State Office of Administrative Hearings

Lesli G. Ginn
Chief Administrative Law Judge

June 30, 2016

Tucker Royall, General Counsel
Texas Commission on Environmental Quality
P.O. Box 13087
Austin Texas 78711-3087

Re: **SOAH Docket No.582-12-5353; TCEQ Docket No. 2011-1647-PWS-E; In Regard to the Enforcement Action Against South Texas Water Authority**

Dear Mr. Royall:

The above-referenced matter will be considered by the Texas Commission on Environmental Quality on a date and time to be determined by the Chief Clerk's Office in Room 201S of Building E, 12118 N. Interstate 35, Austin, Texas.

Enclosed are copies of the Supplemental Proposal for Decision on Remand and Proposed Order that have been recommended to the Commission for approval. Any party may file exceptions or briefs by filing the documents with the Chief Clerk of the Texas Commission on Environmental Quality no later than **July 20, 2016.** Any replies to exceptions or briefs must be filed in the same manner no later than **August 1, 2016.**

This matter has been designated **TCEQ Docket No. 2011-1647-PWS-E; SOAH Docket No. 582-12-5353**. All documents to be filed must clearly reference these assigned docket numbers. All exceptions, briefs and replies along with certification of service to the above parties shall be filed with the Chief Clerk of the TCEQ electronically at http://www10.tceq.state.tx.us/epic/efilings/ or by filing an original and seven copies with the Chief Clerk of the TCEQ. Failure to provide copies may be grounds for withholding consideration of the pleadings.

Sincerely,

Craig R. Bennett
Administrative Law Judge

Enclosures
cc: Mailing List

STATE OFFICE OF ADMINISTRATIVE HEARINGS

AUSTIN OFFICE
300 West 15th Street Suite 502
Austin, Texas 78701
Phone: (512) 475-4993
Fax: (512) 322-2061

SERVICE LIST

AGENCY: **Environmental Quality, Texas Commission on (TCEQ)**

STYLE/CASE: **SOUTH TEXAS WATER AUTHORITY**

SOAH DOCKET NUMBER: **582-12-5353**

REFERRING AGENCY CASE: **2011-1647-PWS-E**

STATE OFFICE OF ADMINISTRATIVE HEARINGS

ADMINISTRATIVE LAW JUDGE
ALJ CRAIG R. BENNETT

REPRESENTATIVE / ADDRESS | **PARTIES**

SCOTT HUMPHREY
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
OFFICE OF PUBLIC INTEREST COUNSEL
P. O. BOX 13087, MC-103
AUSTIN, TX 78711-3087
(512) 239-0574 (PH)
(512) 239-6377 (FAX)
scott.humphrey@tceq.texas.gov

OFFICE OF PUBLIC INTEREST COUNSEL

JENNIFER N. COOK
ATTORNEY
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
MC-175 P.O. BOX 13087
AUSTIN, TX 78711-3087
(512) 239-1873 (PH)
(512) 239-3434 (FAX)
jennifer.cook@tceq.texas.gov

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

MIKE WILLATT
WILLATT & FLICKINGER
2001 N. LAMAR
AUSTIN, TX 78705
(512) 476-6604 (PH)
(512) 469-9148 (FAX)
mwillatt@wfaustin.com

SOUTH TEXAS WATER AUTHORITY

SOAH DOCKET NO. 582-12-5353
TCEQ DOCKET NO. 2011-1647-PWS-E

EXECUTIVE DIRECTOR OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY	§	**BEFORE THE STATE OFFICE**
	§	
	§	
	§	**OF**
v.	§	
	§	
SOUTH TEXAS WATER AUTHORITY	§	**ADMINISTRATIVE HEARINGS**

SUPPLEMENTAL PROPOSAL FOR DECISION ON REMAND

I. INTRODUCTION

This enforcement action involves eight alleged drinking water violations by South Texas Water Authority (STWA). The Executive Director (ED) of the Texas Commission on Environmental Quality (TCEQ or Commission) sought to impose an administrative penalty of $2,443 on STWA and to require certain corrective actions. An original proposal for decision (PFD) was issued in this case on July 23, 2013. The Commission subsequently considered the PFD at an open meeting in November 2013 and, after continuing the matter to allow the ED and STWA to explore potential corrective actions, remanded the case to the Administrative Law Judge (ALJ) in June 2015 for a limited evidentiary hearing.

The hearing on remand was conducted on December 16-17, 2015, with all parties appearing and participating. The record closed on May 20, 2016, after the parties submitted written closing arguments. After considering the evidence and arguments of the parties on remand, the ALJ recommends the corrective actions set out in this supplemental PFD.[1]

[1] This Supplemental PFD on Remand is not intended to supersede the original PFD, but rather to supplement it.

II. BACKGROUND

Before moving to a more detailed discussion and analysis of the applicable law and the ED's alleged violations, the ALJ first lays out the factual background of this case, most of which is not disputed.

STWA was created by the legislature in 1979 as a water conservation and reclamation district designed to provide a wholesale water supply to the cities of Kingsville, Driscoll, Bishop, and Agua Dulce.[2] In 1981, STWA entered into a water supply contract with the City of Kingsville, which is the most significant customer of STWA for purposes of the water quality issues presented in this case. STWA purchases treated water from the City of Corpus Christi and distributes the water to its customers through two pipelines: a 42-inch pipe that runs 28 miles from Corpus Christi (the Main Line), and a 14-inch pipe that splits off the Main Line and runs approximately 16.5 miles (the West Branch). This case involves the Main Line. Currently, STWA sells potable water on a wholesale basis to six customers, which then distribute it to individuals within their communities for human consumption. While STWA does not provide direct water service to any individual, the water STWA provides is ultimately used by approximately 37,000 individuals, who receive the water on a retail basis from STWA's six customer systems.

On July 19, 2011, TCEQ investigator Melanie Edwards investigated STWA's facilities and documented the eight violations alleged in this case. One of the violations is for a failure to maintain the required disinfectant residual throughout STWA's pipeline. STWA has had a longstanding problem with maintaining the minimum disinfectant residual level. This violation was documented by the TCEQ during investigations in 2004 and 2008, as well as the 2011 investigation leading to this case. This failure to maintain the minimum disinfectant residual level is at the heart of this case and is the primary dispute between STWA and the ED.

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[2] Tr. Vol. 2 at 201. (The ALJ uses "Tr." to refer to the transcript of the original hearing, and "Remand Tr." to refer to the transcript from the hearing on remand.)

As a result of his investigation, the ED filed his Preliminary Report and Petition on February 8, 2012, seeking penalties and corrective action against STWA. On March 16, 2012, the ED had the matter referred to the State Office of Administrative Hearings (SOAH) for a hearing. On September 25, 2012, the ED filed a First Amended Preliminary Report and Petition, which is the current pleading in this case. A hearing was conducted in March 2013, and the initial PFD was issued in July 2013. The Commission considered that PFD at an open meeting in November 2013. During the open meeting, the Commissioners indicated their belief that STWA was a public water system subject to the Commission's rules, and that it had committed the violations alleged by the ED and found by the ALJ. However, the Commissioners also expressed concerns about the burdensome expense associated with the corrective actions that STWA might need to take.

Therefore, the Commission continued the matter without issuing a final decision to allow the ED to work with STWA to come up with solutions that would allow STWA to comply with the rules in a cost-effective, feasible manner. The ED developed some possible solutions, but was unable to reach an agreement with STWA for implementation of them. Therefore, the ED requested that the case be remanded back to SOAH for an additional limited evidentiary hearing. The Commission agreed and issued an order on June 4, 2015, remanding the case to SOAH to take additional evidence related to the cost-effective options for STWA to comply with the Commission's minimum disinfectant residual level requirements.

After the matter was remanded to SOAH, the ALJ conducted an additional evidentiary hearing on December 16-17, 2015. The parties submitted additional briefing on the issues, and the record closed on May 20, 2016. The ALJ now issues this Supplemental PFD on Remand to address the limited issues raised in this remand proceeding.

III. DISCUSSION

The sole remaining issue for the Commission to consider in this case is the cost of compliance to STWA and the options for compliance that STWA may have available to it. In this regard, the Commission asked the ED to put together a team to conduct a study. The ALJ first discusses the ED's efforts and findings, and then discusses the ED's recommendations.

A. The ED's Research and Analysis

1. The ED's Study

The TCEQ has a team of engineers, water chemists, and other experts within its Water Supply Division known as the Texas Optimization Program (TOP). The TOP team's responsibilities include training water suppliers to properly treat water and diagnose problems in water supplies. The TOP team studied STWA's system for five weeks in September and October 2014 and prepared a Distribution System Evaluation (DSE) report that was delivered to STWA in May 2015.[3] The TOP team's study focused on two primary factors: water age and water quality. Each of these is discussed briefly below.

2. The Water Age in STWA's System

The TOP team concluded that the average water age in STWA's Main Line over the 4 year time period studied was approximately 20 days.[4] If the 5-month period during which Kingsville took no water was excluded, the average dropped to 10 days, which the TOP team concluded was not unreasonable.[5] However, while the "averages" were low, there were periods and locations where the water age was more than 150 days.[6] So, while the average was

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[3] ED Ex. R-1 (consisting of two binders).

[4] ED Ex. R-1 at 6, 105-106.

[5] ED Ex. R-1 at 6, 105-106.

[6] ED Ex. R-1 at 6, 105-106.

reasonable, there were outlier periods/locations where the water age could get very high, thus contributing to the water quality problems noted in this case.

3. The Water Chemistry in STWA's System

The TOP team found that the primary problem with STWA's system, though, is not the water age, but rather operational deficiencies that lead to poor water quality—specifically, nitrification in the system. The TOP team concluded there are two major problems facing STWA: (1) a lack of sampling points that would allow STWA to make proper water quality management decisions (*i.e.*, knowing how to properly adjust the water chemistry as it is passing through the system), and (2) the presence of nitrifying bacteria within the system that degrade the disinfectant residual.

The TOP team determined that STWA is not able to properly manage the water chemistry in its system because it does not have enough representative sampling points so that it can make water chemistry adjustments as needed throughout the system. The TOP team noted that STWA does not sample the water at any point along the Main Line after it accepts it from the City of Corpus Christi. Rather, it simply boosts the water with disinfectant at the Driscoll Booster Station and then again at chloramine boosting stations at customer delivery points. The TOP team contends that the system needs to be sampled more frequently so that tailored boosting can occur, based upon the actual water chemistry, rather than simply blind boosting.

The TOP team noted that STWA's disinfectant boosting methods and lack of sampling points have resulted in nitrification in the Main Line and in the storage tanks downstream at customer locations. Nitrification is the process by which ammonia is sequentially oxidized to nitrite and nitrate. This nitrification is a result of STWA's use of chloramine as its disinfectant. As the chloramine decays over time, ammonia levels increase and this ammonia serves as the "food" for the bacteria that causes nitrification. Once nitrification occurs, it speeds the decay of chloramine even more, causing the chloramine disinfectant residual to last perhaps only a few days rather than the four to six weeks it might normally last. The TOP team noted that

preventing and eliminating nitrification is essential for STWA to be able to maintain the disinfectant residual at the level required by the TCEQ rules.

B. The ED's Minimum Required Recommendations

To remedy the water quality problems STWA has experienced, the ED recommends that it be required to take a number of actions. These are discussed below, along with STWA's response to the proposed actions.

1. Develop and Implement a Better Monitoring Plan for the System

The ED asserts that STWA has not established a sufficient monitoring plan for its system, and asks that STWA be required to submit one that requires it to sample more throughout its system. The ED contends that existing air release valves (ARVs) could be used as cost-effective sampling sites on the Main Line, and that STWA could install sample taps upstream and downstream of the Driscoll Booster Station as well. The ED recommends that sampling be required at each of the following locations: (1) the ARVs along the Main Line; (2) A new tap upstream of the Driscoll Booster Station; (3) a new tap downstream of the Driscoll Booster Station; (4) A tap between a newly-added ammonia injection point and the chlorine injection point (once a new ammonia injection point is added); and (5) at each customer location prior to additional boosting.

STWA has been working with the ED to develop additional sampling points. In its closing arguments, STWA indicated that it will continue working with the ED on this and does not expect it to be a point of contention going forward.

Therefore, at this time, it appears that STWA agrees that it needs a better monitoring plan that includes the additional sampling points recommended by the ED.

2. Develop a Nitrification Action Plan

STWA does not currently have a nitrification action plan (NAP). The ED recommends that it be required to adopt one that sets out the corrective actions to be taken when nitrification is detected in the system. The NAP should describe the necessary monitoring, trigger levels, and actions to avoid, control, and resolve nitrification episodes. The ED notes that typical corrective actions may include verification of sample results, localized flushing, system-wide flushing, and temporary conversion to free chlorine (instead of chloramine) as the disinfectant. The ED asserts that STWA's NAP should implement these actions, including standard flushing procedures and the periodic and routine use of free chlorine (a "free chlorine burn") to help control nitrification.

STWA agrees that nitrification is occurring in the Main Line and in the storage tanks at STWA's customer connections, but disputes that the nitrification is a result of operational issues. Rather, STWA asserts it is mainly a function of water age. Because of this, STWA disagrees that it needs a NAP that would require regular flushing and free chlorine burns. STWA's expert, Aaron Archer, testified that flushing would not provide any long-term benefits and is generally not used to address nitrification. He also testified that free chlorine burns are a measure of last resort and carry with them a risk of causing other water quality problems. He acknowledged that free chlorine burns provide an immediate benefit, but the benefit lasts no more than two or three months before the nitrification issue returns. Further, Mr. Archer took issue with the TOP team's laboratory tests used to determine possible remedies for STWA's system. He contended that the laboratory tests conducted by the TOP team were not reflective of the real world conditions of STWA's system and were not a good predictor of what would happen on the system.[7]

Given its historic ongoing problems with nitrification, the ALJ agrees that STWA should be required to adopt a NAP that includes periodic flushing and free chlorine burns as needed. Even STWA's expert, Mr. Archer, agreed that free chlorine burns provide an immediate benefit.

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[7] ED Ex. R-23B, at attached exhibit 3.

He just felt that a benefit of only two or three months was not enough. However, in the absence of other long-term fixes, this is a reasonable remedy to attempt to ensure that water quality standards are being met for the protection of customers. Moreover, it is necessary for STWA to adopt some sort of NAP in light of its long history with nitrification problems. Therefore, the ALJ agrees with the ED's recommendation on this issue.

3. Establish Consistent Water Demand through Customer Contracts

The ED also proposes that STWA be ordered to have terms in its water purchase contracts that require customers to take consistent minimum water amounts, which would help keep water age down in STWA's system. This, in turn, will help keep the disinfectant residual level from decaying. The ED notes that STWA currently provides water to a number of entities without a contract, and provides water to the City of Kingsville under a one-year contract that does not require consistent water usage.[8] The ED argues that adequate long-term contracts between STWA and its customers, requiring consistent minimum usage, will allow STWA to better manage the water quality of its system. However, the ED also notes that he believes that STWA can meet applicable water quality standards even apart from its customer's water usage decisions. So, while he recommends that consistent long-term contracts be implemented, the ED asserts that STWA's ability to comply with water quality standards is not premised on this.

STWA agrees that long-term contracts with the terms proposed by the ED are critical. It notes in its closing arguments that it is pursuing such contracts in good faith, but has no control over its ability to obtain them. Namely, STWA asserts it has no legal means to compel its customers to enter into such contracts.

The ALJ agrees with STWA on this issue. While STWA should pursue long-term contracts that include regular minimum consistent water demand from its customers, it has no ability to force other entities into such contracts. Therefore, it is impractical to mandate any

[8] STWA does have longer-term contracts with a few of its customers. The ED focuses, however, on Kingsville (which has only a one-year contract) and the customers that take water without a contract.

specific contractual terms (whether related to the length of the contract or any minimum levels of water usage) as "requirements" for STWA under any corrective action ordering provisions. STWA clearly understands the necessity of long term contracts with consistent usage requirements, and it appears to be aggressively pursuing such contracts. Therefore, the ALJ recommends no required corrective action in this regard.

4. Add Ammonia Injection Capabilities at the Driscoll Booster Station

Finally, the ED recommends that STWA be ordered to add ammonia injection capabilities to the Driscoll Booster Station. Currently, STWA can add only chlorine to the Main Line at the Driscoll Booster Station. If STWA adds ammonia boosting capabilities at this location, it will be able to better maintain a compliant minimum disinfectant level as the water travels the rest of the way through the pipe to the City of Kingsville and other users. It is estimated that the cost to add the recommended ammonia boosting facilities would be between $100,000 and $150,000. STWA agrees that this is a good step and it has committed to pursuing it. Accordingly, the ALJ agrees that such should be required of STWA in the corrective action ordering provisions.

C. The ED's Additional Recommendations

In addition to those actions identified in the previous section which the ED contends are essential for ensuring proper water quality, the ED also suggests other actions that, while not essential, would help STWA improve the quality of water in its system. These are discussed below.

1. Encourage Kingsville to Distribute its Demand on a Bell Curve

The ED notes that, at the time of the hearing, STWA was negotiating with the City of Kingsville to enter into a long-term (20-year) contract. The ED asserts that STWA should continue to pursue such a contract and ensure that it contains a number of terms, including that

(1) Kingsville be required to take a minimal amount of water based on quantity, not price, and (2) that the minimal demand requirements be structured according to a bell curve, so that Kingsville is required to take more water in the summer months when the disinfectant residual is expected to decay more quickly, and less water in the winter months when the disinfectant residual is expected to last longer.

As discussed previously, STWA does not have a legal means to compel its customers to agree to certain contractual provisions. Thus, while the ED's suggestion is accurate and helpful, it cannot readily be reduced to any enforceable corrective action ordering provision. Therefore, the ALJ does not recommend any Commission requirement in this regard.

2. Utilize Standard Operating Procedures Regarding Chemical Dosing

The ED asserts that STWA should establish standard operating procedures (SOPs) to ensure that its field operators are aware of the chemical composition of the water and are able to dose the correct amount of chloramine based upon those water conditions. The SOPs should address not only the operating procedures, but also the training of staff to ensure that they are well-qualified to manage the water quality of STWA's system. The ALJ agrees that, given the historic problems STWA has experienced and the unique challenges facing it, it should establish and implement SOPs to ensure that its employees are doing all they can to detect and correct any water quality issues. Thus, the ALJ recommends that STWA be required to adopt and implement SOPs as requested by the ED.

3. Install a pH Adjustment Station near the O.N. Stevens Plant

The ED recommends that STWA consider installing a pH adjustment station at the beginning of the Main Line. This adjustment station would raise the pH of the water, thus resulting in a slower decay rate of the disinfectant residual. When the pH of the water coming from the O.N. Stevens Plant was adjusted from 7.6 to 8.6, the chloramine residual in STWA's system remained compliant with TCEQ minimum levels for at least 60 days, which covered the

entire duration of the TOP team's study of the system.[9] Without such an adjustment, the chloramine residual drops below the minimum required level after approximately 40 days.[10] This recommendation was also discussed by STWA's consultant in 2009, but was never put into effect. STWA's consultant has estimated that the cost of this improvement would be approximately $150,000.[11]

STWA argues that the addition of a pH adjustment station is not a viable or cost-effective option. Although it was discussed by STWA's expert in 2009 as a possible solution, it was rejected because of concerns it would cause heavy deposition and scaling on STWA's system and its customers' systems. STWA notes that raising the pH could cause problems to residential users by plugging up dishwashers, washing machines, and hot water heaters by virtue of the increased deposition and scaling that would be expected.[12]

Because of the overall cost to STWA of building a pH adjustment station, as well as the potential harm to residential customers from pH adjustments, the ALJ does not recommend that this be required of STWA. If the other corrective actions do not satisfactorily address the water quality problems, then this option may be explored.

4. Install Additional Chemical Booster Stations

The ED asserts that it would be helpful for STWA to install one or more additional booster stations on the Main Line between the Driscoll Booster Station and the City of Kingsville. The TOP team estimated that additional chloramine booster stations could be added at a cost of $100,000 to $200,000 per station.

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[9] Remand Tr. Vol. 1 at 166-167.

[10] Remand Tr. Vol. 1 at 166.

[11] Remand Tr. Vol. 2 at 20.

[12] Remand Tr. Vol. 2 at 21-23.

STWA disagrees with this estimate, calculating it would likely cost between $400,000 and $500,000 per booster station and take a few years to build.[13] Specifically, the land acquisition could take one or two years, and the design and construction probably another year.[14] Moreover, STWA would likely have to issue bonds to raise the funds necessary to construct one or more additional booster stations.[15] Thus, STWA contends that it is not a feasible solution, as it would likely take four to five years to implement. If such a recommendation is required by the Commission, STWA proposes that it be required to build only one station initially so that its effectiveness could be measured before additional stations are built.

The addition of one or more booster stations after the Driscoll Booster Station likely would be a helpful step in resolving the problem. However, it also would be an expensive and time-consuming remedy, likely taking a few years to implement and costing $400,000 to $500,000 per station. While this option should be explored if the other more immediate steps do not solve the nitrification problems, the ALJ does not believe it should be required yet. Rather, the addition of ammonia injection, better sampling and operating plans, and perhaps more consistent usage by customers may resolve the nitrification issues without the need for further costly actions. Therefore, the ALJ does not recommend that this be included as a required corrective action at this time.

D. Summary

STWA has clearly had problems with nitrification. However, it appears that there is hope that these problems will be resolved. First, in December 2013, Ricardo Water Supply Corporation (Ricardo WSC) connected into the Main Line near where the City of Kingsville connects to it. Thus, even if Kingsville does not take water for extended periods,

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[13] Remand Tr. Vol. 2 at 14-15.

[14] Remand Tr. Vol. 2 at 14-15.

[15] Remand Tr. Vol. 2 at 100-101.

Ricardo WSC's usage should now prevent water stagnation in STWA's system. That, coupled with STWA's efforts at securing contracts with its customers to provide for more consistent required water usage, should generally address STWA's water age concerns.

Further, the ED has developed a number of corrective actions that should help solve the nitrification problems that have plagued STWA's system. By requiring STWA to (1) add water sampling points, (2) develop a better monitoring plan, (3) develop SOPs and an action plan for dealing with nitrification, and (4) add ammonia injection capabilities at the Driscoll Booster Station, it appears the Commission may be able to ensure going forward that water in STWA's system meets minimum quality standards. Accordingly, the ALJ recommends that the Commission include these requirements in its final order in this case.

Although the ALJ previously recommended that STWA not be considered a public water system, he understands the Commissioners have disagreed with that conclusion (as reflected in their discussion during the open meeting in November 2013). To assist the Commissioners, the ALJ is submitting along with this supplemental PFD a proposed final order that incorporates the Commissioners' prior determinations in this case along with the ALJ's recommendations on the remand issues. Therefore, while both the PFD and this supplemental PFD should be considered together, the proposed order submitted with this supplemental PFD addresses all pending matters in this case and may be used as the basis of the Commission's final order in this docket. Accordingly, the prior proposed order submitted by the ALJ may be disregarded.

IV. CONCLUSION

In conclusion, the ALJ finds that the ED has demonstrated that STWA committed eight violations for which it is subject to administrative penalties and that a total administrative penalty of $2,443 for the violations is warranted. Further, the ALJ recommends that the Commission impose the corrective actions noted by the ALJ in this supplemental PFD to ensure that STWA meets the water quality standards applicable to it going forward.[16] Consistent with these conclusions and recommendations, the ALJ provides, along with this supplemental PFD, a proposed order with findings of fact and conclusions of law for the Commission's consideration.

SIGNED June 30, 2016.

CRAIG R. BENNETT
ADMINISTRATIVE LAW JUDGE
STATE OFFICE OF ADMINISTRATIVE HEARINGS

[16] The ALJ has adopted verbatim the vast majority of the ED's proposed corrective action ordering provisions, making a couple of minor modifications and leaving out those provisions he does not recommend at this time.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

AN ORDER
IN REGARD TO THE ENFORCEMENT ACTION
AGAINST SOUTH TEXAS WATER AUTHORITY
TCEQ DOCKET NO. 2011-1647-PWS-E,
SOAH DOCKET NO. 582-12-5353

On November 20, 2013; June 3, 2015; and _____, the Texas Commission on Environmental Quality (TCEQ or Commission) considered the Executive Director's First Amended Report and Petition recommending that the Commission enter an order assessing administrative penalties against and requiring corrective action by South Texas Water Authority (STWA). A Proposal for Decision (PFD) and a Supplemental PFD on Remand have been presented by Craig R. Bennett, an Administrative Law Judge (ALJ) with the State Office of Administrative Hearings (SOAH), who conducted hearings concerning the First Amended Report and Petition on March 5-6, 2013, and December 16-17, 2015, in Austin, Texas.

After considering the ALJ's PFD and Supplemental PFD on Remand, the Commission adopts the following Findings of Fact and Conclusions of Law:

I. FINDINGS OF FACT

A. Background

1. STWA was created by the Texas legislature in 1979 as a water conservation and reclamation district designed to provide a wholesale water supply to the cities of Kingsville, Driscoll, Bishop, and Agua Dulce.

2. STWA owns and operates a wholesale water supply system located 1/2 mile west of United States Highway 77 on East County Road 2010 in Kingsville, Kleberg County, Texas.

3. STWA purchases treated water from the City of Corpus Christi and distributes the water to its customers through two pipelines: a 42-inch pipe that runs 28 miles from Corpus Christi (the Main Line), and a 14-inch pipe that splits off the Main Line and runs approximately 16.5 miles (the West Branch).

4. Currently, STWA sells potable water on a wholesale basis to six customers: Nueces Water Supply Corporation; City of Kingsville; Nueces County Water Control and Improvement District No. 5; City of Bishop; City of Driscoll; and City of Agua Dulce. These six customers of STWA then distribute the water to individuals within their communities for human consumption.

5. Each of STWA's six current customers is a public water system, as defined by the Commission's rules.

6. STWA does not currently provide direct water service to any individual, but the water STWA provides is ultimately used by approximately 37,000 individuals, who receive the water on a retail basis from STWA's six customer systems.

7. Until November 2012, STWA also served the LCS Detention Center in addition to the customers identified above. The LCS Detention Center is a private correctional facility that houses individuals. At all times STWA provided service to the LCS Detention Center, the facility had at least 25 individuals who were served directly by STWA.

8. STWA no longer provides service to the LCS Detention Center.

B. Procedural History, Notice, and Jurisdiction

9. On July 19, 2011, the TCEQ investigator Melanie Edwards investigated STWA's facilities and documented the eight violations alleged in this case.

10. On February 8, 2012, the Executive Director (ED) of the TCEQ filed his Preliminary Report and Petition, seeking penalties and corrective action against STWA.

11. On February 13, 2012, STWA filed an answer to the Preliminary Report and Petition and requested a hearing.

12. On March 16, 2012, the ED filed a letter asking the Commission's Chief Clerk to refer this case to SOAH for hearing, and the Chief Clerk referred it to SOAH on March 22, 2012.

13. On March 26, 2012, the Chief Clerk mailed a notice of hearing to STWA, the ED, and the Office of Public Interest Counsel.

14. The notice of hearing contained a statement of the time, place, and nature of the hearing; a statement of the legal authority and jurisdiction under which the hearing was to be held; a reference to the particular sections of the statutes and rules involved; and a short, plain statement of the matters asserted.

15. A preliminary hearing convened before SOAH ALJ Penny Wilkov on April 26, 2012.

16. On September 25, 2012, the ED filed a First Amended Preliminary Report and Petition, which is the current pleading in this case.

17. An initial evidentiary hearing on the merits was conducted on March 5-6, 2013, with ALJ Craig R. Bennett presiding. The ED appeared through attorneys Jennifer Cook and Peipey Tang. STWA appeared through attorneys Mike Willatt and Bill Flickinger. The record initially closed on May 24, 2013, after written closing arguments were filed.

18. In July 2013, the ALJ issued his initial PFD in this case.

19. On November 20, 2013, the Commission considered the initial PFD and continued deliberation of the matter without issuing a final decision to allow the ED to work with STWA to come up with solutions that would allow STWA to comply with the rules in a cost-effective, feasible manner.

20. The TCEQ has a team of engineers, water chemists, and other experts within its Water Supply Division known as the Texas Optimization Program (TOP). The TOP team's responsibilities include training water suppliers to properly treat water and diagnose problems in water supplies.

21. The TOP team studied STWA's system for five weeks in September and October 2014 and prepared a Distribution System Evaluation report that was delivered to STWA in May 2015.

22. The ED subsequently requested that this case be remanded to SOAH for an additional limited evidentiary hearing regarding possible corrective actions.

23. On June 4, 2015, the Commission issued an order remanding the case back to SOAH to take additional evidence related to the cost-effective options for STWA to comply with the Commission's minimum disinfectant residual level requirements.

24. After the matter was remanded to SOAH, the ALJ conducted an additional evidentiary hearing on December 16-17, 2015. The parties submitted additional briefing on the issues, and the record closed on May 20, 2016.

C. The Violations

25. STWA uses chloramine as a disinfectant in its water system.

26. Field tests conducted on STWA's pipeline in 2011 showed chloramine levels below 0.5 mg/L on numerous occasions in 2011. Specifically, the following chloramine levels (expressed in mg/L) were observed at different locations along the pipeline: 0.27, 0.20, 0.28, 0.40, 0.25, 0.31, and 0.21.

27. In 2011, STWA's chemical and microbiological monitoring plan was missing required data, including information on the sampling frequency, the analytical procedures used, and a written description of the methods used to calculate compliance. After the ED's investigation, the monitoring plan was updated to include the missing information.

28. In 2011, STWA failed to have required paperwork showing it was using an approved laboratory for analyzing its samples for the maximum residual disinfectant levels.

29. In 2011, STWA employees were running their own samples to determine compliance with the maximum residual disinfectant levels.

30. In 2011, STWA was sampling six pump stations, five times per week, which would have resulted in a monthly total of approximately 120 samples (*i.e.*, 30 per week); however, STWA had less than 40 samples per month included in its Disinfectant Level Quarterly Operating Reports (DLQORs).

31. STWA was previously granted an exception by the ED to convert from the use of a chlorine disinfectant to a chloramine disinfectant. As part of that exception, the ED required that STWA monitor and record free ammonia levels.

32. In 2011, STWA was not monitoring or recording free ammonia levels as required by the ED's exception.

33. In 2011, STWA's continuous disinfectant residual analyzers were not being calibrated.

34. In 2011, STWA used a sight glass on the 2,500-gallon tank at its Bishop Eastside Pump Station to comply with the TCEQ's requirement that all pressure tanks with a capacity

greater than 1,000 gallons must be fitted with a device to readily determine the air-water-volume.

35. In 2011, the sight glass on the 2,500-gallon tank at STWA's Bishop Eastside Pump Station was inoperable.

36. In 2011, STWA was monitoring the chloramine disinfectant residual after booster disinfection at pump stations, which did not provide a representative sample of the disinfectant residual throughout the 42-inch pipe from the water treatment plant to the City of Kingsville's pump station.

37. When samples were collected in 2011 from locations prior to STWA's booster locations, these samples reflected disinfectant levels below the required minimum residual level.

D. STWA's System

38. The average water age in STWA's Main Line over the 4-year time period studied by the TOP team was approximately 20 days. If the 5-month period during which Kingsville took no water was excluded, the average dropped to 10 days. However, while the "averages" were low, there were periods and locations where the water age was more than 150 days when Kingsville was not taking water for an extended period of time.

39. STWA does not sample the water in its system at any point along the Main Line after it accepts it from the City of Corpus Christi. Rather, it simply boosts the water with disinfectant at the Driscoll Booster Station and then again at chloramine boosting stations at the customer delivery points.

40. STWA is not able to properly manage the water chemistry in its system because it does not have enough representative sampling points so that it can make water chemistry adjustments as needed throughout the system.

41. STWA's system needs to be sampled at more points so that tailored boosting can occur, based upon the actual water chemistry.

42. Currently, STWA lacks the ability to add ammonia to the Main Line at the Driscoll Booster Station.

43. Ammonia boosting capabilities at the Driscoll Booster Station would allow STWA to better maintain a compliant minimum disinfectant level as the water travels the rest of the way through the pipe to the City of Kingsville and other users.

44. The cost to add ammonia boosting facilities at the Driscoll Booster Station is estimated at between $100,000 and $150,000.

II. CONCLUSIONS OF LAW

A. Procedural History, Notice, and Jurisdiction

1. The Commission has jurisdiction in this case pursuant to Texas Water Code chapter 7 and Texas Health & Safety Code chapter 341.

2. Under Texas Health and Safety Code § 341.049, the Commission may assess an administrative penalty against any person who violates chapter 341, subchapter C of the Texas Health and Safety Code, or of any rule or order adopted or issued thereunder.

3. Under Texas Health and Safety Code § 341.049, the penalty may not exceed $1,000 per violation, per day, for each of the violations at issue in this case.

4. In determining the administrative penalty, Texas Health and Safety Code § 341.049 requires the Commission to consider several factors, and the Commission's Penalty Policy implements those factors.

5. SOAH has jurisdiction over matters related to the hearing in this case, including the authority to issue a PFD with findings of fact and conclusions of law. Tex. Gov't Code ch. 2003.

6. The ED has the burden of proof in this case by a preponderance of the evidence. 30 Tex. Admin. Code § 80.17(d).

7. STWA was notified of the First Amended Report and Petition and of the opportunity to request a hearing on the alleged violations, penalties, and corrective actions proposed therein. 30 Tex. Admin. Code §§ 1.11 and 70.104.

8. STWA was adequately notified of the hearing on the alleged violations and the proposed penalties and corrective actions. Tex. Gov't Code §§ 2001.051(1) and 2001.052; 1 Tex. Admin. Code § 155.401; and 30 Tex. Admin. Code §§ 1.11, 1.12, 39.25, 70.104, and 80.6(b)(3).

B. STWA's Status as a Public Water System

9. STWA is a public water system. 30 Tex. Admin. Code § 290.38(66).

C. The Violations

10. The TCEQ's rules require the residual disinfectant concentration of the water within a public water system's distribution system to be at least 0.5 mg/L of chloramine (if chloramine is used instead of free chlorine). 30 Tex. Admin. Code §§ 290.110(b)(4) and 290.46(d)(2)(B).

11. In 2011, STWA violated 30 Texas Administrative Code §§ 290.110(b)(4) and 290.46(d)(2)(B) because it failed to maintain minimum chloramine levels throughout the system.

12. The TCEQ's rules require that all public water systems maintain an up-to-date chemical and microbiological monitoring plan. 30 Tex. Admin. Code § 290.121.

13. In 2011, STWA violated 30 Texas Administrative Code § 290.121 because its monitoring plan data was missing some of the required information.

14. The TCEQ's rules require that an approved laboratory be used to analyze samples to determine compliance with maximum residual disinfectant levels. 30 Tex. Admin. Code § 290.119(a)(2)(D).

15. In 2011, STWA violated 30 Texas Administrative Code § 290.119(a)(2)(D) by failing to use an approved laboratory to analyze samples to determine compliance with maximum residual disinfectant levels.

16. The TCEQ's rules require that public water systems submit DLQORs showing samples taken to demonstrate compliance with the TCEQ's disinfectant level requirements, and that all samples taken must be included in the analysis. 30 Tex. Admin. Code § 290.110(f)(1).

17. In 2011, STWA violated 30 Texas Administrative Code § 290.110(f)(1) by failing to include all samples in its compliance analysis.

18. The TCEQ's rules allow the ED to grant exceptions to certain requirements of the Commission's rules provided that the water system complies with all requirements imposed by the ED in the exception. 30 Tex. Admin. Code § 290.39(l).

19. In 2011, STWA violated 30 Texas Administrative Code § 290.39(l) by failing to comply with a requirement of the ED to monitor and record free ammonia levels as a condition of the exception granted to STWA to convert from the use of a chlorine disinfectant to a chloramine disinfectant.

20. The TCEQ's rules require that continuous disinfectant residual analyzers be calibrated every 90 days using chlorine solutions of known concentrations. 30 Tex. Admin. Code § 290.46(s)(2)(C)(i).

21. In 2011, STWA violated 30 Texas Administrative Code § 290.46(s)(2)(C)(i) by failing to calibrate its continuous disinfectant residual analyzers every 90 days.

22. The TCEQ's rules require that all pressure tanks with a capacity greater than 1,000 gallons must be fitted with a device to readily determine the air-water-volume. 30 Tex. Admin. Code § 290.43(d)(3).

23. In 2011, STWA violated 30 Texas Administrative Code § 290.43(d)(3) by failing to have an operable device on its 2,500-gallon storage tank at the Bishop Eastside Pump Station that could readily determine the air-water-volume.

24. The TCEQ's rules require that public water systems monitor the disinfectant residual at various representative locations throughout the distribution system. 30 Tex. Admin. Code § 290.110(c)(4).

25. In 2011, STWA violated 30 Texas Administrative Code § 290.110(c)(4) because it was not monitoring the disinfectant residual levels at representative locations throughout its distribution system.

26. The penalty that the ED proposes for STWA's violations considered in this case conform to the requirements of the Texas Health and Safety Code § 341.049 and the Commission's Penalty Policy.

27. STWA should be assessed a total administrative penalty of $2,443 for the violations considered in this case.

28. STWA should be required to take corrective actions to bring its water system into compliance with all applicable water quality rules, including the minimum disinfectant residual requirements of the TCEQ's rules.

III. ORDERING PROVISIONS

NOW, THEREFORE, BE IT ORDERED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY, IN ACCORDANCE WITH THESE FINDINGS OF FACT AND CONCLUSIONS OF LAW, THAT:

1. Within 30 days after the effective date of this Commission Order, South Texas Water Authority shall pay an administrative penalty in the amount of $2,443 for its violations of the Commission's rules as noted above and considered in this case.

2. Checks rendered to pay penalties imposed by this Order shall be made out to "TCEQ." Administrative penalty payments shall be sent with the notation "Re: South Texas Water Authority, TCEQ Docket No. 2011-1647-PWS-E" to:

   Financial Administration Division, Revenues Section
   Attention: Cashier's Office, MC 214
   Texas Commission on Environmental Quality
   P.O. Box 13088
   Austin, Texas 78711-3088

3. The payment of the administrative penalty listed herein and South Texas Water Authority's compliance with all the terms and conditions set forth in this Order will completely resolve the past violations set forth by this Order. However, the Commission shall not be constrained in any manner from requiring corrective actions or penalties for other violations that are not raised here.

4. The Executive Director may refer this matter to the Office of the Attorney General of the State of Texas for further enforcement proceedings without notice to South Texas Water Authority if the Executive Director determines that South Texas Water Authority has not complied with one or more of the terms or conditions in this Order.

5. Immediately upon the effective date of this Commission Order, South Texas Water Authority shall:

   a. Begin providing access to the Facility to allow entry to employees and agents of the TCEQ for the purpose of inspecting and investigating conditions related to the Facility, in accordance with 30 Texas Administrative Code § 290.46(a); and

   b. Respond completely and adequately, as determined by the Executive Director, to all requests for information regarding these Ordering Provisions within 15 days after the date of such request or otherwise specified in writing by the Executive Director, provided that no other applicable response deadline is set out elsewhere in this Commission Order.

6. Within 30 days after the effective date of the Commission Order, South Texas Water Authority shall:

   a. Check the accuracy of the continuous disinfectant analyzers using chlorine solutions of known concentrations or by comparing the results from the on-line analyzer with the results of an approved benchtop method at least once every seven (7) days and properly verify the analyzers used to determine the effectiveness of chloramination every ninety (90) days, in accordance with 30 Texas Administrative Code § 290.46(s)(2);

   b. Locate, uncover, mark, document, and create a complete inventory of all existing sampling points, valves, and mains on all water lines, including the west branch, in accordance with 30 Texas Administrative Code § 290.46(n); and

   c. Submit an up-to-date map of the Facility and as-built drawings of the chloramination facilities, in accordance with 30 Texas Administrative Code § 290.46(n).

7. Within 45 days after the effective date of the Commission Order, South Texas Water Authority shall:

   a. Submit written certification in accordance with Ordering Provision No. 11 below, to demonstrate compliance with Ordering Provision No. 6.a.;

   b. Submit an updated monitoring plan for the system, including an updated sampling plan, in accordance with 30 Texas Administrative Code § 290.121. The monitoring plan shall include the complete inventory created pursuant to Ordering Provision No. 6.b. above, including documentation showing the location of all existing sampling points, valves, and mains on all water lines, including the west branch; and

   c. Submit a Nitrification Action Plan ("NAP"), in accordance with 30 Texas Administrative Code § 290.46(z), as well as Standard Operating Procedures for implementing the NAP and ensuring the sampling and monitoring plans referenced in Ordering Provision No. 7.b. are properly implemented.

8. Within 90 days after the effective date of this Commission Order, South Texas Water Authority shall:

   a. Submit a progress report for the preceding 90-day period, and for each quarter thereafter, which shall include the following:

      i. A brief summary of all actions taken and the results thereof during the preceding 90-day period, including implementation of the most recent monitoring plan and efforts made to maintain compliance with disinfectant residual levels; and

ii. All sampling data gathered during the preceding 90-day period.

All quarterly progress reports shall be submitted to the TCEQ no later than the fifteenth (15) day after the end of each quarter. South Texas Water Authority shall continue to submit quarterly progress reports to the TCEQ until it can demonstrate at least 12 consecutive months of compliance with the disinfectant residual requirements.

b. Submit documentation demonstrating the installation of any additional sampling taps and valves, in accordance with 30 Texas Administrative Code § 290.39;

c. Submit an updated monitoring plan, including an updated sampling plan, reflecting the installation of any additional sampling taps and valves, in accordance with 30 Texas Administrative Code § 290.121;

d. Submit for approval all plans and specifications to add ammonia boosting capabilities at the Driscoll Booster Station, in accordance with 30 Texas Administrative Code § 290.39. The plans and specifications shall be submitted to:

Plan Review Team, MC 159
Water Supply Division
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

e. Submit, to the address listed in Ordering Provision No. 8.d. above, engineering plans, specifications, maps, and other pertinent information for proposed additional sampling points and valves, including the west branch, pursuant to 30 Texas Administrative Code § 290.46(n); and

f. Submit, to the address listed in Ordering Provision No. 8.d. above, a detailed engineering report that describes the strategies and facilities Respondent intends to employ to comply with the disinfectant residual requirement.

9. Within 180 days after the effective date of this Commission Order, South Texas Water Authority shall:

a. Submit documentation demonstrating the installation of ammonia boosting capabilities at the Driscoll Booster Station, in accordance with 30 Texas Administrative Code §§ 290.39 and 290.110; and

b. Submit an updated monitoring plan, including an updated sampling plan, reflecting the installation of ammonia boosting capabilities at the Driscoll Booster Station, in accordance with 30 Texas Administrative Code § 290.121.

10. Within 730 days after the effective date of this Commission Order, South Texas Water Authority shall submit documentation demonstrating at least 12 consecutive months of compliance with the disinfectant residual requirements, in accordance with 30 Texas Administrative Code §§ 290.110 and 290.46.

11. All documents, reports, plans and other correspondence and information required to be submitted under these Ordering Provisions shall be accompanied by detailed supporting documentation, including photographs, receipts, and/ or other records, shall be signed by Respondent, and shall include the following certification language:

> "I certify under penalty of law that I have personally examined and am familiar with the information submitted and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Unless otherwise indicated, all documents, reports, plans, correspondence, information, supporting documents and certifications shall be submitted to:

Water Supply Division, MC 154
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

and:

Order Compliance Team
Texas Commission on Environmental Quality
Enforcement Division, MC 149A
P.O. Box 13087
Austin, Texas 78711-3087

12. All other motions, requests for entry of specific findings of fact or conclusions of law, and any other requests for general or specific relief, if not expressly granted herein, are hereby denied.

13. The effective date of this Order is the date the Order is final. Tex. Gov't Code § 2001.144 and 30 Tex. Admin. Code § 80.273.

14. The Commission's Chief Clerk shall forward a copy of this Order to South Texas Water Authority.

15. If any provision, sentence, clause, or phrase of this Order is for any reason held to be invalid, the invalidity of any provision shall not affect the validity of the remaining portions of this Order.

SIGNED:

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

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Bryan W. Shaw, Ph.D., Chairman
For the Commission