . . ." Also, the Customers argue that the DEP and this Commission "are remote and have not been effective in their supervision of the utility's day-to-day performance in relation to water quality during the last ten years."

If there is "consistent compliance certification at delivery points and reduction in customer complaints," the Customers state that it would "be appropriate to reduce the number of sites and frequency of tests for compliance." The Customers argue that "[t]he subjective assessments of customers of Aloha are essential for this process to become effective, because discoloration of water and rotten egg smell are more sensitive than even the standards that are being recommended at this time." The Customers further argue that "an adequate minimum of objective compliance measurements at the point of delivery will prevent subjective complaints of customers from holding the utility captive to non-provable claims of poor quality," and that disputes could be referred to the FDEP or the Commission.

3. OPC's Arguments

OPC agrees with the position of the Customers as to the frequency, number, and location of the sampling sites. Citing Exhibit 23, VAK-26 and 27, OPC notes that the TBWA Agreement calls for sampling to be done "at the Points of Connection," and that the maximum average would be calculated "using a running four quarterly sample average." OPC further states that Aloha's allegation that "annual sampling at the treatment facility" is "the norm at the TBWA" is "patently incorrect." Also, OPC notes that Aloha's witness Levine essentially agreed with Dr. Kurien stating that TBWA conducts its measurement "a few times a year" or quarterly. Because of the demonstrated problems with Aloha's water, OPC argues that the testing should be more frequent than TBWA, and should only be reduced to four times a year when Aloha can demonstrate that its delivered water is comparable to the water provided by TBWA.

B. Commission Analysis

Earlier in this Order, we decided that the test sites for compliance shall be the plant sites and the bacteriological/field test sites. The following discussion details how and when the tests shall be performed, and the requirements on the utility if any site fails to meet the specified goal.

Testing Frequency. The first round of tests for determining attainment of the goal shall be accomplished during the first five business days of November 2005. As to how frequently the tests should be accomplished, witness Kurien asserts that TBWA samples its water at least four times annually to assess compliance with its standard and suggests that, if Aloha intends to follow the example set by TBWA, it should test its water at least at this same frequency. Witness Porter maintains that the TBWA guidelines anticipated annual compliance reporting, even if multiple samples are taken more frequently.

Because this is both a new treatment process that has never been used and a new testing procedure, we find that the record supports more frequent testing, at least initially. Therefore, the testing periods shall be monthly for all plant sites and field sites, for the first three months (November and December 2005, and January 2006). Beginning in February 2006, quarterly testing periods shall be allowed for the plant and field sites, unless a plant or field site test exceeds the goal. If a plant or field site test exceeds the goal, it shall be retested monthly until the site achieves the goal for three consecutive months. When Aloha begins purchasing water from the County, the interconnection site shall be tested monthly so that the test results can be

used to establish the goal for the field test sites if the level of total sulfides in the County water exceeds 0.1 mg/L. In addition, as suggested by utility witness Porter, all field tests shall be performed by a commercial laboratory during the first five business days of each testing period.

Also, because flushing can temporarily increase the amount of chlorine residual in the water and reduce the hydrogen sulfide level, Aloha shall proceed with its normal flushing program. However, a temporary burst of chlorine could temporarily affect any test for sulfide, and any test taken immediately after flushing might not be indicative of the actual sulfide level which may be present under normal circumstances. Aloha's flushing reports show that some sites are flushed every weekday. Therefore, all tests for total sulfides shall be conducted prior to any flushing that is to be conducted for that day.

Number of Tests. All of the plant sites, as previously defined, shall be tested during each testing period (monthly or quarterly). Aloha estimated that each hydrogen sulfide test would cost approximately $107, plus possibly some cost for setup. However, there was nothing in the record about the costs for testing for total sulfides. If Aloha tested all thirty field (bacteriological) sites in each testing period, the cost for testing for hydrogen sulfide alone would be over $3,210. There would likely be additional costs for testing for the other sulfides. We believe that it is not necessary to test all 30 field sites in each testing period as described above. We find that testing ten field sites spread over the Seven Springs System in each testing period is enough for Aloha and this Commission to obtain an accurate picture of whether the sulfur or sulfate is converting back to sulfide in Aloha's distribution system.

Therefore, the field test sites shall be divided into three groups of ten, and one group of ten sites shall be tested during each testing period (monthly or quarterly). The first group of ten sites shall be tested in November 2005; the second group of ten sites shall be tested in December 2005; and the third group of ten sites shall be tested in January 2006. Subsequently, the first group of ten field sites tested in November 2005, shall be tested every third quarter, beginning in February 2006. The second group of ten sites, which were tested in December 2005, shall be tested every third quarter beginning in May 2006. The third group of ten sites which were tested in January 2006, shall be tested every third quarter beginning in August 2006. In determining the ten sites for each testing period, the sites shall be chosen so as to spread the tests over the Seven Springs Service Territory as evenly as possible. Any retesting of a field site, resulting from the site exceeding the goal, shall not count in the requirement to test ten field sites, unless it is in its normal rotation.

We have also found that the major problems with black water and rotten-egg smell are concentrated in the southern half of Aloha's Seven Springs territory. Looking at the map of Aloha's service territory, we estimate that the southern half of Aloha's Seven Springs territory begins south of the intersection of Mitchell Ranch Road and State Road 54. Therefore, in each testing period, at least six of the ten field site tests shall be taken south of the intersection of Mitchell Ranch Road and State Road 54. In the event there are not at least 18 field (bacteriological) sites in the southern half of Seven Springs, Aloha shall be allowed to use a southern test site more than once or create a new site, but, in any case, no field site shall be used more than twice in any three consecutive testing periods (unless it is a retest for a prior failure).

Based on this criterion, all of the plant sites, ten of the field sites, and, when Aloha begins purchasing from the County, the interconnection with the County shall all be tested during each regular testing period (monthly or quarterly). For purposes of retesting, the County water shall be tested monthly. In addition to those test sites, any plant or field sites which exceeded the goal will require retesting. As a result, when Aloha goes to quarterly testing, there may be retests in the intervening months for sites that exceed the goal in the prior month(s).

Reporting Requirements. By October 1, 2005, Aloha shall provide a list identifying the field sites to be included in each of the three groups of 10 field sites and a map identifying the field sites by test group.

By the last working day of November and December 2005, January and February 2006, and each subsequent quarter (May, August, November, etc.), Aloha shall file a report on the results of the tests. The report shall include the dates, specific location of each test site, and total sulfide levels found for each test site. For all quarterly reports beginning May 2006, Aloha shall provide, in addition, the same information for any retest sites that may have occurred in the intervening two months since the last quarterly report. In addition, if a plant or field site test exceeds the goal, the report shall include an analysis of the possible causes for exceeding the goal at each site, and any remedial action taken or proposed to be taken by Aloha to reduce the level of total sulfides at that site to the level prescribed by the goal.

All reports shall be filed with the Commission's Division of Commission Clerk and Administrative Services in this docket so Commission staff can monitor compliance with the established standard. If our staff believes the results should be brought to the Commission's attention, they may do so. Otherwise, the reports will remain on file. While the record does not address reporting requirements, we find that it is within our discretion to require follow-up reporting to ensure that the utility is continuing to meet the specified goal. Section 367.121(1)(c), F.S., states that we may require "such regular or emergency reports from a utility . . . as the commission deems necessary . . . ."

Summary. Based on all the above, we summarize our decision as follows:

Testing Frequency:

1. Monthly testing shall be required for all plant sites and field sites, for the first three months beginning November 2005.
2. Quarterly testing shall then be required for the plant and field sites, beginning February 2006, unless a plant or field site test exceeds the goal.
3. If a plant or field site test exceeds the goal, it shall be retested monthly until the site achieves the goal for three consecutive months.
4. When Aloha begins purchasing water from the County, the interconnection site shall be tested monthly.
5. All field tests shall be performed by a commercial laboratory during the first five business days of each testing period.

6. All tests in the field for total sulfides shall be conducted prior to any flushing that is to be conducted for that day.

`Number of Tests:

1. All of the plant sites shall be tested during each testing period.
2. The field (bacteriological test) sites shall be divided into three groups of ten and one group of ten sites shall be tested during each testing period. Any retesting of a field site, resulting from the site exceeding the goal, will not count in the requirement to test ten field sites unless it is in its normal rotation.
3. At least six of the ten field site tests shall be taken south of the intersection of Mitchell Ranch Road and State Road 54. No field site shall be used more than twice in any three consecutive testing periods (unless it is a retest for a prior failure).

Reporting Requirements:

1. By October 1, 2005, Aloha shall provide a list identifying the field sites to be included in each of the three groups of 10 field sites and a map identifying the field sites by test group.
2. By the last business day of November and December 2005, January and February 2006, and each subsequent quarter (May, August, November, etc.), Aloha shall file a report on the results of all tests performed during that testing period, including retests. The report shall include the dates, specific location of each test site, and total sulfide levels found for each test site. For all quarterly reports beginning May 2006, Aloha shall also provide the same information for any retest sites that may have occurred in the intervening two months since the last quarterly report. In addition, if a plant or field site test exceeded the goal, the report shall include an analysis of the possible causes for each site's exceeding the goal and any remedial action taken or proposed to be taken by Aloha to reduce the level of total sulfides at that site to the level prescribed by the goal.
3. All reports shall be filed with the Commission's Division of Commission Clerk and Administrative Services in this docket.

ISSUE OF LAW

VII. Authority of the Commission to Regulate, Impose, or Establish Drinking Water Standards, Maximum Contaminant Levels, Action Levels, or Treatment Technique Requirements

At the Prehearing Conference, Aloha questioned whether this Commission had the authority to take the contemplated actions and requested that this legal issue be added.

A. Arguments of the Parties

1. Aloha's Arguments

Aloha argues that "the 2002 per curiam appellate decision of the First District Court of Appeal is not a [sic] 'affirmance' of that portion of the PSC's Order [Final Order] which required that 98% of the hydrogen sulfide in Aloha's raw water be removed." Citing Department of Legal Affairs v. District Court of Appeal, 434 So. 2d 310 (Fla. 5th DCA 1983), Aloha states that the Florida Supreme Court recognized "that the District Courts of Appeal, which have addressed the issue of the effect of a per curiam affirmance, have been firm in holding that such has no precedential value and have consistently held that a per curiam decision without opinion cannot be cited as precedent." Because "[s]uch a decision does not establish any point of law, and there is no presumption that the affirmance was on the merits . . . Department of Legal Affairs, at 311," Aloha argues that "no appellate court has ever ruled that the PSC has the lawful authority to impose water quality standards."

Moreover, Aloha notes that pursuant to Section 367.121(1)(a), F.S., the Commission shall have the power:

> To prescribe fair and reasonable rates and charges, classifications, standards of quality and measurements, and to prescribe service rules to be observed by each utility, ***except to the extent such authority is expressly given to another agency.***

(emphasis supplied by the utility)

In the past, Aloha notes that this Commission "has consistently, and properly, deferred to the appropriate environmental protection agencies on water quality issues," and cited In re: Application of South Brevard Utility, Inc., 90 F.P.S.C. 4:438, 442 (1990), where despite many customers complaints about the water having a color and a strange odor, this Commission "found that 'there is no requirement for opacity or odor control established by DER . . . .'" Aloha then argues, as economic regulators, the Commission "may not impose an environmental standard that is greater than the standard set by the agency charged with enforcing various environmental standards." Aloha also cites In re: Application of RHV Utility, Inc., 95 F.P.S.C. 8: 115, 117 (1995), as a case where we explicitly deferred to the environmental protection authority and held "[a]s long as the utility appears to be cooperating with the agency of primacy in this area, our involvement is unnecessary."

Aloha notes that on numerous occasions we have dealt with the subject of hydrogen sulfide in the water of the utilities we regulate, and have "consistently observed that hydrogen sulfide is not harmful, that problems associated with it are typically localized in the customer's plumbing, and that the water in each of those cases nonetheless satisfied safe drinking water requirements." Aloha then cited eleven cases in support of its position, and stated that in each case, we chose not to extend our "jurisdiction to the implementation of water quality standards or water treatment protocols."

Aloha argues that we have "no lawful authority to stray into those areas of regulation whose implementation has expressly been reserved by state and federal law for environmental agencies . . . ," and that we have "only those powers granted by statute expressly or by necessary implication." Deltona Corp. v. Mayo, 342 So. 2d 510 (Fla. 1977)(citing Cape Coral v. GAC Utilities, Inc., 281 So. 2d 493 (Fla. 1973)). In Deltona, Aloha notes that this Commission found that whether Deltona had engaged in unfair business practice or committed fraud was not of statutory concern to the Commission. In Cape Coral, Aloha states that the Florida Supreme Court noted that:

1. All administrative bodies created by the Legislature are not constitutional bodies, but, rather, simply mere creatures of statutes;
2. The PSC's powers, duties and authority are those and only those that are conferred expressly or impliedly by statute of the State;
3. Any reasonable doubt as to the lawful existence of a particular power that is being exercised by the PSC must be resolved against the exercise thereof; and
4. The Legislature has never conferred upon the PSC a general authority to regulate public utilities.

Aloha argues that if this Commission "has jurisdiction to force a water treatment standard upon Aloha which exceeds any existing state or federal law . . . applied to any (much less all) other utilities, that authority would not logically be limited to the element of hydrogen sulfide," but also would extend to "odor, taste, clarity, or fitness for human consumption." And yet, Aloha argues that neither our "enabling statutes, nor its administrative rules even attempt to either establish any such standards or to provide when or how the implementation of any such standards would or could be appropriate." Aloha states that if we were to issue an Order requiring the higher standards, this would usurp the jurisdiction of those "state and federal agencies that do have jurisdiction over the water quality of Florida's regulated utilities," which would be "neither lawful nor appropriate."

In conclusion, Aloha argues that we should recognize that we do "not have the expertise to establish and enforce water quality standards." Further, Aloha states that in our PAA Order, we recognized that we had made a mistake when we required the 98% removal standard from all wells, and that in that same PAA Order, we declined "to prescribe the treatment methodology that Aloha should use in order to comply with the requisite treatment standard." Aloha concludes that we should not, again, attempt to extend our jurisdiction into areas beyond our expertise, as we did in our 2002 order to Aloha.

2. OPC/Customers' Arguments

In its Supplement to Post-Hearing Statements of Issues and Positions, allowed by the Prehearing Officer over Aloha's objections and Motion to Strike, OPC set out its argument as to why this Commission did have the authority to regulate, impose, or establish drinking water standards, maximum contaminant levels, action levels, or treatment technique requirements. OPC first cites Section 367.011(3), F.S., which states:

> The regulation of utilities is declared to be in the public interest, and this law is an exercise of the police power of the state for the protection of the public health, safety and welfare. The provisions of this chapter shall be liberally construed for the accomplishment of this purpose.

OPC goes on to note that "water quality is such an important issue that when setting rates," pursuant to Subparagraph 367.081(2)(a)1., F.S.:

> . . . In every such proceeding, the commission shall consider the value and quality of the service . . . .

OPC then cites subparagraph 367.121(1)(a), F.S., the same subparagraph cited by Aloha, and notes that the Commission has the power to prescribe "standards of quality and measurements" except to the extent that such power is limited or taken away by being expressly given to another state agency. OPC acknowledges that pursuant to Section 403.851, F.S., the responsibility for the safety of drinking water is shared between the Department of Environmental Protection and Department of Health.

However, OPC argues that the quality of water service is a much broader concept than safety, and that "water may be safe but still of inferior quality." OPC notes that in the case of City of North Miami Beach v. Metropolitan Dade County, 317 So. 2d 110 (Fla. 3d DCA 1975), cert. denied, 334 So. 2d 604 (Fla. 1976), "the Court found that the public health laws did not give the Department of Health and Rehabilitative Services [HRS] exclusive jurisdiction over water quality and services in Florida." The HRS attorney had argued that HRS and its agents had "final responsibility and general supervision and control over all systems of water supply insofar as their adequacy, sanitary and physical condition affect public health." Without addressing that argument, the court stated:

> It is sufficient for a determination of this case to point out that the Division's position does not conflict with the position taken here by Metropolitan Dade County. It is clear that the County does not seek to over-ride a validly-exercised state authority. It seeks rather to assert an authority of its own in order 'to regulate on a county-wide basis according to a uniform plan those municipal functions that are susceptible to, and could be most effectively carried on under, a regulatory plan applicable to the entire county.

OPC argues that, like the County in the above-noted case, "the Commission has its own, legislatively provided power to prescribe standards of quality and measurements." OPC further notes that staff DEP witness Sowerby "expressed no concern about the Commission applying additional standards to Aloha," and his concern was only that the utility would conduct tests "at locations and with frequency at least as great as those required" by DEP.

OPC concludes that we have "explicit authority to prescribe standards of quality and measurements, and nothing proposed in this case conflicts with rules of other state agencies." Finally, OPC argues that quality of service is a "core concern found in several sections of

Chapter 367, Florida Statutes, and the legislature has given this Commission jurisdiction over that aspect of the service provided by water and wastewater companies," and that this "Commission has ample authority to require Aloha to meet the standards proposed in this case."

B. Commission Analysis

Aloha argues that "the 2002 *per curiam* appellate decision is not an 'affirmance' of that portion of the PSC's Order which required that 98% of the hydrogen sulfide in Aloha's raw water be removed." Aloha is confusing "precedential value," i.e., a per curiam affirmance cannot be used for precedential purposes, with what the appellate court did. The appellate court affirmed the entire Final Order, which included a requirement that Aloha, because of unsatisfactory quality of service, remove 98% of the hydrogen sulfide in Aloha's raw water.

The legality of the 98% removal requirement was squarely before the 1st DCA. Aloha's Initial Amended Brief filed at the 1st DCA raised the issue:

> THE COMMISSION'S ORDER DIRECTING ALOHA TO IMPLEMENT A TREATMENT PROCESS DESIGNED TO REMOVE AT LEAST 98% OF THE HYDROGEN SULFIDE IN ALOHA'S RAW WATER IS NOT SUPPORTED BY COMPETENT, SUBSTANTIAL EVIDENCE AND EXCEEDS THE COMMISSION'S LAWFUL JURISDICTION.

When making its arguments to the Court, Aloha relied on the same cases and orders in its appellate brief as it now does in its Post-Hearing Memorandum. While the per curiam affirmance may not have any precedential value that "the PSC has the lawful authority to impose water quality standards," Aloha's arguments have previously not been accepted by the court.

We disagree with Aloha's argument that this Commission lacks the authority to impose a water quality standard, and agree with the legal argument of OPC. Pursuant to Sections 367.011(2) and (3), 367.081(2)(a)1., 367.111(2), and 367.121(1)(a), (c) and (d), F.S., we have jurisdiction over the quality of service provided by Aloha, and pursuant to Section 367.011(3), F.S., the provisions concerning quality of service shall be liberally construed. Section 367.111(2), F.S., provides in pertinent part:

> Each utility shall provide to each person reasonably entitled thereto such safe, efficient and sufficient service as is prescribed by Part VI of chapter 403 and parts I and II of Chapter 373, or rules adopted pursuant thereto; but such service shall not be less safe, less efficient, or less sufficient than is consistent with the approved engineering design of the system and the reasonable and proper operation of the utility in the public interest.

We have initiated show cause proceedings against Aloha in Docket No. 050018-WU because of the poor quality of service experienced by Aloha's customers, and one of the statutes we relied on in doing so was Section 367.111(2), F.S. Aloha may or may not be violating any

DEP or HRS standards, and yet we have found it proper to initiate the deletion proceeding based in part on this section.

Moreover, Sections 367.121(1)(a), (c) and (d), F.S., provide in pertinent part:

> (1) In the exercise of its jurisdiction, the commission shall have power:
> (a) To prescribe fair and reasonable rates and charges, classifications, standards of quality and measurements, and to prescribe service rules to be observed by each utility, except to the extent such authority is expressly given to another state agency.
> * * *
> (c) To require such regular or emergency reports from a utility . . .
> (d) To require repairs, improvements, additions, and extensions to any facility, if reasonably necessary to provide any reasonably prescribed quality of service . . . .

We have previously determined that Aloha's quality of service was unsatisfactory and required Aloha to remove 98% of the hydrogen sulfide from its raw water, and that decision was affirmed by the appellate court. It was only after Aloha petitioned this Commission to modify the standard that we issued our PAA Order. The question then became how should the requirement affirmed by the court be modified, not if there should or could be a standard at all. Rule 25-30.433(1), F.A.C., governs our action in considering quality of service, and that rule requires us to consider: (1) the quality of the utility's product; (2) the operational conditions of the utility's plant and facilities; and (3) the utility's attempt to address customer satisfaction. The utility's attempt to address customer satisfaction is not governed by whether the utility is complying with EPA or DEP standards. In issuing our Final Order, we followed this rule.

Aloha's reliance on the language "except to the extent such authority is expressly given to another state agency," in Section 367.121(1)(a), F.A.C., is misplaced. In City of North Miami Beach, the Third DCA determined that the public health laws did not give HRS exclusive jurisdiction over water quality and services in Florida, and that the County was appropriately seeking to assert authority of its own. Likewise, the Legislature has provided this Commission with authority to review the quality of service provided by water and wastewater utilities and require improvements as we deem necessary.

On page 23 of its Post-Hearing Memorandum, Aloha cites eleven orders in which we dealt with the subject of hydrogen sulfide in the water of other utilities and in which it argues that we declined to require those utilities to take any action. Those eleven orders are:

1) In re: Application of Pennbrooke Utilities, Inc., 01 F.P.S.C. 6: 75, 81 (2001) [Order No. PSC-01-1246-PAA-WS, Docket No. 001382-WS];
2) In re: Application of United Water Florida, Inc., 97 F.P.S.C. 5: 641, 648-650 (1997) [Order No. PSC-97-0618-FOF-WS, Docket No. 960451-WS];
3) In re: Application of Heartland Utilities, Inc., 96 F.P.S.C. 11:268, 270-72 (1996)[Order No. PSC-96-1389-FOF-WU, Docket No. 960517-WU];

4) In re: Application of JJ's Mobile Homes, Inc. (JJs), 95 F.P.S.C. 10: 480, 485-87 (1995) [Order No. PSC-95-1319-FOF-WU, Dockets Nos. 921237-WS and 940264-WS];
5) In re: Application of Lake Josephine Water, 95 F.P.S.C. 8:389, 390-91 (1995) [Order No. PSC-95-1044-FOF-WS, Docket No. 950020-WU];
6) In re: Application of St. George Island Util. Co., Ltd., 94 F.P.S.C. 11: 141, 146-49 (1994) [Order No. PSC-94-1383-FOF-WU, Docket No. 940109-WU];
7) In re: Application of Ocean City Utilities, Inc., 94 F.P.S.C. 3: 97, 99 (1994) [Order No. PSC-94-0244-FOF-WU, Docket No. 920736-WSU];
8) In re: Application of CGD Corp., 93 F.P.S.C. 1: 70, 71 (1993) [Order No. PSC-93-0011-FOF-WS, Docket No. 920937-WS];
9) In re: Application of Springside at Manatee, Ltd., 92 F.P.S.C. 4: 213, 214 (1992) [Order No. PSC-92-0190-FOF-WS, Docket No. 910909-WS];
10) In re: Application of Laniger Enterprises of America, Inc., 91 F.P.S.C. 7: 341, 342 (1991) [Order No. 24817, Docket No. 900945-WS]; and
11) In re: Application of Fisherman's Cove of Stuart, Inc., 91 F.P.S.C. 3: 656, 658 (1991) [Order No. 24284, Docket No. 900654-WS].

Having reviewed those orders, we find that there are some common themes. As previously stated, pursuant to Rule 25-30.433(1), F.A.C., we consider the utility's attempt to address customer satisfaction. In doing so, we review the number of complaints, the severity of the complaints, the utility's attempt to respond to its customers' concerns, and the utility's cooperation with regulatory agencies. While we give great deference to the findings of DEP and the county health departments, we have repeatedly indicated that compliance with all primary, or even secondary standards, does not mean that the quality of service must be found to be satisfactory and that the utility need do nothing further.

In the United Water Florida and JJ's orders cited above, even though we found that the quality of service was satisfactory, we nevertheless required the utilities to take further action to address water problems. Finally, in each of the eleven orders, we either found that the quality of service was satisfactory or made no final pronouncement on the quality of service. In most of the orders, we noted that the utilities were taking measures to address the problem and were trying to respond to the customers concerns and be cooperative. Because of this cooperation and the utilities' efforts to resolve their problems, it was unnecessary for us to intercede or become involved, except as noted in United Water Florida and JJ's. Seven of the utilities were using some form of aeration to reduce the hydrogen sulfide level, and another utility was using two points of chlorination to try to keep the residual free chlorine at appropriate levels. At least seven of the Orders addressed very minimal customer complaints. For Springside at Manatee and Laniger there was only one customer complaint about odor for each utility, and for Laniger that complaint may have been against the wastewater treatment plant. Aloha's reliance on these orders is not persuasive.

We find that Aloha's situation is much worse than even the situations described in the United Water Florida and JJ's, the worst cases noted above. Concerning quality of service, United Water Florida had only 27 customers out of 28,500 testify, and JJ's had only 16

customers testify. In the hearing in this case, with a customer base considerably less than United Water Florida, Aloha had 29 customers testify and complain of black or discolored water, odor/taste problems, low pressure, and or sediment/sludge. See, Final Order, page 8. In the JJ's and United Water Florida cases, although the quality of service was found to be satisfactory, we required the utilities to take additional action. In this case, we found the customer testimony to be persuasive that the quality of service was unsatisfactory and that additional actions were required. Moreover, a review of our decisions shows that Aloha's customers have complained about black and smelly water for almost ten years and, as of the date of the hearing, it appears that Aloha has still not fixed the problem.

In its closing paragraph, Aloha argues that we do not have "the expertise to establish and enforce water quality standards," and that we should not again attempt to extend our jurisdiction into areas beyond our expertise, as we did in our 2002 Final Order. However, we note that this current process began upon Aloha's petition for us to modify the 98% removal standard to a more attainable standard. Therefore, the original question was not whether we could require additional actions and set standards, but how should the standard be modified. Aloha is now attempting to go back to the same position it took when it appealed the Final Order.

In conclusion, while we find that we should not use the terms drinking water standard or "maximum contaminant level" because of the use and meaning attached to them by DEP and EPA, we further find that there is no question but that we have jurisdiction over the quality of service provided by a utility and can require the utility to take specific actions to improve the quality of service. See, Sections 367.011, 367.081(2), 367.111(2), 367.121(1)(a), (c) and (d), F.S. Also, we have already ordered the utility to remove 98% of the hydrogen sulfide from its finished water and make improvements to its wells to improve the quality of service when we issued our previous Final Order in this case, and that Final Order was per curiam affirmed. Therefore, the question should not be whether we can require certain actions, but how should the previous Final Order be modified, and how to measure when additional actions are required, and what those actions will be.

Based on the foregoing, it is

ORDERED by the Florida Public Service Commission that the reference to total sulfide in the finished water of 0.1 mg/L shall be stated as a goal with specific actions to be taken if that goal is not consistently reached. It is further

ORDERED that attainment of the goal shall be determined by testing Aloha's water for total sulfides at the utility's plant sites as it first enters the distribution system and at field (bacteriological) sites which are distributed throughout the utility's service area. It is further

ORDERED that the goal for the plant sites shall be 0.1 mg/L of total sulfides. It is further

ORDERED that when Aloha Utilities, Inc., begins to purchase water from Pasco County, the County water shall be tested monthly for total sulfides in the same manner as all test sites,

and the goal for the bacteriological field test sites shall be the higher of the total sulfides level in the County water or 0.1 mg/L of total sulfides in the water. It is further

ORDERED that as determined in Order No. PSC-02-0593-FOF-WU, issued April 30, 2002, in this docket, we found Aloha's quality of service to be unsatisfactory, and failure to substantially obtain the goal of 0.1 mg/L of total sulfides in the finished water, or the higher level of the County if the purchased County water has a higher level, shall constitute continued provision of unsatisfactory quality of service which is not in the public interest. It is further

ORDERED that Aloha Utilities, Inc. shall be put on notice that meeting the goal does not relieve Aloha from ultimately addressing the black and smelly water complaints. In addition, we retain the option to take additional action as appropriate in the future to address customer complaints, even if Aloha is meeting the 0.1 mg/L goal. It is further

ORDERED that the hydrogen peroxide treatment or other upgrade proposed by Aloha shall be given a chance to work. However, if the utility opts for a treatment which converts rather than removes total sulfides, it shall file a report within 60 days of the issuance of this Order with an analysis on elemental sulfur filtration options as described in the body of this Order. It is further

ORDERED that, as described in the body of this Order, monthly testing shall be required for all plant sites and field sites for the first three months, beginning November 2005. It is further

ORDERED that quarterly testing shall then be required for the plant and field sites, beginning February 2006, unless a plant or field site test exceeds the goal. It is further

ORDERED that if a plant or field site test exceeds the goal, it shall be retested monthly until the site achieves the goal for three consecutive months. It is further

ORDERED that all field tests (bacteriological test sites) shall be performed by a commercial laboratory during the first five business days of each testing period, and shall be conducted prior to any flushing that is to be conducted for that day. It is further

ORDERED that all of the plant sites shall be tested in the first five days of each testing period. It is further

ORDERED that the field test sites shall be divided into three groups of ten, and one group of ten sites shall be tested during each testing period. In determining the ten sites for each testing period, the sites shall be chosen so as to spread the tests over the Seven Springs Service Territory as evenly as possible. It is further

ORDERED that any retesting of a field site, resulting from the site exceeding the goal, will not count in the requirement to test ten field sites unless it is in its normal rotation. It is further

ORDERED that at least six of the ten field site tests shall be taken south of the intersection of Mitchell Ranch Road and State Road 54, and no field site shall be used more than twice in any three consecutive testing periods (unless it is a retest for a prior failure). It is further

ORDERED that by October 1, 2005, Aloha shall provide a list identifying the field sites to be included in each of the three groups of 10 field sites and a map identifying the field sites by test group. It is further

ORDERED that by the last business day of November and December 2005, January and February 2006, and each subsequent quarter (May, August, November, etc.), Aloha shall file a report on the results of all tests performed during that testing period, including retests. The report shall include the dates, specific location of each test site, and total sulfide levels found for each test site. It is further

ORDERED that for all quarterly reports beginning May 2006, Aloha shall also provide the same information for any retest sites that may have occurred in the intervening two months since the last quarterly report. It is further

ORDERED that if a plant or field site test exceeded the goal, the report shall include an analysis of the possible causes for exceeding the goal at each site, and any remedial action taken or proposed to be taken by Aloha to reduce the level of total sulfides at that site to the level prescribed by the goal. It is further

OREDERED that all reports shall be filed with the Commission's Division of Commission Clerk and Administrative Services in this docket. It is further

ORDERED that the stipulation that the docket shall remain open pending final disposition of the refund requirement for the appeals period is approved.

By ORDER of the Florida Public Service Commission this 29th day of June, 2005.

/s/ Blanca S. Bayó
BLANCA S. BAYÓ, Director
Division of the Commission Clerk
and Administrative Services

This is a facsimile copy. Go to the Commission's Web site, http://www.floridapsc.com or fax a request to 1-850-413-7118, for a copy of the order with signature.

(SEAL)

RRJ

Dissent of Commissioner Lisa Polak Edgar:

I respectfully dissent from the majority's decision limiting the location of testing for assessment of compliance with the 0.1 mg/L goal to the plant and field sites as prescribed in the Order. An efficient and effective sampling regime for testing at specifically identified customer meters, the point where the utility's responsibility ends and the customer / property owner's responsibility begins, would provide useful information to the customers, the utility, and the Commission. This additional sampling data would also be beneficial should there be future questions regarding whether the specified goal has been "consistently reached" as discussed on page 10 above. It is my opinion that the potential logistical concerns raised are manageable and resolvable.

Chapter 367, F.S., provides the Commission with jurisdiction over quality of service. This is consistent with, and complementary to, the authority of health and environmental agencies for water quality standards. I encourage further discussions by the Commission and its staff with other regulatory agencies and interested parties to consider statewide quality of service standards and other measures to further assure that Aloha's customers and all areas of Florida receive safe, high quality water with acceptable taste, odor and color.

NOTICE OF FURTHER PROCEEDINGS OR JUDICIAL REVIEW

The Florida Public Service Commission is required by Section 120.569(1), Florida Statutes, to notify parties of any administrative hearing or judicial review of Commission orders that is available under Sections 120.57 or 120.68, Florida Statutes, as well as the procedures and time limits that apply. This notice should not be construed to mean all requests for an administrative hearing or judicial review will be granted or result in the relief sought.

Any party adversely affected by the Commission's final action in this matter may request: 1) reconsideration of the decision by filing a motion for reconsideration with the Director, Division of the Commission Clerk and Administrative Services, 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399-0850, within fifteen (15) days of the issuance of this order in the form prescribed by Rule 25-22.060, Florida Administrative Code; or 2) judicial review by the Florida Supreme Court in the case of an electric, gas or telephone utility or the First District Court of Appeal in the case of a water and/or wastewater utility by filing a notice of appeal with the Director, Division of the Commission Clerk and Administrative Services and filing a copy of the notice of appeal and the filing fee with the appropriate court. This filing must be completed within thirty (30) days after the issuance of this order, pursuant to Rule 9.110, Florida Rules of Appellate Procedure. The notice of appeal must be in the form specified in Rule 9.900(a), Florida Rules of Appellate Procedure.