State of Florida

Public Service Commission

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TALLAHASSEE, FLORIDA 32399-0850

-M-E-M-O-R-A-N-D-U-M-

DATE: JUNE 8, 2000

TO: DIRECTOR, DIVISION OF RECORDS AND REPORTING (BAYÓ)

FROM: DIVISION OF REGULATORY OVERSIGHT (WALDEN)
DIVISION OF ECONOMIC REGULATION (MONIZ)
DIVISION OF LEGAL SERVICES (FUDGE, JAEGER)

RE: DOCKET NO. 960545-WS - INVESTIGATION OF UTILITY RATES OF ALOHA UTILITIES, INC. IN PASCO COUNTY.
COUNTY: PASCO

AGENDA: JUNE 20, 2000 - REGULAR AGENDA - POST HEARING DECISION - PARTICIPATION IS LIMITED TO COMMISSIONERS AND STAFF

CRITICAL DATES: NONE

SPECIAL INSTRUCTIONS: NONE

FILE NAME AND LOCATION: S:\PSC\RGO\WP\960545.RCM

CASE BACKGROUND

Aloha Utilities, Inc. (Aloha or utility), is a class A water and wastewater utility in Pasco County. The utility consists of two distinct service areas — Aloha Gardens and Seven Springs. As of December 31, 1997, Aloha was serving approximately 8,457 water customers in its Seven Springs service area.

On April 30, 1996, Mr. James Goldberg, President of the Wyndtree Master Community Association, filed a petition, signed by 262 customers within Aloha's Seven Springs service area, requesting that the Commission investigate the utility's rates and water quality. The petition and request were assigned Docket No. 960545-WS, and a formal hearing was scheduled.

For the purposes of the initial hearing (First Hearing), Docket No. 960545-WS was consolidated with Docket No. 950615-SU (Aloha's reuse case). The First Hearing was held on September 9-

10, 1996 in New Port Richey, and concluded on October 28, 1996 in Tallahassee. Customer testimony concerning quality of service was taken on September 9, 1996. Customer testimony sessions were attended by more than 500 customers, fifty-six of whom provided testimony about the following quality of service problems: black water, pressure, odor, and customer service related problems. The customers also provided many samples of black water.

After evaluation of the evidence taken during the First Hearing, the Commission rendered its final decision by Order No. PSC-97-0280-FOF-WS (Final Order), issued on March 12, 1997. In that Order, the Commission determined that the quality of service provided by Aloha's water system was unsatisfactory. The Commission ordered Aloha to evaluate the treatment alternatives for removal of hydrogen sulfide from its water and prepare a report that addresses this evaluation. In addition to finding the quality of the utility's water to be unsatisfactory, the Commission found that "the utility's attempts to address customer satisfaction and its responses to customer complaints are unsatisfactory. These management practices of Aloha concern us, and will be further addressed in Docket No. 960545-WS, which is to be kept open."

On June 12, 1997, Aloha filed its engineering report (EXH 12), recommending that it be allowed to continue adjusting the corrosion inhibitor dosage level in an ongoing effort to eliminate the black water problem. Aloha also recommended that if hydrogen sulfide treatment facilities were required, then the option of constructing three central water treatment plants which utilize packed tower aeration should be approved. Aloha estimated that construction and operation of the three treatment plants and other water system upgrades would increase customer rates by 398 percent.

On November 26, 1997, by Order No. PSC-97-1512-FOF-WS, the Commission concluded that more investigation was needed and ordered the utility to survey its Seven Springs customers to determine the extent of the quality of service problems and to determine if the customers were willing to pay for new treatment facilities that were not required by any current Department of Environmental Protection (DEP) or Environmental Protection Agency (EPA) rule and which would increase their water rates. Aloha distributed 8,597 surveys and the Commission received 3,706 responses. Also, as a follow-up to the survey, the Commission conducted an on-site survey on July 17, 1998.

In a June 5, 1998 letter to the Commission, Aloha stated that it was willing to begin construction of three centrally located packed tower aeration treatment facilities to remove hydrogen

sulfide from the source water. Aloha was willing to proceed with this upgrade to address customer quality of service concerns and to comply with future EPA regulations. However, before commencing construction of these water treatment facilities, Aloha requested that the Commission issue an order declaring that it was prudent for Aloha to construct these facilities.

This request was considered at the December 15, 1998 Agenda Conference. Also, the Commission again considered whether there was a water quality problem in Aloha's Seven Springs service area and, if so, what further actions were required.

Pursuant to the decisions at that agenda conference, on January 7, 1999, the Commission issued Proposed Agency Action Order No. PSC-99-0061-FOF-WS, (PAA Order) determining that the Commission should take no further actions in regards to quality of service in this docket and closing the docket. Also by final action the Commission denied the utility's request for an order declaring it to be prudent to begin construction of three central water treatment facilities. By that Order, the Commission required any protests to be filed by January 28, 1999 in order to be timely.

Subsequently, three customers – Edward O. Wood, James Goldberg, and Representative Mike Fasano, filed timely protests to the PAA Order, and requested a formal hearing. Based on these protests, another formal hearing (Second Hearing) was scheduled for September 30 and October 1, 1999.

However, the Second Hearing was rescheduled several times and Prehearing Conferences were held on November 15, 1999 and March 22, 2000. The Second Hearing was held on March 29-30, 2000, in New Port Richey, Florida, with customer testimony being taken in two sessions on March 29, 2000. Several hundred customers attended each session and approximately 50 customers testified. The technical portion of the hearing began on March 30, 2000, in New Port Richey and was continued and concluded on April 25, 2000, in Tallahassee, Florida.

All late-filed exhibits were to be filed by May 9, 2000. Briefs were originally scheduled to be filed on May 16, 2000, but, pursuant to motion of the utility, all parties were given until May 19, 2000 to file their briefs.

All late-filed exhibits, except Exhibit 5, were timely filed. At the hearing on March 29, 2000, the Commission requested from Mr. Sandy Mitchell a copy of the analysis of his water by Halstead Metal Products. That document was marked as Exhibit 5 – Late

Filed. On May 1, 2000, staff informed Mr. Mitchell that the Commission had not received Exhibit 5 - Late Filed, and requested that he submit it as soon as possible. Mr. Mitchell responded on May 3, 2000, stating that he could not locate the results of the water test, but would continue to look for it. Staff then informed Mr. Mitchell that it needed to be filed by May 9, 2000. However, Exhibit 5 - Late Filed has not been received.

Briefs were timely filed on May 19, 2000. Also, on May 19, 2000, the Office of Public Counsel (OPC) filed its Motion to Strike Exhibit Testimony (Motion). In that Motion, OPC specifically requested that Late-Filed Exhibit 13 be stricken in its entirety. The utility filed its timely response to this Motion to Strike on May 30, 2000.

This recommendation addresses OPC's Motion to Strike, the utility's response, the two issues identified at the Prehearing Conferences and whether this docket should be closed.

STIPULATIONS AT HEARING

At the Second Hearing, the parties stipulated to, and the Commission accepted, the following stipulations:

1. Stipulated that the prefiled direct testimony of Pete Screnock would be admitted and that he would be excused from cross-examination.

2. Stipulated that the prefiled direct testimony and exhibits of Robert C. Nixon would be admitted and that he would be excused from cross-examination.

3. Stipulated that, in addition to Exhibit 1 attached to Mr. Watford's Rebuttal Testimony, that Exhibit 2 should also be stricken. Also, his prefiled rebuttal testimony would be stricken starting on page 1, line 18, through page 3, line 17.

4. Stipulated that for Mr. Porter's rebuttal testimony that only lines 3 through 14, on page 33, should be stricken.

5. Stipulated that the first eight pages of Exhibit 3, memorandums attached to the Pasco County Black Water Study, would be removed and not admitted, but that pages 9 through 99 of Exhibit 3 would be admitted.

6. Stipulated that pages 19, 22, 24, and 27 of Aloha's 1998 annual report would be admitted. (Exhibit 18)

7. Stipulated that Mr. Porter's testimony in regard to his trips to customer residences would be limited to his comments to what he saw, what he did, and what he understood the customers' concerns were.

OFFICIAL NOTICE

The Commission ruled that it would take official notice of the following:

1. Order No. 19093, issued April 4, 1988, in Docket No. 870532-WS; Order No. PSC-96-1320-FOF-WS, issued October 30, 1996, in Docket No. 950495-WS; and, Order No. PSC-99-0513-FOF-WS, issued March 12, 1999, in Docket No. 980214-WS; and

2. Section 341.101, Adoption of Standard Plumbing Code, City of Jacksonville, Florida. (Exhibit 17)

DISCUSSION OF ISSUES

ISSUE A: Should the Commission grant the Office of Public Counsel's Motion to Strike Exhibit Testimony which requested that the utility's Late-Filed Exhibit 13 be stricken in its entirety?

RECOMMENDATION: The Office of Public Counsel's Motion to Strike Exhibit Testimony should be granted in part and denied in part. The second full paragraph on page 2 of the exhibit and the attached newspaper article should be stricken in their entirety. The rest of Late-Filed Exhibit 13 should be admitted. (FUDGE, JAEGER)

STAFF ANALYSIS: The utility timely filed its Late-Filed Exhibit 13 (Exhibit) on May 9, 2000. On May 19, 2000, OPC filed its Motion to Strike Exhibit Testimony (Motion to Strike) which requested that the utility's Late-Filed Exhibit 13 be stricken in its entirety.

In its Motion to Strike, OPC notes that it is a time-honored procedure to allow the utility "to file a general response to the testimony offered by customer witnesses . . . [which] allows the utility to respond to an inherent lack of notice in customers' testimony offered at hearing." However, OPC claims that the response of the utility ranges well beyond this limited purpose in at least two aspects. First, OPC states that the utility's response is replete with a reiteration of the utility's case-in-chief. Second, OPC states that the Exhibit ranges and meanders well beyond any evidence properly placed before the Commission in the utility's written and rebuttal testimony, and even attempts to place newspaper articles in the record. OPC argues further that the newspaper article is untested hearsay and is irrelevant to any issue in this matter.

The utility timely filed its Response to OPC's Motion to Strike on May 30, 2000. The utility states that "to the extent any portion of Late-Filed Exhibit 13 is 'untested hearsay' then the well-established tenets of administrative law determine the appropriate weight to be given that evidence." Citing transcript page 538, Aloha further argues that the Exhibit was merely the utility's response to customer complaints presented at hearing as requested by the Commission.

Finally, Aloha argues that OPC's Motion to Strike does not assert that the Exhibit was not a result of a procedure that OPC, the Commission and Aloha all agreed to in the first part of the

bifurcated proceeding, and that OPC "merely says in a cursory and conclusory way that the exhibit goes 'too far.'" Aloha concludes that hearsay evidence can only support a finding of fact if it is corroborated by evidence that is competent and substantial. Based on the above, Aloha requests the Commission to deny OPC's Motion to Strike.

In considering OPC's Motion to Strike, staff notes that the utility's attorney at the hearing on April 25, 2000, specifically agreed that:

> to the extent that Mr. Porter's testimony does address the concerns of customers and his trips to their residences, we will not ask and he will not offer testimony, about, well, the customer said this, the customer had a revelation, the customer felt better after he talked to me, the customer said I see the problem now, none of that. It is just what he saw, what he did, what he understood the customer's concerns were. (TR 988, lines 12-20).

Staff believes that there are several "borderline" instances where the Exhibit may have violated this agreement (Stipulation 7), and that there is one clear violation.

Staff believes that the clear violation occurs on page 2 of the Exhibit, in the second full paragraph. In that paragraph, the Exhibit refers to and discusses a "letter to the editor" written by one of the customers visited by Mr. Porter, and that letter is attached to the Exhibit. Staff agrees with OPC that this letter and any reference to this letter is improper and should be stricken. Therefore, staff recommends that the second full paragraph on page 2 of the Exhibit and the attached newspaper article be stricken in their entirety.

Staff notes that OPC's Motion to Strike does not specifically point out other offenses that OPC found objectionable, but merely argues that the Exhibit ranges well beyond the limited purpose of allowing the utility to respond to an inherent lack of notice in customers' testimony offered at hearing. Staff has reviewed the Exhibit and notes that there are several instances where the utility could be said to have violated its agreement (as quoted above) as to what the Exhibit would not contain.

First, on the first page of the Exhibit, in the third and fourth paragraphs, the utility discusses customer comments about the efficacy of removal of the magnesium sacrificial anode and the

replacement of copper piping with CPVC pipe. This could be interpreted as violating the agreement reached at hearing not to put in customer commentary.

Second, in the fourth paragraph of the second page, the utility states: "Each customer expressed a desire to learn the technical facts . . . and stated that they were pleased to receive individual answers to their questions." Also, in attempting to set up meetings with the customers, the utility unnecessarily quoted Mr. Hawcroft and Mr. Wood when they declined to have the utility come to their home.

Finally, staff notes that for Mr. Lane, Mr. Bagnato, and Mr. Hennessy, the utility stated that these customers had commented about the effectiveness of the removal of the magnesium sacrificial anode and the replacement of copper piping with CPVC pipe. Mr. Lane and Mr. Bagnato apparently commented about the effectiveness of the removal of the anode, and Mr. Hennessy apparently commented about the effectiveness of the replacement of copper piping with CPVC piping.

Although there may be other instances to which OPC objects, staff believes that in the rest of the Exhibit, the engineer for Aloha complied with the stipulation and agreement by merely stating what he observed. Also, staff does not believe that the instances of referring to customer statements listed above are so egregious as to warrant striking the entire Exhibit. Therefore, staff recommends that only the second full paragraph on page 2 of the Exhibit and the attached newspaper article be stricken in their entirety, and that the rest of Late-Filed Exhibit 13 be admitted, and accorded the weight the Commission deems appropriate.

ISSUE 1: Is the quality of service provided by the utility satisfactory?

RECOMMENDATION: Yes. The utility's overall quality of service is satisfactory given the inherent conditions of the area's raw water supply. Water quality is meeting all EPA and DEP standards and the operational conditions of the plant are satisfactory. However, customer satisfaction appears to be marginal. Until the black water problem is resolved, customers will not be satisfied with overall quality of service. (WALDEN)

POSITIONS

UTILITY: Yes. The quality of Aloha's product, the operations, and conditions of Aloha's plant and facilities, and attempts by Aloha to address customer satisfaction should all be found to be satisfactory based upon the great weight of evidence presented at hearing.

OPC: No, the quality of service is still unsatisfactory.

FASANO: Did not file a Post-Hearing Statement or Brief.

STAFF ANALYSIS: As noted in the Case Background, the PAA Order No. PSC-99-0061-FOF-WS (PAA Order), issued January 7, 1999, contained discussion about the surveys sent to Aloha's Seven Springs area water customers. That Order noted that 8597 surveys were mailed out, and 3706 customers (43%) responded. Discolored water was observed by 2625 respondents; unacceptable taste and odor was indicated by 2415 respondents; and 2921 customers stated they were unwilling to pay increased rates for water. (PAA Order, pp. 8-9) The survey mailed by Aloha to customers was required by Order No. PSC-97-1512-FOF-WS. Although portions of the PAA Order were protested, the protestors did not contest the above-noted provisions. Therefore, pursuant to Section 120.80(13)(b), Florida Statutes, those provisions are deemed stipulated. The original Commission Order, PSC-97-0280-FOF-WS, found the water quality of service unsatisfactory, and required Aloha to evaluate treatment alternatives to remove the hydrogen sulfide from the water. (Order, pp. 16, 46)

To aid in the discussion of this issue, staff will separate its analysis into three areas for quality of service: Quality of the Product; Operational Conditions of the Plant; and, Customer Satisfaction. It is apparent from the customer testimony and the attendance at the hearing on March 29, 2000, that a significant

portion of the customers are dissatisfied with the overall quality of service provided by Aloha.

QUALITY OF THE PRODUCT

Representative Fasano testified that constituents had contacted him about the quality of water provided to them by Aloha, specifically noting black, foul-smelling water, or low water pressure. The volume of complaints to his office continues. (TR 18-19) He testified about the 3700 survey responses that customers provided noting problems of black, brown, and strange colored water; rotten egg smelling water; and poor service from Aloha. (TR 21) He emphasized that whether all customers responded or not to the survey, Aloha should be concerned about the 3700 responses that were received, even though it was not a majority of Aloha's customers. (TR 32) The problems continue. (TR 22-23; 26; 28)

Forty-six customers testified at the hearing and complained of black or discolored water; odor/taste problem; low pressure; and/or, deposits/sediment. Many customers brought containers of discolored or black water to the hearing for viewing. (TR 17-471)

Witness Coogan noted that the problem seemed to begin when wells Nos. 8 and 9 came on line. (TR 179) Utility witness Porter stated that these wells came on line in 1996, but that the water characteristics from wells Nos. 8 and 9 were essentially the same as the other wells. All of Aloha's wells draw water from the Floridan Aquifer. He saw no correlation between the black water problems and the activities of these two new wells. For these reasons, he did not believe that it would be feasible to install packed tower aeration at only this location. (TR 591-592; 595-596; 624; 1030)

Utility witnesses Porter and Watford testified that Aloha provides an excellent quality of water service, and that the utility is and has been in compliance with applicable standards for water quality. (TR 485; 487-488; 520; 535-536; 736-737; 744; 753; 754; 772) Mr. Porter testified that it has never been shown that a water sample from Aloha has failed to meet the rules governing water quality. Not once has anyone shown a water sample going into a home that was not clean, clear, and odor free, except for sometimes the smell of chlorine. (TR 511-512) Staff witness Screnock, employed by the Florida DEP, stated that Aloha met the standards set forth by the DEP and the EPA. (TR 790)

Witness Porter stated that Aloha's raw water contains hydrogen sulfide. Mr. Porter testified that he smelled hydrogen sulfide at

every raw water tap. (TR 1037) Lab reports have verified this, as has the DEP, and the PSC staff. Aloha arranged for independent samples to be taken in August, 1999 (at the same time witness Biddy arranged for samples to be collected), and the results of testing of these samples were consistent with earlier tests of Aloha's raw water that showed the presence of hydrogen sulfide. Results obtained by Mr. Biddy's lab were inconsistent with Aloha's lab tests that showed the presence of hydrogen sulfide, and earlier findings by Aloha, the DEP, and the PSC staff. Mr. Porter testified that Mr. Biddy's test results were flawed and could not be relied upon. (TR 1008-1010; 1012-1013; 1036)

Mr. Watford stated that the black water experienced by some of the utility's customers is copper sulfide, caused by a reaction with copper household plumbing and naturally occurring hydrogen sulfide in Aloha's water. (TR 737) Mr. Watford also testified that the utility has no copper in its system, and that therefore the formation of the copper sulfide occurs in the customers' homes after the dissolved hydrogen sulfide in the water reacts with the customers' copper piping. (TR 752-753) Finally he claimed that it was the utility's desire to have customers satisfied with the service provided, with a goal of solving this black water problem. (TR 750-751; 754)

Hydrogen sulfide is not present in excessive levels in Aloha's finished water according to witness Porter, due to the conversion of hydrogen sulfide at the treatment plant to sulfates. Water is chlorinated at the well site, and the hydrogen sulfide is chemically changed to sulfate. (TR 485-488; 605) Sulfates do not smell, have no taste, and are not corrosive. The cause of the black water problem, as explained by Mr. Porter, is a reaction occurring in the hot water heater which changes the sulfates back to sulfides. This same reaction can occur in cold water systems that are allowed to go warm and sit for a very long time. The sulfides then react with the copper plumbing in customers' homes to form copper sulfide. EPA has set a standard of 250 mg/l for sulfates, and Aloha's concentration runs at a high of 16 mg/l, which is a minute amount. (TR 512-514; 605)

The utility contends that in terms of water quality, its responsibility ends at the point of delivery as defined in Rules 25-30.225(5) and 25-30.231, Florida Administrative Code. This is at the water meter. (TR 534-535; 746; 754-755)

OPC witness Biddy testified that during the course of his investigation, he questioned several customers about the timing of the black water problem. The answers all pointed to the time of

the installation of wells Nos. 8 and 9. He therefore concluded that these two wells are suspect as being involved with the black water occurrence. (TR 868) He testified that wells Nos. 8 and 9 are located in close proximity to Chelsea Place, Wyndgate, and Trinity Oaks in a very isolated southwest portion of the service area, from where many of the black water complaints emanate. (TR 881)

Additionally, Mr. Biddy employed an independent testing laboratory to collect water samples from five of Aloha's well sites. Test results were puzzling, showing a lack of detection of sulfides and sulfates in both the raw and finished water samples, but with Threshold Odor Numbers (TON) exceeding the state standards. While standing at the wells when samples were collected, he thought he smelled hydrogen sulfide. (TR 882-883; 891; 909; 914) The lab informed Mr. Biddy that the samples with a high TON had a strong chlorine odor. (EXH 21) He concluded the testing was worthless, and stated that he thought someone had dosed the raw and finished water samples with extraordinary chlorination. (TR 869-872; 882; 889-894; 901-902; 905; 945-946)

Staff witness Mike LeRoy, an employee of the DEP, testified that the black water problem was not unique to Aloha, but has occurred in other places in Florida. The vast majority of complaints that Mr. LeRoy knew of came from Aloha customers. The situation in the Aloha service area appears to be a real problem. (TR 661-663; 695-698) Mr. LeRoy states that the existence of hydrogen sulfide in water in Florida is widespread. (TR 706) Witness Screnock agreed with Mr. LeRoy that the black water problem is not unique to Aloha, and has occurred elsewhere in Florida. (TR 789)

Duval County had a corrosion problem with copper piping, and has amended its building code, enacting an ordinance to eliminate copper as an approved piping material in residential construction. (EXH 17; TR 699) Polk County residents have experienced black water, and Orange, Pinellas, and Seminole County residents have had pinhole leaks develop, indicating pipe failures. Witness LeRoy stated that Representative Fasano had appeared before the Pasco County Commission, proposing that Pasco County ban copper piping, but the proposal was not approved. (TR 697-699)

A compilation of data from customers in Aloha's service area (EXH 3), the Pasco County Water Study, was authored by Mr. LeRoy. The purpose of this study was to determine whether there were easy, inexpensive methods that customers could use to ameliorate the black water problem. (TR 664-665) The study, which resulted in

Exhibit 3, was designed by Mr. LeRoy and (Mr. LeRoy's supervisor) Mr. Hoofnagle at the DEP; the data gathered by the Florida Rural Water Association; and, the lab tests performed by Pasco County Laboratory, a state certified lab. (TR 670; 675) The Florida Rural Water Association, a non-profit organization, was used to help abate the distrust that was sensed from customers of Aloha toward the DEP, the Department of Health, and the utility. (TR 665) The study concluded there was no inexpensive method that had any lasting effect. (TR 668-669; 673) No determination was made whether the cause for black water was Aloha, or something in the houses. (TR 674) Mr. LeRoy testified that although the water provided by Aloha meets state standards, there is a problem with the water and something needs to be done. (TR 663; 665)

Witness LeRoy testified that the presence or absence of a water conditioning unit appeared to have little or no effect on the generation of hydrogen sulfide and the subsequent reaction with copper pipes. Generation of hydrogen sulfide occurs mainly in the hot water tank. If hydrogen sulfide is generated, the problem shows up in the house. (TR 678-680) Witness LeRoy stated that iron piping can also produce black water when hydrogen sulfide is present. (TR 716)

Utility witness Porter disagreed with Mr. LeRoy, stating that home water treatment units and water heaters are the primary cause of the water quality changes, causing sulfides to reappear in customers' homes. (TR 488; 558; 583) He explained that some customers who did not have water softeners still had black water because the problem was caused by more than one factor. The water softener only made the problem worse. (TR 505) Interpreting a statement from Exhibit 3 that water conditioning units in the home appeared to have no effect on the generation of hydrogen sulfide, Mr. Porter believed the comment meant that the water conditioning units were not responsible for generating hydrogen sulfide, and that the units, therefore, had no effect on the corrosion itself. The comments did not address whether the softening units had an effect on the copper corrosion as a whole. (TR 617-618)

Mr. Porter testified that it was the DEP who identified the black substance in the water as copper sulfide. A puzzling occurrence was the dispersion of the black water problem. As Mr. Porter explained, if there were three houses side by side, it was not uncommon to have the house in the middle have the problem, but the two others would not. (TR 493; 506) Mr. Porter concluded that there were a number of factors that could affect the formation of copper sulfide: treatment of water by a home treatment unit; frequency of water use; temperature of the water heater; grounding

of the household electrical system; lightning strikes. (TR 494-504) He also noted that the utility had planned to investigate and determine the grades of copper pipe installed in customers' homes, but the tests were never performed by the outside third party. (TR 584)

Aloha began feeding a corrosion inhibitor in early 1996 to reduce corrosivity of the water and to comply with the Lead and Copper Rule. (TR 623; 737-738) Water softeners generally remove calcium in the softening process. If all the calcium is removed, the water becomes corrosive. This general corrosion is what the EPA's Lead and Copper Rule addresses. General corrosion leads to the development of pinhole leaks, causing the need to repipe the home. In this case, Aloha is feeding calcium orthophosphate, which is intended to bond with the calcium in the water and place a coating on the inside wall of piping to inhibit corrosion. Water softeners remove the calcium, which means there is nothing for the inhibitor to bond with, and therefore, no coating. But even in homes with no softener, where there should be a coating on the inside pipe wall, black water occurs, which caused witness LeRoy to question what effect the sulfides have on the calcium orthophosphate. Mr. LeRoy was not willing to state that water softeners exacerbate the black water problem, nor would he recommend that customers disconnect their water softeners. He noted that water can be corrosive even when no sulfides are present, although sulfides make the water more corrosive. (TR 681-685; 718)

Although the customers are dissatisfied with the taste, odor, and color of the water, based on witness Screnock's testimony that Aloha meets the standards set forth by the DEP and the EPA for water quality, staff recommends that the quality of Aloha's water is satisfactory.

OPERATIONAL CONDITIONS OF THE PLANT

The utility has done a pretty good job of flushing the system, according to witness Fasano. (TR 37) Fire hydrants have discharged discolored water when they were flushed. (TR 22-23; 35-36)

Witness Watford testified that pressure provided in the system has always been adequate and above the minimum required standard. With water restrictions in place in Pasco County, when irrigation occurs during permitted periods, the pressure goes down, and may drop from 50 to 35 pounds, making a customer think there is a low pressure condition. Pressure has not fallen below standards. (TR 741; 759-761)

Mr. Porter testified that chlorine is used as part of the treatment to accomplish two purposes: oxidize the hydrogen sulfide present in the raw water; and remove pathogenic organisms through disinfection. Chlorine changes the form of sulfur from hydrogen sulfide to sulfate. Sulfates are tasteless, odorless, colorless, and non-corrosive. (TR 1038-1039)

In keeping with the utility's compliance with the Lead and Copper Rule, Aloha began feeding a corrosion inhibitor in early 1996. Testing has shown that the corrosion levels have been reduced below action levels, and the frequency of monitoring has been reduced. Aloha has not been out of compliance with the Lead and Copper Rule. (TR 737-738; 744; 753-754)

Witness Porter indicated that the corrosion inhibitor program in place by Aloha was reviewed by and approved by the EPA. (TR 532) He explained that even with the corrosion control inhibitor, due to some of the damage that has already occurred to the customers' copper piping, the presence of copper sulfide acts as a catalyst to continue the reaction. The Jacobs study (EXH 15, SGW-1) concluded that once the formation of copper sulfide had begun, it is almost impossible to stop. (TR 507, 604) For the customers without a home treatment unit, who have not had a problem with copper sulfide, it is the corrosion control inhibitor that is doing its job. On the other hand, in many new neighborhoods, a home treatment unit comes with the home, and the corrosion control inhibitor will not help the piping in those homes in the least. (TR 528-529; 535) Mr. Porter admitted that in some cases, water conditioning units do not seem to remove the inhibitor, but in other cases, the inhibitor was removed. (TR 572)

Staff believes that the record shows that the utility is meeting standards set forth by the DEP and the EPA for operating conditions of its plants, as shown by the testimony of DEP witnesses LeRoy and Screnock, as well as by utility witnesses Watford and Porter. Therefore, staff recommends that the operational condition of the plant is satisfactory.

CUSTOMER SATISFACTION

Customers testified for the most part about discolored or black water. There were some complaints of undesirable taste and odor, and insufficient pressure. A number of customers stated that the utility was not responsive, or, if the utility did respond, the problem remained. (TR 17-282) A tabulation of complaints from the March, 2000 hearing, separated by category, is attached as Schedule No. 2. There have also been many customer comment forms returned

to the Commission and placed in the correspondence side of the docket file.

Concerning customer relations, utility witness Watford testified that the utility logs and records customer complaints, stating that he believes the utility is in compliance with Commission rules. Additionally, a new computer system has been purchased to track complaints. Water quality complaints are routed through a single customer service representative so that customers avoid talking to two or three different utility representatives for the same problem. (TR 741-742; 765; 768-770)

The utility has discussed complaint handling with its staff and has regular meetings to discuss customer concerns and problems, including how to deal with them. An informational packet containing an explanation and possible solutions has been prepared and is provided to each customer whose complaint is determined to be related to copper sulfide. Aloha has sent its staff out to flush internal systems of households in an attempt to address customers' concerns. (TR 743-744)

Witness Watford testified that the customers are not satisfied with the service, regardless of how many times the utility sends a representative to a home. Until a solution to the black water problem is found, there will be dissatisfied customers. (TR 766) Witness Porter agreed that customers would be unhappy because the black water problem has not gone away. (TR 540)

Staff agrees with the customers that the black water problem is a real problem, and that something needs to be done. While the water quality provided meets the DEP and EPA standards, the presence of hydrogen sulfide in the raw water being converted to sulfates, and back into sulfides, is not acceptable. Staff also agrees with witness Watford, that until a solution to the black water problem is found, customer satisfaction with the service provided will not be achieved.

Based on the customer testimony and the survey results, although Aloha does not appear to be in violation of any Commission rules concerning customer relations, a significant portion of the customers are clearly dissatisfied with Aloha's overall quality of service. Therefore, staff recommends that Aloha's customer satisfaction be considered marginal. Nevertheless, staff believes that the overall quality of service must be considered satisfactory. Despite this conclusion, staff believes that, consistent with the public interest, Aloha should be directed to take the actions set forth in Issue 2 of this recommendation.

ISSUE 2: What action, if any, should the Commission require the utility to take to improve the quality of service?

RECOMMENDATION: Consistent with the public interest, the Commission should:

1) order Aloha to immediately begin a pilot project to identify the best available treatment alternative to enhance the water quality and to diminish the tendency of the water to produce copper sulfide in the customers' homes. Aloha should be required to file monthly reports with the PSC indicating the status of permitting and construction for the pilot project and the results of the pilot project on the quality of water.

2) Aloha should be ordered to file an application to revise its service availability charges by February 1, 2001, in accordance with Rule 25-30.565, Florida Administrative Code.

3) Aloha should be ordered to increase its water plant capacity charge for the Seven Springs system from $163.80 per ERC to $500 per ERC, on a temporary basis, subject to refund, pending the utility filing a Service Availability application, and approval of a final charge by the Commission. Revised tariff sheets and a proposed customer notice should be filed within thirty days of the Commission's vote to reflect the $500 plant capacity charge. The approved charge should be effective for connections made on or after the stamped approval date on the tariff sheets pursuant to Rule 25-30.475(2), Florida Administrative Code, provided the appropriate notice, pursuant to the staff analysis, has been made.

The utility should be required to set up an escrow account to guarantee the funds collected subject to refund, as set forth in the staff analysis. The utility should be required to deposit, on a timely basis, the difference between its plant capacity charge of $163.80 per ERC and the $500 per ERC charge, in escrow.

Pursuant to Rule 25-30.360(6), Florida Administrative Code, the utility shall provide a report by the 20th of each month indicating the monthly and total monies collected subject to refund. Should a refund be required, the refund should be with interest and undertaken in accordance with Rule 25-30.360, Florida Administrative Code.

4) The Commission's Bureau of Regulatory Review should conduct a management and operational audit of Aloha's management performance, operating procedures, relations with customers and the

public generally, as provided by Section 350.117, Florida Statutes. (WALDEN, MONIZ)

POSITIONS

UTILITY: The Commission should make a determination that no further action is necessary. In the alternative, the Commission should order Aloha to make improvements in full recognition that Aloha's water meets all regulatory standards. If improvements are required, it should also authorize the appropriate rate increase to cover such costs.

OPC: The Commission should order Aloha to undertake a comprehensive testing program to determine the causes of the quality of service problems and to develop cost-effective solutions within 90 days. These activities should be open to review by the Citizens. Aloha should consider oxidizing pressure filters, aeration and other measures.

FASANO: Did not file a Post-Hearing Statement or Brief.

STAFF ANALYSIS:

Staff has explored several options in an attempt to recommend a solution to the black water problems that have confronted Aloha's customers. Several witnesses expressed frustration that although the water meets DEP and EPA standards, the water needs improvement and something needs to be done about it. Witness Lane agreed. (TR 157) Apparently the customers look to the Commission as their only hope for a resolution to the black water problem. (TR 22-23; 109-110; 141; 147; 165; 194)

TREATMENT OPTIONS/PILOT PROJECT

Aloha began feeding a corrosion inhibitor in early 1996 to help resolve the black water problem and to reduce the water's corrosivity and comply with the Lead and Copper Rule. (TR 623; 737-738) The utility notes that the use of home treatment units by customers strips the corrosion inhibitor and chlorine, and changes the pH of the water contributing to corrosivity and the likelihood that copper sulfide will form. (TR 744-745) Additional treatment facilities, specifically packed tower aeration, have been identified as potential solutions in the study submitted by utility witness Porter. The utility is willing to move ahead with these improvements if desired by the customers and the Commission. (TR 739-741; 746; 749)

Utility witness Porter noted other alternatives for reducing the reactions in the hot water heaters which are causing hydrogen sulfide to appear in customers' homes. One method is to raise the water temperature to 150-160 degrees. The problem with this alternative is a danger of scalding the customer. Another method is to change the anode in the water heater from one made of magnesium to one made of aluminum. (TR 516-517)

Mr. Porter suggests a pilot study to more accurately determine the treatment results and ultimately the costs to remove the hydrogen sulfide; to share these results with the DEP; and to see what the DEP will permit to be built. He believes the pilot testing will take one year, although the pilot testing could begin in several months at one of the well sites. (TR 1055-1056)

Witness Biddy suggests a detailed study of wells 8 and 9, and perhaps a single packed tower aeration unit at these wells could solve the water quality problem. The cost of this capital improvement would be only a fraction of the estimates the utility proposed for the entire system. (TR 868-869) Instead of packed tower aeration as proposed by witnesses Watford and Porter, Mr. Biddy recommended pressure filters at a cost of $225,000 to $250,000. (TR 875) Pressure filters oxidize the hydrogen sulfide using magnesium dioxide, and then trap the sulfur particles. Periodic backwashing cleans the filters. Mr. Biddy was not aware of any plants in Florida using this design, although there are over 500 installations elsewhere in the country. He had not contacted any utilities who use this design, had never designed a facility using pressure filters for hydrogen sulfide removal, nor did he know of any facilities like this which had been permitted in Florida by the DEP. (TR 965-966; 970; 1023)

Mr. Biddy has designed packed tower aeration facilities, and they work well in removing hydrogen sulfide. Because Aloha's system uses hydropneumatic tanks, the cost of packed tower aeration becomes expensive when the treated water must be stored in a vessel and then be repumped with high service pumps. This brings the cost up as shown in Exhibit 12. Due to the high cost, Mr. Biddy suggested the alternate system using pressure filters. (TR 963; 971; 976-977)

Concerning witness Biddy's suggestion of an oxidizing pressure filter, Mr. Porter explained that it is a green sand filter with magnesium dioxide as a coating on the sand, which would convert the hydrogen sulfide gas to sulfate. He compared its treatment results to what Aloha's treatment process is now: chlorine oxidizes the hydrogen sulfide, and converts it to sulfate. Green sand filters

are generally used to remove iron and manganese according to Mr. Porter. (TR 1040) Mr. Porter did not find any references in DEP's rules that documented treatment where filters could be used for hydrogen sulfide removal directly. (TR 1022) In addition, the oxidizing filter requires a tremendous amount of pretreatment equipment which was not identified by Mr. Biddy. (TR 1044) This pretreatment for hydrogen sulfide would require potassium permanganate, aeration or ozonation prior to the reaction vessel, as well as an air relief valve to release gases at the top of the oxidation reaction tank. (EXH 26) Mr. Porter characterized this pretreatment equipment as expensive, noting that in his report (Exhibit 12), a substantial amount of the cost is to treat the off gas. (TR 1053)

Witness LeRoy testified as discussed in Issue 1, that corrosion is occurring both in homes with and without water softeners. His major concern is to protect the new homes coming on line, and suggested that packed tower aeration as suggested by utility witness Porter, is the correct solution. There are 1236 plants in Florida that use this proven treatment method for the removal of hydrogen sulfide, including plants in Pinellas County. (TR 685; 691; 712; 718) As far as resolving the problem of black water in the homes already experiencing the condition, witness LeRoy was reluctant to say the condition would vanish, but instead testified that there may be an improvement. He referred to the Sarah Jacobs study (EXH 15, SGW-1) which concluded that the corrosion would continue even at very low levels of hydrogen sulfide concentration. (TR 686-687) He is familiar with the Sarah Jacobs study, and agrees with the findings, but notes that the conditions were controlled, specifically using deionized water. He added that the study did not use water treated by a water softener. (TR 659; 683)

Utility witness Porter testified that using packed tower aeration, virtually 100%, or about 99.9% of the hydrogen sulfide would be removed. (TR 579) In the Sara Jacobs study, it appears that if virtually all the hydrogen sulfide is removed, then it might still take as long as 400 days for the corrosion rate to return to normal. (TR 580)

Witness LeRoy testified that hydrogen sulfide is a gas and that "filters don't really do much for gases." (TR 695) Utility witness Porter agreed. (TR 577) Mr. LeRoy testified that reverse osmosis is one of the tightest filters used in water treatment, and hydrogen sulfide goes right on through. One of the treatment processes for reverse osmosis is degasification to remove the hydrogen sulfide when it exists in the raw water. (TR 695) He was

not aware of utility-sized filters that would remove hydrogen sulfide. (TR 728) However, Mr. LeRoy did state that he was not familiar with small point-of-use devices and could not rule out that a filter could remove hydrogen sulfide. (TR 728) Utility witness Porter also replied that in-line filters or pressure filters would not be effective in removing hydrogen sulfide.

New drinking water requirements expected to be effective in 2003 will not directly impact Aloha according to witness LeRoy. While utility witness Porter stated that trihalomethanes (THMs) were in the range of 60-70, the new first increment threshold is 80 (TR 599), and Mr. LeRoy predicted that as long as the THMs remained in the 60-70 range, this was not a problem requiring additional equipment, including packed tower aeration. (TR 691-693; 720-721) The Phase Two threshold for THMs has not yet been established, although a level of 60 has been discussed. Witness LeRoy was reluctant to predict what the limit would be, stating that the EPA has historically changed things radically from what was originally proposed. He could not speculate what the final outcome would be. (TR 694) Witness LeRoy testified that in treating water with chlorine to remove hydrogen sulfide, due to daily fluctuations of the hydrogen sulfide, the chlorine demand of the water could be reduced, and, if the feed rate of chlorine remained constant, it was possible for THMs to inadvertently increase. (TR 726-727)

The DEP is not anticipating legislative proposals to address aesthetic quality of water. Witness LeRoy explained that EPA has secondary standards that focus on aesthetics, although those standards do not include hydrogen sulfide. (TR 699-700) He stated that he would not drink the black water, nor would he want it in his plumbing, but if faced with the problem, would let the tap run and clear the line. (TR 701-702)

EPA addressed the problem of hydrogen sulfide in drinking water back as far as 1977, and proposed that a maximum level be set at .05 milligrams per liter. Now, 23 years later, EPA has yet to set a limit. It is not a health standard, but rather a secondary aesthetic and, therefore, it seems unlikely that a standard will be established. The DEP has polled other states in the country, inquiring which states have set a limit or standard for hydrogen sulfide. None have. If Florida were to establish a standard, it would apply to all water systems, and would be expensive to install treatment equipment, especially for a small system. An additional dilemma would be determining what the standard should be. (TR 704-705)

For the Aloha system, witness LeRoy suggests removal of the hydrogen sulfide. The current treatment method of converting the sulfides to sulfates through chlorination, while effective in meeting current drinking water standards, is not adequate for customer satisfaction due to the reconverting of sulfates back to sulfides, causing the black water problem. (TR 707-708) Although Aloha's water at the point of DEP required monitoring contains no hydrogen sulfide, and even though the conversion process causes the hydrogen sulfide to reappear in the homes, with the current DEP standards, there is almost nothing the DEP can require the utility to do to correct the black water problem. (TR 710-711)

Utility witness Watford states that additional treatment facilities, specifically packed tower aeration, have been identified as potential solutions in the study submitted by utility witness Porter and certain improvements recommended. The utility is willing to move ahead with these improvements if desired by the customers and the Commission. (TR 489; 739-741; 746; 749; 758-759)

Witness Porter testified that substantial improvements could be undertaken to reduce the hydrogen sulfide concentration to minute levels. It was his opinion that these improvements will reduce odor and copper corrosion, and assist the utility in conforming to expected EPA regulations concerning the disinfection by-products rule which are anticipated to have an effect on Aloha as these rules are phased in over the next three to six years. He also stated that if the customers' pipes were already corroded, the proposed improvements probably will not help the water quality to any major extent to those homes. The solution to correcting the black water problem to homes with damaged piping is to replace the piping in the home with PVC. (TR 485-486; 521-523; 582)

Addressing the timing required for improvements, witness Porter testified that time frames for task completion as contained in Exhibit 12, Section 9, were accurate, although the starting date would change. (TR 1049)

Based on the evidence, staff recommends that the Commission order Aloha to immediately begin a pilot project to identify the best available treatment alternative to enhance the water quality and to diminish the tendency of the water to produce copper sulfide in the customers' homes. Witness Porter suggested that a pilot study is needed to more accurately determine the treatment results and ultimately the costs to remove the hydrogen sulfide. He proposed sharing the results of the pilot project with the DEP and to see what the DEP will permit to be built. Aloha should be required to file monthly reports with the PSC indicating the status

of permitting and construction for the pilot project and the results of the pilot project on the quality of water. The PSC and the DEP staff will work together to monitor the utility's progress.

REPIPING THE CUSTOMER HOMES/LOW COST LOANS/ ONE TIME REBATE

One customer's home, belonging to Mr. Vinto, has been repiped with CPVC, and according to witness Watford, the customer has not seen black water since the repiping. The copper sulfide problem has been resolved. Mr. Vinto has made two complaints to the utility since the repiping, both involving odor, but not discolored water. (TR 778)

Utility witness Watford testified that the only known way to completely eliminate the black water problem is to repipe the homes with CPVC or a material other than copper. (TR 736, 802-804, 812) When Mr. Watford was asked if Aloha had considered offering some type of assistance to its customers for the sole purpose of repiping, he testified that Aloha had considered the possibility of offering low costs loans to its customers. But, after talking to a lender it became clear, for a number of reasons, that it probably would not be feasible to offer low cost loans. First, there would have to be a direct arrangement between the lender in that all the homeowners would have to go through a qualification process for the loan. Second, the lender would not agree for the utility to be an intermediary to collect the loans. And third, the amount of money ($1,500 to $5,000) for each loan would not be large enough to justify the administrative costs to the lender. (TR 817)

He was also asked, if Goodrich's CPVC Division was willing to offer low interest loans to Aloha's customers wanting to repipe their homes, would Aloha be willing to administer such a program discounting the cost of repiping customers homes. However, he was not able to give a definite answer, because he did not know what it would entail. (TR 817-818)

Additionally, Mr. Watford testified that a financing option for the customer wanting to repipe his home could be something called an MSTU or MSBU. According to Mr. Watford, the form of financing amortizes the cost over a very long period of time and has been approved by the County and also carries a cost rate of around 2 to 3 percent and could be paid off over a long period of time, such as twenty years. Thus, the costs would be relatively insignificant. The cost is also attached to the property, so if the house was sold halfway through the encumbrance, would go with the property. (TR 818-819)

In addition, staff asked Mr. Watford if Aloha had examined the possibility of offering a one time rebate of $500 to $1,000 to those customers who repipe their homes. He testified that he had heard some talk, second or third hand, about increasing the utility rates to pay for rebates to customers for repiping their homes. However, without knowing parameters that would be used for the rebates, he could not say whether the utility would be willing to make an offer such as this. He did state that with the present financial situation of the utility, Aloha would probably require outside financing from the very beginning. (TR 820)

Based on the testimony by Aloha's President, Mr. Watford, the utility does not appear willing, nor financially able, to offer its customers a rebate or a low cost loan for the purpose of repiping their homes. In addition, Rule 25-30.225(5), Florida Administrative Code, states:

> Each water utility shall operate and maintain in safe, efficient, and proper condition, all of its facilities and equipment used to distribute, regulate, measure or deliver service up to and including the point of delivery into the piping owned by the customer....

Rule 25-30.210(7), Florida Administrative Code, states:

> "Point of delivery" for water systems shall mean the outlet connection of the meter for metered service or the point at which the utility's piping connects with the customer's piping for non-metered service.

The utility has indicated that it is not feasible to offer customers low cost loans or a one time rebate. Because the utility's responsibility ends at the meter, staff does not believe that the Commission should require the utility to offer low cost loans or rebates for the purpose of repiping customers homes. However, if the utility were to propose a financial incentive program to the customers for repiping, the recovery of the associated program costs could be reviewed by the Commission for appropriateness.

SERVICE AVAILABILITY

In Aloha's reuse case, Docket No. 950615-SU, Order No. PSC-97-0280-FOF-WS, issued March 12, 1997, Representative Fasano testified that Aloha's service availability charges were below those of neighboring utilities. He alleged that had Aloha sought authority from the Commission to charge compensatory service availability

charges, it would not have to charge all of its customers for the plant upgrades, since the contributions in aid of construction (CIAC) would have been a significant offset to the need for higher recurring rates. In that same docket, Utility witness Nixon testified that Aloha was at a 96% contribution level, which exceeded the maximum guideline established by Rule 25-30.580, Florida Administrative Code.

Again, at the Second Hearing, Witness Fasano discussed Aloha's proposal to upgrade its plant, stating that the proposal would cost $10 million. This investment would cause a nearly 400% increase in customers' bills. (TR 20-21) As a way to fund improvements, he suggested an increase in service availability fees, to a level more competitive with the Pasco County Utility Department. (TR 26-27) Specifically noting the growth in the Wyndtree, Chelsea Place, and Trinity areas, he believes that those who are building homes should help pay for that growth through increased impact fees and that the burden should not be placed on the existing customers. (TR 55-56)

Rule 25-30.580(1)(a), Florida Administrative Code, provides that:

> (a) The maximum amount of contributions-in-aid-of-construction, net of amortization, should not exceed 75% of the total original cost, net of accumulated depreciation, of the utility's facilities and plant when the facilities and plant are at their designed capacity; and
> (b) the minimum amount of contributions-in-aid-of-construction should not be less than the percentage of such facilities and plant that is represented by the water transmission and distribution and sewage collection systems.

In Order No. PSC-97-0280-FOF-WS, issued March 12, 1997, in Docket No. 950615-SU the Commission found that the addition of the plant related to the reuse project would reduce the level of CIAC to some degree, but the 96% contribution level made it unlikely that it would result in a need for additional service availability charges. Thus, the Commission ruled that, based on the record, the current service availability charges were adequate.

In this case, Representative Mike Fasano testified that in 1996 he came before the Commission and suggested that Aloha needed to increase its impact fees to make them competitive with what Pasco County is charging its customers. According to Mr. Fasano, Pasco County's impact fee is around $3,000. (TR 26-27) Aloha's

plant capacity charge for its Seven Spring's water system is only $163.80. (EXH 18) He further testified that the monies generated by increased fees would offset the cost of much of the required improvements to Aloha's system. (TR 27)

Utility witness Watford was asked why Aloha had not filed for a service availability case. He testified that he believed it would be foolish to file for an increase in service availability charges since according to Aloha's last two annual reports, it exceeded the seventy-five percent contribution guideline as prescribed by the Commission's rules. (TR 822)

Staff does not disagree that Aloha's CIAC level exceeds the maximum amount allowed by Rule 25-30.580(1)(a), Florida Administrative Code. However, the utility has presented a proposal to upgrade its water plant, which could increase its investment in plant by more than $10,000,000. If the utility invests in the plant upgrades that it has indicated are needed to correct the black water problem, then that additional plant investment will have a significant impact on the utility's CIAC level. It appears that, based on the utility's projections of cost and growth, even with an increase in the utility's plant capacity charge, it would be within the minimum and maximum CIAC level required by Rule 25-30.580 (1)(a) & (b), Florida Administrative Code.

Staff estimated the impact of an increase in Aloha's water plant capacity charge for the Seven Springs system based on information contained in Aloha's 1998 Annual Report (EXH 18), Witness Porter's Water Facilities Upgrade Study Report (EXH 12), and the Economic Analysis prepared by Mr. Nixon (EXH 28). The annual report provided beginning balances for plant, accumulated depreciation, CIAC, and accumulated amortization. The Water Facilities Upgrade Study Report provided the utility's current capacity and demand and the estimated growth in ERCs and expected demand for water service to the year 2015. The Economic Analysis was used to estimate the costs for the new facilities. (EXH 28). The utility's current design capacity is 5.472 million gallons per day (mgd), with a projected design capacity of 7.212 mgd by the year 2015. The average daily flow is 2.88 mgd. (EXH 12, pp. 14; 16-18; 42)

Staff analyzed the utility's projected CIAC level using projected plant capacity charges of $750 per ERC and $500 per ERC. By applying a charge of $750 to the future ERCs, staff determined that the utility would reach a contribution level of 75.69% in the year 2015, as shown on Schedule No. 1-B, attached to the recommendation. However, because of the uncertainty of the utility's construction costs and the growth projections, staff

believes a more conservative approach should be taken. Staff estimated that a plant capacity charge of $500 per ERC would place the utility at a contribution level of approximately 58.09% in the year 2015. Schedule No. 1-A has been prepared and is attached illustrating the basis for Staff's recommendation that a temporary plant capacity charge of $500 for the Seven Springs water system is appropriate.

Pursuant to Section 367.101, Florida Statutes, "[t]he commission shall set just and reasonable charges and conditions for service availability." Therefore, staff recommends that Aloha be required to file an application to revise its service availability charges by February 1, 2001, in accordance with Rule 25-30.565, Florida Administrative Code. Aloha should be ordered to increase its water plant capacity charge for the Seven Springs system from $163.80 per ERC to $500 per ERC, on a temporary basis, subject to refund, pending the utility filing a service availability application, and approval of a final charge by the Commission. Revised tariff sheets and a proposed customer notice should be filed within thirty days of the Commission's vote to reflect the $500 plant capacity charge.

The proposed notice should include the date the notice will be issued, a statement that the utility is increasing its water plant capacity charge for new connections to the Seven Springs system from $163.80 per ERC to $500 per ERC, on a temporary basis, subject to refund; the utility's address, telephone number and business hours; and a statement that any comments concerning the charge should be addressed to the Director of Records and Reporting at 2540 Shumard Oak Boulevard, Tallahassee, FL 32399-0870. The approved charge should be effective for connections made on or after the stamped approval date on the tariff sheets pursuant to Rule 25-30.475(2), Florida Administrative Code, providing the appropriate notice has been made.

The notice should be mailed or hand delivered to all persons in the service area who have filed a written request for service within the past twelve calendar months or who have been provided service within the past twelve calendar months. In addition, the utility should publish a copy of the approved notice in a newspaper of general circulation in its service area within ten days of staff's approval of the notice. The utility should also be required to provide proof to the Commission of the date the notice was given within 10 days after the date of the notice.

The utility should be required to set up an interest bearing escrow account to guarantee the funds collected subject to refund

(the difference between $500 and the current charge of $163.80, $336.20). The account should be established between the utility and an independent financial institution pursuant to a written escrow agreement. The Commission should be a party to the written escrow agreement and a signatory to the escrow account. The written escrow agreement should state the following: that the account is established at the direction of this Commission for the purpose set forth above; that no withdrawals of funds should occur without the prior approval of the Commission through the Director of the Division of Records and Reporting; that the account should be interest bearing; that information concerning the escrow account should be available from the institution to the Commission or its representative at all times; and that pursuant to Consentino v. Elson, 263 So. 2d 253 (Fla. 3d. DCA 1972), escrow accounts are not subject to garnishments. The utility should be required to deposit into the escrow account, on a timely basis, the difference between its plant capacity charge of $163.80 per ERC and the $500 per ERC charge. If a refund is not required, the interest earned by the escrow account should revert to the utility.

Pursuant to Rule 25-30.360(6), Florida Administrative Code, the utility should provide a report by the 20th of each month indicating the monthly and total monies collected subject to refund. Should a refund be required, the refund should be with interest and undertaken in accordance with Rule 25-30.360, Florida Administrative Code. In no instance should maintenance and administrative costs associated with any refund be borne by the customers. The costs are the responsibility of, and should be borne by, the utility. The utility should keep an accurate and detailed account of all monies it receives.

CUSTOMER SATISFACTION

Concerning the area of customer satisfaction, while the utility has made changes and improvements to its complaint handling procedure, staff recommends that the Commission's Bureau of Regulatory Review conduct a management and operational audit of Aloha, as provided by Section 350.117(3), Florida Statutes. Specifically, a review of Aloha's management performance, operating procedures, and relations with customers and the public generally, should be performed. The audit will provide feedback to the Commission as to the appropriateness of the utility's existing customer service policies and procedures. The audit may also provide the Commission with recommended measures to increase Aloha's effectiveness in responding to customer concerns.

STAFF CONCLUSION:

From the testimony, the utility's goal is to have customers satisfied with the service provided, with a goal of solving this black water problem. According to witnesses Porter and LeRoy, the best alternative is to remove the hydrogen sulfide from the water. Conversion of the hydrogen sulfide to sulfates does not solve the sulfide problem, as evidenced by the customer testimony stating that black water is coming from their faucets. Mr. Biddy's suggestion of the pressure filters may be feasible, but the equipment has not been used in Florida; pretreatment equipment will be needed; and such equipment has never been a method that Mr. Biddy has recommended to a client. Mr. Biddy has instead designed packed tower aeration in the past. Additionally, there is some question as to whether the DEP might permit a pressure filter installation.

Capital improvements will be required for removal of hydrogen sulfide from the raw water, and staff's recommendation for modification of the utility's water plant capacity charge for the Seven Springs system (for new water customers) is intended to help offset the cost of capital improvements with CIAC. Staff believes that the utility should proceed immediately with a pilot project for the best available treatment alternative to enhance the water quality and to diminish the tendency of the water to produce copper sulfide in the customers' homes. Staff realizes that this pilot project will not help the customers who are already experiencing the black water problem, but it is the necessary first step in eliminating the hydrogen sulfide contained in the raw water.

ISSUE 3: Should this docket be closed?

RECOMMENDATION: No. This docket should remain open until the utility has filed its application to revise its service availability charges. After such time, this docket should be closed administratively. (MONIZ, JAEGER)

STAFF ANALYSIS: This should remain open until the utility has filed its application to revise its service availability charges. After such time, all outstanding matters in this docket should be incorporated into the service availability case docket and this docket should be closed administratively.

Aloha Utilities Inc
Docket No. 960545-WS
Water Service Availablity Charges

SCHEDULE 1-A

Proposed Plant Capacity Char	$500
Current Plant Capacity Charge	$163.80

	PIS	Depr Exp	Depr Rate
New Plant	$10,124,214	$418,130	
Existing Plant	$7,595,753	$224,042	
	$17,719,967	$642,172	3.62%

		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Capacity	MGD	5,472,000	5,588,000	5,704,000	5,820,000	5,936,000	6,052,000	6,168,000	6,284,000	6,400,000	6,516,000	6,632,000	6,748,000	7,212,000	7,212,000	7,212,000	7,212,000
Demand	MGD	2,880,000	2,998,000	3,116,000	3,234,000	3,352,000	3,470,000	3,568,000	3,666,000	3,764,000	3,862,000	3,960,000	4,072,000	4,184,000	4,296,000	4,408,000	4,520,000
% Used		52.63%	53.65%	54.63%	55.57%	56.47%	57.34%	57.85%	58.34%	58.81%	59.27%	59.71%	60.34%	58.01%	59.57%	61.12%	62.67%
Growth	ERCs	400	400	400	400	400	400	332	332	332	332	332	380	380	380	380	380
Utility Plant		17,719,967	17,719,967	17,719,967	17,719,967	17,719,967	17,719,967	17,719,967	17,719,967	17,719,967	17,719,967	17,719,967	17,719,967	17,719,967	17,719,967	17,719,967	17,719,967
Accumulated Depreciation		(1,678,275)	(2,320,447)	(2,962,619)	(3,604,791)	(4,246,963)	(4,889,135)	(5,531,307)	(6,173,479)	(6,815,651)	(7,457,823)	(8,099,995)	(8,742,167)	(9,384,339)	(10,026,511)	(10,668,683)	(11,310,855)
Net Plant		16,041,692	15,399,520	14,757,348	14,115,176	13,473,004	12,830,832	12,188,660	11,546,488	10,904,316	10,262,144	9,619,972	8,977,800	8,335,628	7,693,456	7,051,284	6,409,112
CIAC		6,528,549	6,728,549	6,928,549	7,128,549	7,328,549	7,528,549	7,694,649	7,860,749	8,026,849	8,192,949	8,359,049	8,548,949	8,738,849	8,928,749	9,118,649	9,308,549
Accumulated Amortization		(1,655,045)	(1,895,264)	(2,379,325)	(2,634,040)	(2,896,003)	(3,165,213)	(3,441,058)	(3,722,922)	(4,010,805)	(4,304,708)	(4,604,631)	(4,911,004)	(4,604,631)	(4,924,768)	(5,251,787)	(5,585,688)
Net CIAC		4,873,504	4,833,285	4,549,224	4,494,509	4,432,546	4,363,336	4,253,591	4,137,827	4,016,044	3,888,241	3,754,418	3,637,945	4,134,218	4,003,981	3,866,862	3,722,861
Net Investment		11,168,188	10,566,235	10,208,124	9,620,667	9,040,458	8,467,496	7,935,069	7,408,661	6,888,272	6,373,903	5,865,554	5,339,855	4,201,410	3,689,475	3,184,422	2,686,251
CIAC Ratio		30.38%	31.39%	30.83%	31.84%	32.90%	34.01%	34.90%	35.84%	36.83%	37.89%	39.03%	40.52%	49.60%	52.04%	54.84%	58.09%

Aloha Utilities Inc
Docket No. 960545-WS
Water Service Availablity Charges

SCHEDULE 1-B

Proposed Plant Capacity Char	$750
Current Plant Capacity Charge	$163.80

	PIS	Depr Exp	Depr Rate
New Plant	$10,124,214	$418,130	
Existing Plant	$7,595,753	$224,042	
	$17,719,967	$642,172	3.62%

		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Capacity	MGD	5,472,000	5,588,000	5,704,000	5,820,000	5,936,000	6,052,000	6,168,000	6,284,000	6,400,000	6,516,000	6,632,000	6,748,000	7,212,000	7,212,000	7,212,000	7,212,000
Demand	MGD	2,880,000	2,998,000	3,116,000	3,234,000	3,352,000	3,470,000	3,568,000	3,666,000	3,764,000	3,862,000	3,960,000	4,072,000	4,184,000	4,296,000	4,408,000	4,520,000
% Used		52.63%	53.65%	54.63%	55.57%	56.47%	57.34%	57.85%	58.34%	58.81%	59.27%	59.71%	60.34%	58.01%	59.57%	61.12%	62.67%
Growth	ERCs	400	400	400	400	400	400	332	332	332	332	332	380	380	380	380	380
Utility Plant		17,719,967	17,719,967	17,719,967	17,719,967	17,719,967	17,719,967	17,719,967	17,719,967	17,719,967	17,719,967	17,719,967	17,719,967	17,719,967	17,719,967	17,719,967	17,719,967
Accumulated Depreciation		(1,678,275)	(2,320,447)	(2,962,619)	(3,604,791)	(4,246,963)	(4,889,135)	(5,531,307)	(6,173,479)	(6,815,651)	(7,457,823)	(8,099,995)	(8,742,167)	(9,384,339)	(10,026,511)	(10,668,683)	(11,310,855)
Net Plant		16,041,692	15,399,520	14,757,348	14,115,176	13,473,004	12,830,832	12,188,660	11,546,488	10,904,316	10,262,144	9,619,972	8,977,800	8,335,628	7,693,456	7,051,284	6,409,112
CIAC		6,628,549	6,928,549	7,228,549	7,528,549	7,828,549	8,128,549	8,377,699	8,626,849	8,875,999	9,125,149	9,374,299	9,659,149	9,943,999	10,228,849	10,513,699	10,798,549
Accumulated Amortization		(1,656,857)	(1,902,512)	(2,399,257)	(2,666,656)	(2,944,927)	(3,234,069)	(3,533,163)	(3,841,285)	(4,158,437)	(4,484,618)	(4,819,828)	(5,164,715)	(4,819,828)	(5,185,361)	(5,561,216)	(5,947,394)
Net CIAC		4,971,692	5,026,037	4,829,292	4,861,893	4,883,622	4,894,480	4,844,536	4,785,564	4,717,562	4,640,531	4,554,471	4,494,434	5,124,171	5,043,488	4,952,483	4,851,155
Net Investment		11,070,000	10,373,483	9,928,056	9,253,283	8,589,382	7,936,352	7,344,124	6,760,924	6,186,754	5,621,613	5,065,501	4,483,366	3,211,457	2,649,968	2,098,801	1,557,957
CIAC Ratio		30.99%	32.64%	32.72%	34.44%	36.25%	38.15%	39.75%	41.45%	43.26%	45.22%	47.34%	50.06%	61.47%	65.56%	70.24%	75.69%

Complaints from Customers at Hearing

Customer	Subdivision	Discoloration	Odor/ Taste	Copper Pipe	Home Treatment Units	Low Pressure	Deposits Sediment	Customer Relations
Ruth Drew	Edenbrook		X				X	
John Hatsios	Chelsea Place	X						No
Harry Hawcroft	Wyndgate	X		X	X		X	
Elizabeth Marinelli	Chelsea Place	X	X				X	
Delores Reis	Wyndtree	X	X					
Raymond Hartinger	Wyndgate	X	X	X	X		X	
Ernest Lane	Trinity		X		X	X		
Joseph Sharkey	Wyndtree	X	X	X				
William Coogan	Chelsea Place	X	X		X			
Luigi Bagnato	Chelsea Place	X	X		X			
Louis and Anita King	Heritage Lake	X			X			
Virginia N. Pratt	Chelsea Place	X	X		X	X	X	
Ronald J. Eustice	Wyndtree	X	X		X	X		
Elizabeth Sessa	Aloha Gardens		X			X		
Edward Wood	Wyndtree	X		X			X	
David Murphy	Trinity	X	X	X	X		X	
Jane Dhans	Riverside Villas	X	X			X	X	
Linwood Oberg	Wyndgate	X	X	X	X	X	X	
William Crean	Trinity Oaks		X	X	X			
Olga & Robert Clayton	Wyndtree	X	X	X	X		X	No
Brian Williams	Chelsea Place	X			X		X	
Mr. Fawcett	Nature's Hideaway	X		X				
Mr. & Mrs. Nick Caputo	Chelsea Place	X		X	X		X	No
Robert L. Wickett	Trinity	X		X	X			
Robert Wortz	Wyndgate	X		X	X			
Wayne Forehand	Trinity Oaks	X	X		X			
Mr. Mann	Wood Trail Village	X			X		X	No
Mr. Jim Bower	Wyndtree	X	X	X	X			
Eric Horne	Wyndtree	X		X	X			
Mr. McCloskey	Wyndstree	X		X	X			
Ronald Bouse	Country Place	X	X		X			
Gayle & Edward Stein	Wyndtree	X	X	X	X			No
Mark Sebacher	Trinity Oaks	X	X	X	X			
Nora Donaldson	Trinity Oaks	X	X	X	X			
Charles R. Rifkin	Chelsea Place	X	X	X				No
Dave & Jody Hennessy	Chelsea Place	X	X	X			X	
Louis Corona	Wyndtree	X	X	X		X	X	Yes
Pauline Nigels	Natures Hideaway	X		X	X			
Joseph Mooney	Wyndtree	X	X	X				
Ron Lipp	Chelsea	X		X	X	X		
Willie Landas		X	X		X			
Michael Fasano		X						No
William Day	Mitchell Blvd.		X		X	X		No
Debby Avery	Wyndtree	X	X					
Vinent Corelli		X			X			
Sandy Mitchell	Riviera	X						

"X" - means the item was specifically addressed
Blank Space - means the item was not addressed by the customer