Riverfork Homeowners Association

"Where the Finley meets the James"

P.O Box 656, Nixa, MO 65714

FILED

NOV 30 2015

Missouri Public
Service Commission

May 16, 2015

MO Public Service Commission
ATTN: Water/Sewer Dept.
P.O. Box 360
Jefferson City, MO 65102

Office of the Public Counsel
ATTN: Water/Sewer Dept.
P.O. Box 2230
Jefferson City, MO 65102

RE: Riverfork Water Company
Request for Rate Increase

Gentlemen:

Approximately 78% of Riverfork Water Company's (identified subsequently in this letter as RWC) customers reside in the two subdivisions known as Riverfork Ranch and Eastbluff Estates. Riverfork Ranch Homeowner's Association represents both subdivisions, since 100% of all residences within both subdivisions are members of Riverfork Ranch Homeowner's Association. This letter, including the attached petition signed by many of our residents, is our latest expression of our plea to MO PSC to act decisively to force RWC to comply with various long-standing agreements with MO PSC as well as to force RWC to comply with MO DNR's many letters of inspection and recommendations for modifications to RWC's system. Through various telephone and face-to-face discussions with MO DNR, I have learned of MO DNR's long-standing frustration with RWC. Despite MO DNR's efforts, RWC continues to ignore most of the recommendations MO DNR has made for a number of years. RWC's capital installation continues to deteriorate with time because RWC has spent virtually no money for maintenance for many years. The residents of Riverfork Ranch Homeowners Association have made many statements to me over the past two months of their continuing disgust for the way RWC ignores and abuses them. Some of our residents have also expressed some degree of fear that RWC might retaliate against them for signing the attached petition. Relations between RWC and its customers are poor. RWC's customers make few complaints because they believe they will do no good.

Exhibit No. 2
Date 11-19-15 Reporter RCV
File No. WR-2015-0194

EXHIBIT
2

We strongly object to Riverfork Water Company's latest request for a rate increase. Their service has not improved since their last rate increase in 2008. In fact, in some ways, the service has declined. We also believe that Riverfork Water Company has **failed to comply** with some of the 24 requirements as part the signed agreement between RWC and MO PSC regarding Case Numbers QW-2008-0011 and WR-2009-0166. We believe it would be hypocritical of MO PSC to grant a rate increase to Riverfork Water Company when it has failed to meet all of the requirements it agreed to in order to secure the last rate increase.

Comments on MO PSC Agreement with RWC (11/06/2008)

ITEM 18 This MO PSC requirement (see "Company/Staff Disposition Agreement") of Riverfork Water Company's last rate increase required RWC to arrange for an inspection of the storage tank, including a written report regarding the condition of the storage tank and estimates for any needed repairs, modifications and painting. RWC was also required to provide the manager of the Water & Sewer Department with a copy of this report and the Company's proposal to implement the items listed in the report by April 30, 2009. RWC failed to do this by the required date (the report from Hydro-Spec is dated July 27, 2009, and "received" on August 10, 2009).

More significant, however, are the contents of the Hydro-Spec report and the results (or lack thereof) to date. Hydro-Spec's report stated:

- (extracted verbatim from Paragraph 2 of letter) ***"The exterior access ladder is 15 ft. up from base, and has a notched-rail safety system installed, but should be raised 6 ft. to extend up high enough to allow access onto roof without having to disengage from it. There is no safety handrail around roof perimeter."*** We submit our opinion to you that Hydro-Spec failed to note that this installation is in violation of the following US OSHA regulations: 29CFR1910.27(d)(2)(ii), 29CFR1910.27(d)(3), 29CFR1910.27(d)(2)(ii), 29CFR1910.23(c)(1) or 29CFR1910.132(a), and 29CFR1910.23(a)(2).
- (extracted verbatim from Paragraph 3 of letter) ***"The roof vent is inadequate, and has been moved from its normal center location. A plate was welded flat where the vent was originally located and an antenna post has been installed directly in the middle of the roof which makes movement on the roof exterior very limited."*** This work was done when RWC chose to enhance its revenue by allowing Total Wireless (a rural wireless internet service provider) to install various antennae equipment on the roof of the tank. Apparently, appropriate technical supervision of Total Wireless's modifications to RWC's water storage tank was not provided at the time of installation. The flat plate on the center of the cone-top roof may have been installed in such a way as to weaken the seam of the tank roof. We also question whether the interior tank epoxy lining was repaired after the flat plate

was welded onto the roof. We submit our opinion to you that inadequate roof venting is well-known to precipitate the sudden partial vacuum collapse of many tanks in the commercial and industrial world. I have personal experience in the forensics of tank collapses and can testify before the MO PSC if you desire.

- (extracted verbatim from Paragraph 4 of letter) ***"The overflow pipe is a stub type at the top, 6 in. in dia, and has a screen clamped over the opening."*** We have two comments:
    - Without knowing the percentage of open area of the screen, it isn't possible to know how much open area is available to provide venting for the tank. Note that the existing vent is already inadequate.
    - (Refer to item 11, page 8 of MO DNR letter dated February 4, 2015) MO DNR has repeatedly recommended that the tank overflow piping be extended from approximately 100 ft above grade to within 1-2 ft above grade so that dangerous accumulations of ice don't form during the winter. The tank does overflow periodically. This has created a dangerous condition to public safety because the tank overflows onto Highway M-140 (Equine Valley Road). During wintertime tank overflows, many residents, including me, have observed dangerous ice buildups that cover Highway M-140. Unsuspecting motorists have skidded on the ice on several occasions.
- (extracted verbatim from Paragraph 6 of letter) ***"The tank was drained and all sediment was removed from inside. The interior epoxy is in poor condition and should be removed and recoated."*** Pages 6 and 7 of Hydro-Spec's inspection also contain photos with the following notations (extracted verbatim): ***"Interior epoxy coating is in poor condition. Rust and blistering is evident throughout." "Blisters are common throughout interior epoxy." "Rust along floor to wall seam, blisters on floor evident."*** Although this report was submitted in 2009, NOTHING has been done to date. Residents who live in closest proximity to the water tower (e.g. Davis Drive, Sheron Drive) are now the recipients of dark brown-black iron oxide sludge in their drinking water. When our residents call RWC to complain, they are routinely told, "It's not our problem. Your plumbing is at fault." Since the homes in our subdivision (confirmed with some homeowners on Davis and Sheron Drives) have nothing but copper piping in their homes and the exterior water mains are PVC, the only source for this type of iron sludge is the rusting interior of RWC's water storage tank. Please note that **six (6) years** have passed since RWC's water storage tank was inspected and it was known at that time that the interior epoxy coating had failed. Lastly, I wish to voice my growing concern about the crevice corrosion that exists at the tank's side shell to bottom weld seam. Although Hydro-Spec's inspection qualified this problem, they didn't quantify it. The highest stress area in the entire tank is this very weld seam. Sooner or later, the weld seam **will** fail. Hopefully, the tank will "merely" leak, but depending on the

severity of the corrosion, it is possible that the weld seam could fail catastrophically. The known problems of this tank should be rectified **before** this happens. MO DNR and MO PSC, by virtue of the Hydro-Spec inspection and the various MO DNR inspections, have known of the problems in RWC's water storage tank for more than six years (the order to inspect the tank was, no doubt, precipitated by MO DNR's growing concern about the unknown condition of the tank's interior). **When will MO PSC begin proper enforcement action(s) on this item?**

- (extracted verbatim from Paragraph 7 of letter) ***"The exterior paint is in poor condition, with lots of peeling patches and rusted areas, as well as algae growth."*** This item has been the subject of numerous MO DNR inspections. We agree with MO DNR's and Hydro-Spec's recommendations.
- (extracted verbatim from Paragraph 8 of letter) ***"The influent pipe is 12 in. tall from floor, and the effluent pipe is 8 ft. tall, both are 6 in. dia. steel with flanges."*** As has been noted on page 2 of Hydro-Spec's inspection report and in recommendation 9 on page 7 of MO DNR's February 4, 2015 letter to RWC, the effluent pipe should be extended upward to increase the contact time of chlorine with the water. Please note that MO DNR has stated to me that chlorine residuals are sporadically tested by MO DNR at or near the RWC storage tank facility—NOT downstream, near most residents' homes. MO DNR did recently test chlorine residuals on Finley River Drive and it was found to be satisfactory. However, MO Code of State Regulation 10CSR60-4.055(4) requires a minimum residual chlorine level of 0.2 ppm. Whenever I have taken a sealed water sample to an independent laboratory in Springfield, the residual chlorine content was **zero**. Our contention is that residual chlorine testing should be done more often than once/year, especially since it is known by MO DNR that RWC's chlorination system is improperly controlled. Our request is that MO PSC (or its delegate, MO DNR), RWC and Riverfork Homeowners Association **mutually** agree on a protocol for residual chlorine testing, including frequency.
- (page 2 of Hydro-Spec's inspection letter) We agree with all of the recommendations found on page 2. Many of these recommendations are also amplified in several MO DNR letters to RWC.
    - We have attached current photos of the overgrowth of trees encroaching on and engulfing the so-called security fence. Note that this was mentioned in the Hydro-Spec letter, but no tree trimming has occurred in the past six years, other than removing fallen branches from the winter tank overflow incident.
    - Note recommendation 14 of MO DNR's letter of February 4, 2015. What the MO DNR letter fails to mention is that nothing has been done to repair the fence damage for 1½ years. I was the person who called RWC in January, 2014 to report the damage that was done that morning. I also pointed out to RWC that the driver's license plate had been torn off in the accident and that

it should be easy to determine the name/address of the via the MO Dept. Revenue vehicle registration department and/or the local police. Presumably, RWC was able to obtain financial restitution for the damage from either the vehicle owner or his insurance company. If this is the case, why didn't RWC repair the fence long ago?

Riverfork Water Company sent MO PSC an undated letter, responding to MO DNR, MO PSC and the Hydro-Spec inspection report. As short as it is, RWC's letter makes interesting reading. Our comments are as follows:

Item 1 RWC contends that water pressure never falls below DNR minimum. This statement was untrue when RWC wrote the letter and it is untrue now. The residents of Riverfork Ranch can testify that it is common for water pressure to fall far below the 20 PSI minimum. In fact, water pressure sometimes falls so low that second floor bathrooms do not have sufficient pressure for fixtures to operate, and first floor fixtures only trickle. When water pressures fall this low, appliances such as dishwasher fail to operate correctly. RWC has been cited by MO DNR for low water pressure on previous occasions. This alone should be adequate to refute RWC's contention.

I believe that it is also fair to say that MO DNR is probably frustrated with the lack of complaints from RWC's customer base, but the reason for this is, in my opinion, that the residents of Riverfork Ranch have given up, believing that Missouri state departments and agencies are too heavily biased against the citizenry for their voices to be fairly considered. This is a consistent message voiced to me by residents in my contacts with them, by emails, by telephone, and personal visits. This issue has arisen at every HOA Annual Meeting. Several residents have asked about the possibility of filing legal actions against the various state agencies, but I have tried to convince them to "stay the course" and work with and through "the system", however frustrating that may be.

RWC stated that they would like to have a new well completed by December 31, 2010. **No work has ever been done—six years since the letter was written and 4½ years after RWC stated that the work would be completed.**

Item 2 RWC stated that Hydro-Spec "verbally indicated" that the interior epoxy lining of the standpipe/water storage tank "...could last another four or five years and the exterior could be repainted in a couple of years." If this is so, then why did Hydro-Spec state that the lining had already failed? The photographic evidence is quite compelling to me as a mechanical engineer who is experienced in such matters. RWC goes on to state that they intended to complete this work by December 31, 2012. **No work has ever been done—six years since the letter was written and 2½ years after RWC stated that the work would be done.**

Item 3 RWC stated that they would make sure that the trees are trimmed and an attachment to the well house for the chlorine system would be completed by December 31, 2009. **No work has ever been done—six years since the letter was written and 5½ years after RWC stated that the work would be done.**

Perhaps the most interesting statement RWC made in this letter was in the first paragraph—**"We want to have the best water system in the state, so there is no reluctance on our part except for spending money we don't have."** Since Mr. Brower operated (but didn't own) this system for a number of years before he purchased it from the former owner, he knew of the system's various problems **before** he purchased it. As the owner(s), Mr. Brower and his business partner have spent only the money necessary to keep the system in a barely functional state. We have seen no evidence that they have spent any "constructive" money on maintenance, but only on "fix it when it breaks" maintenance. While it can be argued that RWC's statement is either naïve or cynical, it seems to most of RWC's customers that RWC's statement was cynical and designed to placate MO PSC and MO DNR.

In one of my face-to-face visits with MO DNR in early 2015, I was told, *"Riverfork is a bad system. It was poorly designed and was never built according to the plans that were submitted to us. So we know that it was undersized and under-designed from its beginning. The system has been abused by expanding the customer base several times with no capital improvements and it has never been properly maintained. We share your concerns. We (MO DNR) are also frustrated with Mr. Brower's avoidance. Sometimes his required engineering studies and other documentation is as much as a year late. MO DNR is understaffed and it is very difficult for us to keep up with all the various water systems in our area. Mr. Brower is spending even less money now, because he has only himself, his business partner and a part-time bookkeeper as employees. This is not enough help; we have told Mr. Brower this, but we can't force him to hire employees to do the necessary maintenance. But I want you to know that the Riverfork system is **much** better than all of the other, smaller rural water systems that Mr. Brower owns. Those systems are truly awful. Please try to work with us. We are primarily the inspection agency and have limited capability of enforcement, which really rests with MO PSC. Sooner or later, something will have to be done and we all know it. We don't think Mr. Brower will ever spend the money to do much. Your best hope lies with the MO PSC."*

ITEM 20 This item requires RWC to implement the recommendations contained within Appendix G.

The first paragraph of the "Overview" of Appendix G states that local business office hours are 8:00-5:00, Monday through Friday. This is NOT true. The part-time bookkeeper (who is not necessarily in the office at 8:00) is only there until about noon,

at which point the door to the office is locked, unless she decides to leave earlier. The only way to contact RWC at other times is via voicemail, which is totally ineffective because RWC rarely returns calls from customers. The statement is also made in the first paragraph that a cell phone number is provided which gives customers 24/7 access to Company personnel in case of the need for an emergency contact. Whenever someone dials this number, there is either no answer or a customer has to leave a voicemail message. None of the RWC customers I have spoken with can ever remember anyone answering their calls to either telephone number. The ONLY way to get a response from RWC is to call when the bookkeeper is there. She is not always in the office, even from 8:00-noon, and usually doesn't return calls from customers. Both new and existing customers are totally frustrated with this situation. MO PSC needs to force RWC to remedy the situation. While the intent of having a second, "emergency" number was well-intended by MO PSC, RWC has rendered it totally ineffective, by failing to respond to it.

The "Meter Reading" section of Appendix G states, "Inactive meters are always locked when customers move." We fail to understand how RWC locks meters, since meter vault covers (see attached photos) are merely set on top of the meter vault and are not secured in any way. It is easy for even children to lift off the entire meter vault cover. There is no security of meters.

The third and fourth paragraphs of the "Credit and Collections" section of Appendix G discuss delinquent accounts and collection handling. RWC, especially in the last three years, has angered a number of customers by failing to notify them of imminent disconnection for non-payment, then disconnecting water service. A number of customers have been disconnected even though they have paid their bills in a timely fashion, which infuriates customers. It then becomes necessary for a customer to prove payment by showing a copy of the cancelled check (or credit card payment) before RWC will reinstate service. It is obvious that, even with a small number of customers, RWC's record-keeping and bill-processing is inadequate. Similarly, new RWC customers tend to be frustrated because, even when they come to the office in person to establish an account, RWC fails to send monthly billings. It then becomes the customer's responsibility to badger RWC to start sending bills. This is inexcusable.

The "Complaints and Comments" section of Appendix G notes the emergency number, but as pointed out above, this is totally ineffective because RWC does not respond to calls. We believe that RWC deliberately fails to document complaints to avoid further follow-up by MO PSC and MO DNR. My recent face-to-face survey of Riverfork residents uncovered dozens of complaints to RWC. The most common complaint that RWC customers have, other than low water pressure, are:

- Rudeness—The most commonly voiced complaint that RWC's customers have is the uniform rudeness expressed by Mr. Brower, his business partner and the part-time bookkeeper. More than fifty (50) RWC customers—1/3 of his entire customer base—voiced this complaint to me, on a face-to-face basis, just in the months of April and May, 2015! Whenever any voice (telephone or face-to-face) contact is made regarding a complaint of any sort, the almost universal response is hostility and rudeness. Whether the part-time bookkeeper has been instructed in this tactic by Mr. Brower and his business partner or whether this is her natural inclination is unknown. Regardless of the contact person, hostility toward any complaint becomes quickly evident. "It's not our problem" is RWC's near-universal response, whether it's low water pressure, iron oxide sludge in the water, failure to invoice properly, inappropriate disconnections with unwarranted penalty fees for reconnection, broken meter vault covers, etc.
- Profanity—When a customer actually speaks with Mr. Brower about a problem, he tends to lose patience quickly and resorts to use of profane language. This is NOT acceptable business practice, nor is it within societal norms in southwest Missouri. Many Riverfork residents are retired and/or have strong religious beliefs. While Mr. Brower may sincerely believe that he is merely exercising his First Amendment ("free speech") rights, he may not be aware that, as a commercial business venture, he may be infringing on the malice standard established by the Supreme Court. We hereby request that MO PSC enjoin Mr. Brower against future use of profanity in his contact with customers; further, we request that MO PSC establish monetary penalties for Mr. Brower's or his employees' failure to comply.

Under the "Findings, Conclusions, and Recommendations" section of Appendix G, we note that "written service applications" have apparently not been instituted yet. I have spoken to several "new" (2014 and 2015) customers who have said they were not aware of a written service application. They had to go to RWC offices (and expressed frustration that the office isn't always open, even from 8:00-12:00, requiring them to make repeated visits) and established service by speaking with the part-time bookkeeper.

Under the "Customer Rights and Responsibilities Documentation" recommendations in Appendix G, we are not aware that RWC has developed and distributed such a brochure. Perhaps this is not the case, but I haven't been able to locate a resident who says he has received such a document. We also strongly suggest to MO PSC that RWC should be required to give such a document to each NEW customer.

Under the "Complaint and Inquiries Documentation" recommendations in Appendix G, I have already noted above that I wouldn't expect much documentation in this area. Has

MO PSC actually looked at this documentation since its 2008 agreement? This might be useful.

A last comment is in order at this time. RWC customers received a letter written by Mr. Brower in early 2015. The basic tone of his letter to his customers was that he had tried to install entirely new facilities which would eliminate many of our complaints, most notably low water pressure, but that MO DNR had consistently thwarted him in doing so by insisting on "doing it their way". Mr. Brower may or may not have been sincere in expressing his opinions, but he only succeeded in infuriating his customer base. I have spoken to more than 50% of RWC's total customer base about this letter and not a single person believed Mr. Brower's statements. Why should they? Mr. Brower has never done anything substantial to maintain or improve their water service (including all the failed commitments Mr. Brower made to MO PSC in 2009). Instead, the residents view it as a poorly written, self-serving attempt to garner sympathy for his latest attempt in increase water rates, and nothing more. I spoke to MO DNR's Kristen Pattenson about this and she expressed surprise, saying that she hadn't heard of such a letter. I will take the liberty of forwarding a copy to her.

Although I have believed that RWC is seriously undercapitalized for some time, I believe that an audit of RWC's accounting since 2008 is in order. In particular, I am interested in "operating expenses", "retained earnings" and "profits". Exclusive of salaries which Mr. Brower pays to himself and his business partner, it appears that there should be something on the order of $100,000 in the "retained earnings" and "profits" categories. Regardless of the amounts in these various categories, RWC has a reputation of "slow payer". An anecdotal example of this is the lawn-mowing service RWC uses. They have made no payments to this entity in 2015 to date. Perhaps the best advice I can give the lawn mowing service is to place a formal lien against RWC's assets in Stone County, but I would be interested in MO PSC's counsel's feedback.

Attached as Appendix B, please find a formal petition to MO PSC, requesting a denial of RWC's current rate increase. Several other appendices are attached for easy reference by MO PSC.

Please notify me of the date set for the public hearing for RWC's Request for Rate Increase, since a number of Riverfork Ranch residents have expressed their desire to attend the hearing and offer public testimony to the MO PSC. I will notify Riverfork Ranch residents of the date for the public hearing, so please notify me at least 15 days before the scheduled public hearing date. My email address is: stephenrandolph@srandolphassociates.com.

Thank you for your consideration.

Sincerely,

Stephen R. Randolph

Stephen Randolph
President, Riverfork Ranch Homeowners' Association

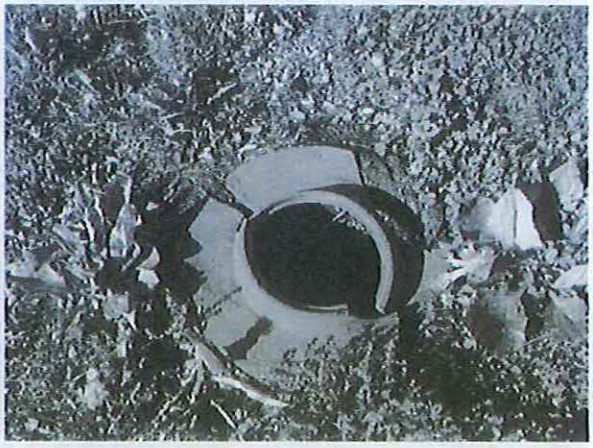
cc: MO DNR—Kristen Pattinson, Drinking Water Compliance Unit
Stone County Sheriff's Office
Stone County Highway Department

APPENDIX A

PHOTOS OF CURRENT (MAY, 2015) CONDITIONS

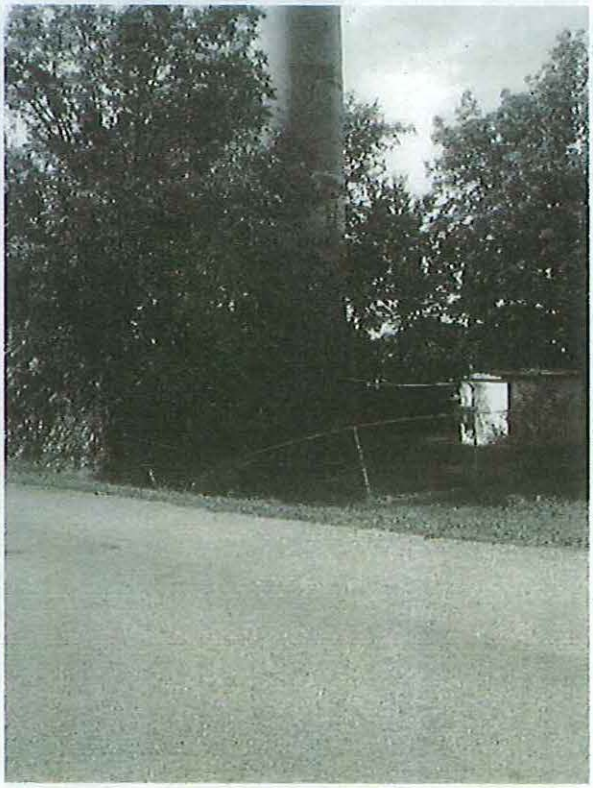
Current Examples of RWC's Abject Lack of Maintenance of its Facilities

Riverfork Ranch—Typical meter vault cover



Riverfork Ranch—At least one meter vault cover

Lack of security—no action for 1.5 YEARS
Note deterioration of exterior paint



Lack of security—tree and brush overgrowth

(see recommendations 10 and 14 of MO DNR's February 4, 2015 letter)

Lack of maintenance—fencing offers no security; ditch has filled in, allowing tank overflows to cross the highway, causing traffic hazards, especially during winter months

APPENDIX B

RIVERFORK RANCH/EAST BLUFF ESTATES

PETITION TO MISSOURI PUBLIC SERVICE COMMISSION

Petition to Missouri Public Service Commission

Riverfork Water Company Application for Rate Increase

Riverfork Water Company, Nixa, MO has approximately 150 customers and has submitted an application for a rate increase. As residents and residential customers of Riverfork Water Company, we hereby object to Riverfork Water Company's application for a rate increase on the following grounds:

1. Riverfork Water Company has failed to comply with some of the most serious items in its agreement with Missouri Public Service Commission as a condition of its last rate increase. Missouri Public Service Commission has failed to enforce the agreement.
2. Riverfork Water Company's service has not substantially improved since Missouri Public Service Commission's last grant of a rate increase. It can be argued that Riverfork Water Company's service has declined since 2008.
3. Despite years of negative inspections by Missouri Department of Natural Resources, Riverfork Water Company has failed to comply with MO DNR's recommendations, requirements and demands for changes to its operations, including increases in its quality of water service to its customers, water pressure, security to its facilities, routine maintenance to its facilities (well, standpipe, water treatment, and water mains), residual chlorine content of water delivered to its customers, and lack of maintenance to its water delivery system, including hydrants.

We, therefore, request Missouri Public Service Commission to:

- Deny Riverfork Water Company's current request for a rate increase.
- Demand that Riverfork Water Company comply with its ALL of its previous agreements with Missouri Public Service Commission BEFORE it submits any future requests for rate increases or service reductions.
- Demand that Riverfork Water Company comply with ALL of the detailed items noted in the Missouri Department of Natural Resources letter of February 4, 2015 and that such compliance be accomplished AND verified by MO DNR no later than September 1, 2015.

NAME	ADDRESS	CITY	DATE
Janis Hall	1869 W. Finley River Dr	Nixa, MO	4-25-15
DAN HALL	1869 W. Finley River	Nixa, MO	4-25-15
EARL FRUITS	1964 W FINLEY RIVER	Nixa, MO	4.25-15
ANN FRUITS	1964 W. FINLEY RIVE	Nixa, MO	4-25-15
JAMES CARNAHAN	1763 YOAKUM Dr	Nixa, MO	4-25-15
JOANN D. BACKER	1859 W. James River Dr	Nixa, MO	4-25-15
NICK BACKER	" " " "	Nixa, MO	4/25/15
RONALD KIRCHER	1740 YOACHUM	Nixa, MO	4/25/15
Kent Franks	1911 Finley Run Dr.	Nixa, MO	4/25/15
Katie Bartlett	2378 Kissee Dr.	Nixa, MO	4/25/15
William Bartlett	2378 Kissee Dr.	Nixa, MO	4/25/15
Galen Wilkinson	2292 Sheron Dr	Nixa, MO	4/25/15
Marilyn Cederwall	2342 Melton Dr	Nixa, MO	4/25/15
Tara Moulder	2331 Melton Dr	Nixa, MO	4/25/15
Victoria Phanco	2266 Alcey Way	Nixa, MO	4-25-15
Betty N. Byerly	1950 W. James River Dr	Nixa, MO	4-25-15
Eric Laird	2525 Equine Valley Rd	Nixa, MO	4-25-15
LISA Brainard	1754 Yoachum Dr	Nixa, MO	4-25-15
DARREN Brainard	1754 Yoachum Dr	Nixa, MO	4-25-15
Dayle Enderson	1781 Youchum Dr	Nixa, MO	4-25-15
Barbara Kuhn	1924 W. Finley River	Nixa, MO	4/25/15
Betty Rayburn	1912 W. Finley River Dr	Nixa, MO	4/25/15
Allan Kuhn	1924 W. FINLEY RIVER DR	Nixa, MO	4/25/15
Loreta Hiemann	1904 W. Finley River Dr	Nixa, MO	4-25-15
James Heinen	1904 W. Finley River Dr	Nixa, MO	4-25-15
FELICIA SCHOBER	1929 W. FINLEY RIVER	Nixa, MO	5/10/15
[illegible]	1929 W. Finley River	Nixa, MO	5/10/15
Angie Fenton	1932 W. Finley River	Nixa, MO	5-11-15
STEVE BOTSCHON	1961 W. FINLEY RIVER Dr	Nixa, MO	5-11-15
KIM BOTSCHON	1961 W. FINLEY RIVER Dr	Nixa, MO	5-11-15
Steven Spencer	1903 W Finley River Dr	Nixa, MO	5/11/15
[illegible]	1886 W Finley River	Nixa, MO	5/11/15
[illegible]	1886 W Finley River Dr	Nixa, MO	5/11/15
[illegible]	1872 W. Finley River Dr.	Nixa, MO	5/11/15
[illegible]	" "	Nixa, MO	5/11/15
[illegible]	1941 W. James River Dr	Nixa, MO	5/14/15
[illegible]	✓ ✓ ✓ ✓	Nixa, MO	✓
Steve Haskill	1906 W. James River Dr	Nixa, MO	5-14-2015
Carol Haskill	1906 W James River Dr	Nixa, MO	5-14-15
Rocky Orlandi	2344 McHon Dr	Nixa, MO	5-14-15
Tracy Orlandi	2344 McHon Dr	Nixa, MO	5-14-15
Zeke Orlandi	2353 Melton Dr	Nixa, MO	5-14-15
Tom Orlandi	2353 Melton Dr	Nixa, MO	5-14-15
[illegible]	1843 Finley River	Nixa, MO	5.15.15

NAME	ADDRESS	CITY	DATE	
Ernest P. Keenan & Martha	1844 W. Finley River	Nixa, MO	5/15/2015	
Martha S. Keenan	1844 W. Finley River	Nixa, MO	5/15/2015	
Jason Coats	1839 W Finley River Dr	Nixa, MO	5/15/2015	
Nikki Coats	1839 W Finley River Dr	Nixa, MO	5/15/2015	
Wanda Vermeer	2373 W Sheron Dr	Nixa, MO	5/15/2015	300-3959
Fred Vermeer	2373 W. Sheron	Nixa, MO	05-15-15	
Linda Franbarger	1800 W. Finley River Dr	Nixa, MO	5-15-15	
John Franbarger	1800 W. Finley River Dr	Nixa, MO	5-15-15	
Andy Crosna	1421 Davis Dr.	Nixa, MO	5-15-15	
Karen Hawkins	1655 W. Riverfork Dr	Nixa, MO	5-15-15	
Joe Hawkins	1655 W. Riverfork	Nixa, MO	5-15-15	
[illegible] Alexander	1746 W. Riverfork	Nixa, MO	5-15-15	
Derek Yeary	1737 W. Riverfork	Nixa, MO	5-15-15	
Stacy Yeary	1737 W. Riverfork	Nixa, MO	5-15-15	
Barbara Reecamp	2351 Robertson Mill	Nixa, MO	5-15-15	
[illegible]	2355 Robertson Mill	Nixa, MO	5-15-15	
Arthur C. Hendrickson	2386 Robertson Mill	Nixa, MO	5-15-15	
Patty S. Hendrickson	2386 Robertson Mill	Nixa, MO	5-15-15	
Angela J. Nash	2363 Robertson Mill	Nixa, MO	5-15-15	
[illegible]	2350 Robertson Mill	Nixa, MO	5/15/15	
Jo Ann Queen	2350 Robertson Mill Way	Nixa, MO	5/15/15	
[illegible]	2347 Robertson Mill Way	Nixa, MO	5/15/15	
Paula Limebury	2337 Alcey Way	Nixa, MO	5-15-15	
[illegible]	2346 Alcey Way	Nixa, MO	5-15-15	
[illegible]	2346 Alcey Way	Nixa, MO	5-15-15	
Jim Powell	2383 Alcey Way	Nixa, MO	5-15-15	
Ronda Powell	2383 Alcey Way	Nixa, MO	5-15-15	
[illegible] Gleason	2430 Alcey Way	Nixa, MO	5/15/15	
Cody Gleason	2430 Alcey Way	Nixa, MO	5/15/15	
[illegible] Britton	2387 Alcey Way	Nixa, MO	5/15/15	
Chris Kahl	2435 Alcey Way	Nixa, MO	5/15/15	
Richard Kahl	2435 Alcey Way	Nixa, MO	5/15/15	
[illegible]	2314 Alcey Way	Nixa, MO	5/15/15	
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NAME	ADDRESS	CITY	DATE
Eston Allison Lot 12	2120 Melton DR	Nixa, MO	5/14/2015
Ethel Allison Lot 12	2120 Melton Dr	Nixa, MO	5/14/2015
Mike Stubbs	2375 Kissee	Nixa, MO	5/14/2015
Kristen Sharp	1851 W James River	Nixa, MO	5/15/2015
James A. McCormick	1651 W RIVERFORK DR	Nixa, MO	5/15/15
Stephen Randolph	1912 W. Finley River DR	Nixa, MO	5-15-2015
Brenda C Reinke	1967 W James River Dr	Nixa, MO	5-15-2015
		Nixa, MO	
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		Nixa, MO	
		Nixa, MO	
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APPENDIX C

PARTIAL EXTRACT OF "NOTICE OF AGREEMENT" REGARDIND DISPOSITION OF SMALL WATER COMPANY REVENUE INCREASE REQUEST

CASE NO. WR-2009-0166

RIVERFORK WATER COMPANY

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Application of Riverfork Water Company for a Rate Increase.	))	Case No. WR-2009-0166

NOTICE OF AGREEMENT REGARDING DISPOSITION OF SMALL WATER COMPANY REVENUE INCREASE REQUEST

COMES NOW the Staff of the Missouri Public Service Commission (Staff), by and through counsel, and for its Notice of Agreement Regarding Disposition of Small Water Company Revenue Increase Request (Agreement Notice) states the following:

1. On November 4, 2008, Riverfork Water Company (Company or Riverfork) submitted to the Missouri Public Service Commission (Commission) a tariff filing transmittal letter (Request Letter), and accompanying revised tariff sheet, requesting the Commission allow an increase of $7,164 in Riverfork's annual water system operating revenues, and establishing the instant case.

2. As noted in Riverfork's Request Letter, the changes contained in the subject revised tariff sheet are based upon a *Company/Staff Agreement Regarding Disposition of Small Water Company Revenue Increase Request* (Disposition Agreement). As the Disposition Agreement was only entered into by Riverfork and Staff, the subject revised tariff sheet bears an effective date more than 45 days from the issue date as required by the small company rate increase procedure. As also noted in the Request Letter, the Disposition Agreement pertains to the small company rate increase request that Riverfork submitted to the Commission on May 9, 2008 (Tracking File No. QW-2008-0011).

3. Included in Appendix A, attached hereto, is a copy of the above-referenced Disposition Agreement; various documents related to the Disposition Agreement; and, affidavits from Staff members that participated in the investigation of the Company's Request.

COMPANY/STAFF AGREEMENT REGARDING DISPOSITION OF SMALL WATER COMPANY REVENUE INCREASE REQUEST

RIVERFORK WATER COMPANY

MO PSC CASE NO. QW-2008-0011

BACKGROUND

Riverfork Water Company (Company) initiated the small company revenue increase request (Request) for water service that is the subject of the above-referenced Missouri Public Service Commission (Commission) tracking file by submitting a letter to the Secretary of the Commission in accordance with the provisions of Commission Rule 4 CSR 240-3.635, Water Utility Small Company Rate Increase Procedure (Small Company Procedure). In its request letter, which was received at the Commission's offices on May 9, 2008, the Company set forth its request for an increase of $24,446 in its total annual water service operating revenues for the affected service areas. In its request letter, the Company also acknowledged that the design of its customer rates, its service charges, its customer service practices, its general business practices and its general tariff provisions would be reviewed during the Commission Staff's (Staff) review of the revenue increase request, and could thus be the subject of Staff recommendations. The Company provides service to approximately 145 residential customers in the affected service area.

Pursuant to the provisions of the Small Company Procedure and related internal operating procedures, the Staff initiated an audit of the Company's books and records, a review of the Company's customer service and general business practices, a review of the Company's existing tariff, an inspection of the Company's facilities and a review of the Company's operation of its facilities. (Hereafter, these activities are collectively referred to as the Staff's "investigation" of the Company's Request.)

Upon completion of its investigation of the Company's Request, the Staff provided the Company and the Office of the Public Counsel (OPC) various information regarding the results of the investigation, as well as its initial recommendations for resolution of the Company's Request.

RESOLUTION OF THE COMPANY'S RATE INCREASE REQUEST

Pursuant to negotiations held subsequent to the Company's and the OPC's receipt of the above-referenced information regarding the Staff's investigation of the Company's Request, the Staff and the Company hereby state the following agreements.

(1) That for the purpose of implementing the agreements set out herein, the Company will file proposed tariff revisions with the Commission containing the rates, charges and language set out in the example tariff sheets attached hereto as Attachment A, with those proposed tariff revisions bearing an effective date of December 19, 2008.

(2) That except as otherwise noted in the agreements below, the ratemaking income statement attached hereto as Attachment B accurately reflects the Company's annualized revenues generated by its current customer rates, the agreed-upon total annualized cost of service for the Company, and the resulting agreed-upon annualized operating revenue increase of $7,164 needed to recover the Company's cost of service.

(3) That the audit workpapers attached hereto as Attachment C, which include consideration of a capital structure of 42.28% equity for the Company and a return on equity of 10.73%, accurately reflect the agreed-upon total annualized cost of service for the Company and provide the basis for the ratemaking income statement referenced in item (2) above.

(4) That the rates set out in the attached example tariff sheets, the development of which is shown on the rate design worksheet attached hereto as Attachment D, are designed to generate revenues sufficient to recover the agreed-upon total annualized cost of service for the Company.

(5) That the rates included in the attached example tariff sheets will result in the residential customer impacts shown on the billing comparison worksheet attached hereto as Attachment E.

(6) That the rates included in the attached example tariff sheets are just and reasonable, and that the provisions of the attached example tariff sheets also properly reflect all other agreements set out herein, where necessary.

(7) That the schedule of depreciation rates attached hereto as Attachment F, which includes the depreciation rates used by the Staff in its revenue requirement analysis, will be the prescribed schedule of water plant depreciation rates for the Company.

(8) That the Company will develop Continuing Property Records for all capital assets. These records will include, but not be limited to, original purchase price, description of asset, account number, and all additions and/or retirements associated with the asset. The Continuing Property Records will be developed and a copy of the

Continuing Property Records will be provided to the Manager of the Auditing Department by March 31, 2009.

(9) That the Company will maintain all of its financial records, including monthly financial records, in accordance with the Commission's approved 1973 Uniform System of Accounts (USOA), as revised July 1976.

(10) That the Company will allocate all items it currently books as miscellaneous equipment to specific USOA accounts.

(11) That the Company will capitalize cost as plant in service or charge the cost as expense according to the guidelines in USOA.

(14) That the Company will develop and maintain a monthly report of the actual gallons pumped versus the amount of gallons billed and provide a copy of this report to the manager of the Auditing Department by January 31, 2009.

(15) That the Company will develop and maintain a monthly report listing the usage by customer and provide a copy of this report to the manager of the Auditing Department by January 31, 2009.

(16) That the Company will immediately begin implementing separating the duties of bookkeeping from the duties of writing checks.

(17) That the Company will refund deposits in the future in accordance with the Company's filed tariff with the Commission.

(18) That the Company will contact and select a storage tank specialist and arrange for an inspection and a written report regarding the condition of the storage tank and estimates for any needed repairs, modifications and painting. The company will provide the manager of the Water & Sewer Department with a copy of this report and the Company's proposal to implement the items listed in the report by April 30, 2009.

(19) That the Company will implement a meter testing and/or meter replacement program in accordance with Commission rule 4 CSR 240-10.030(38). The Company will provide the manager of the Water & Sewer Department with a listing of the meters tested and/or replaced and the property address of the tested/replaced meter under this program by September 30 of each year.

(20) That the Company will implement the recommendations contained in the Engineering & Management Services Department ("EMSD") Report attached hereto as Attachment G no later than November 30, 2008.

(21) The Company will mail its customers a written notice of the rates and charges included in its proposed tariff revisions within 15 days of entry of the Commission approved Order. The notice will include a summary of the impact of the proposed rates on an average residential customer's bill. When the Company mails the notice to its customers, it will also send a copy to the Staff and the Staff will file a copy in the subject case file.

(22) That the Company acknowledges that the Staff will, and the OPC may, conduct follow-up reviews of the Company's operations to ensure that the Company has complied with the provisions of this Disposition Agreement.

(23) That the Company acknowledges that the Staff or the OPC may file a formal complaint against it if the Company does not comply with the provisions of this Disposition Agreement.

(24) That the above agreements satisfactorily resolve all issues identified by the Staff and the Company regarding the Company's Request, except as otherwise specifically stated.

ADDITIONAL MATTERS

Other than the specific conditions agreed upon and expressly set out herein, the terms of this Disposition Agreement reflect compromises between the Staff and the Company, and neither party has agreed to any particular ratemaking principle in arriving at the amount of the annual operating revenue increase specified herein.

Staff has completed a Summary of Case Events and Staff has included the summary as Attachment II to this disposition Agreement.

The Company acknowledges that the Staff will be filing this Disposition Agreement and the attachments hereto, in the case that will be opened when the Company files the proposed tariff revisions called for in the agreement. The Company also acknowledges that the Staff may make other filings in that case.

Additionally, the Company agrees that the Staff shall have the right to provide whatever oral explanation the Commission may request regarding the rate case that will be opened when the Company files the proposed tariff revisions called for in this Disposition Agreement, at any agenda meeting at which that case is noticed to be considered by the Commission. To the extent reasonably practicable, the Staff will provide the Company with advance notice of any such agenda meeting so that it may have the opportunity to also be represented at the meeting.

EFFECTIVE DATE AND SIGNATURES

This Disposition Agreement shall be considered effective as of the date that the Company files the proposed tariff revisions required herein with the Commission.

Agreement Signed and Dated:

Hollis H Brower — 10/30/08

Hollis Brower — Date
President
Riverfork Water Company

11/3/08

James Busch — Date
Manager
Water & Sewer Department
Missouri Public Service Commission Staff

List of Attachments

Attachment A – Example Tariff Sheets

Attachment B – Ratemaking Income Statement

Attachment C – Audit Workpapers

Attachment D – Rate Design Worksheet

Attachment E – Billing Comparison Worksheet

Attachment F – Schedule of Depreciation Rates

Attachment G – EMSD Report

Attachment H – Summary of Case Events

Agreement Attachment G

EMSD Report

Engineering and Management Services Department
Report on the Customer Service Operations
at Riverfork Water Company
QW-2008-0011

Gary Bangert – September 10, 2008

Riverfork Water Company (Riverfork, Company) filed a rate increase request on May 9, 2008, for water service it provides in its Missouri service area near Nixa, Missouri. The Engineering and Management Services Department (EMSD) staff initiated an informal review of customer service processes, procedures, and practices at Riverfork in July 2008. This customer service review was done in conjunction with the Company's rate increase request. Prior to on-site interviews, the EMSD staff examined Company tariffs, annual reports, Missouri Public Service Commission (Commission) complaint records, and other documentation related to the Company's customer service operations.

The purpose of the Engineering and Management Services Department is to promote and encourage efficient and effective utility management. This purpose contributes to the Commission's overall mission to ensure that customers receive safe and adequate service at the lowest possible cost, while providing utilities the opportunity to earn a fair return on their investment.

The objectives of this review were to document and analyze the management control processes, procedures, and practices used by the Company to ensure that its customers' service needs are met and to make recommendations, where appropriate, by which the Company may improve the quality of services provided to its customers. The findings of this review also provide the Commission with information regarding the Company's customer service operations.

The scope of this review focused on processes, procedures, and practices related to:

- Meter Reading
- Customer Billing
- Credit and Collections
- Complaints and Inquiries
- Customer Communication

This report contains the results of the EMSD staff's review.

Overview

Riverfork Water Company was certificated to provide water service in Missouri on January 30, 1990. The Company was purchased by the current owners in 2005. The Company provides water service to approximately 144 customers within its authorized service area. Riverfork's business office is located in Nixa, Missouri. Local business office hours are 8:00 – 5:00, Monday through Friday. A cell phone number is also provided, which gives customers 24-hour, 7-day access available to Company personnel in case of the need for an emergency contact.

Riverfork Water Company staffing in Missouri includes the president, a general manager, and a bookkeeper. Most outside plant functions are performed by the general manager with assistance from the president. Outside contractors are used occasionally for construction activity involving digging or electrical work. Monthly water tests are performed by Water Technology of the Ozarks in addition to some testing by the Department of Natural Resources. The president is also involved in policy development and general problem solving. The general manager's primary responsibilities include daily system checks, chlorination, reading meters, routine maintenance, and responding to customer emergency calls. The general manager spends approximately one week each month on work activity associated with Riverfork. The bookkeeper is responsible for business office functions including taking new service applications, entering meter readings, preparing and mailing customer bills, maintaining customer account records, and posting customer bill payments. The bookkeeper also responds to customer inquiries and complaints received by telephone or from customers who walk into the business office. The bookkeeper spends about 10 hours per week on Company work activities.

Company management anticipates minimal future growth in the number of customers it serves. Most applications for new service are from customers in existing homes.

Meter Reading

The general manager reads all of the water meters within the last two days of the month. The meter route sheet includes the previous meter readings of customers that the general manager uses to verify the accuracy of current meter readings. The bookkeeper enters the meter readings into the computer and the bills are printed and mailed on the first day of the month. Company management stated that meter readings are never estimated. Inactive meters are always locked when customers move. Consequently, there has been no problem with theft of service. A master meter is located in the system and read every month. A monthly report is

produced enabling Company personnel to compare the quantity of water that is pumped with the amount that is billed to customers. Modern meter reading technology has been examined, but Company management has determined that a different system is not economically feasible give the small size of the water system.

Customer Billing

The Company uses American Business software for its utility billing program to calculate and print the customers' bills. The accuracy of bills is verified by the bookkeeper when the bills are produced by checking the history of usage on each account. As previously mentioned all bills are printed and mailed on the first day of each month. Bills are due on the 20th of the month and considered delinquent on the 21st day of each month. There is no provision for a late payment charge in the Company's tariff.

Customers' water bills are based on a price schedule of $12.48 for up to 2,000 gallons of usage. Over 2,000 gallons of usage, customers are charged $3.81 per 1,000 gallons of usage.

Credit and Collections

Customers typically come into the office to apply for service, although no standard application form is used. The bookkeeper requests the information from new customers that is necessary to set up the account in the billing system. Customer account records are maintained on the computer and backed up monthly; however, no fireproof storage is available to store critical customer account records. No deposit is required from new customers. The bookkeeper responds to any questions new customers have about their water service including payment options; however, no written information about rights and responsibilities is provided to customers.

Customers may pay their bills using any of four payment options. Company personnel estimate that about 80% of customer payments are received through the mail. A small portion of these mailed payments are received through outside electronic payment providers where customers initiate payment transactions from their home computer. Company personnel indicated that approximately 15% of the customers bring their payment to the business office and about 5% pay with a credit card. There is no additional customer charge for using a credit card. Bill payments are never collected from customers in the field. Company personnel stated they rarely receive an insufficient funds check although a $15 returned check fee is applied in that

situation. Bill payments are recorded into the billing system and processed daily. Bank deposits are made daily.

The Company has an established procedure for handling delinquent accounts. Bills are considered delinquent 21 days after rendition. A past due notice is mailed to delinquent customers on the 25th day. After 10 days, a door hang tag notice is presented allowing 24 hours before the water service is shut off. Company management stated that disconnections are only performed mid-week and customers are immediately reconnected after paying the past due amount plus a $15 reconnection charge.

Few delinquent customers have their service disconnected because of nonpayment. Although 10 – 20 typically do not pay their bill until after the due date each month, there is usually less than one disconnection performed per month. Company management stated that no accounts are over 60 days past due and customers with past due amounts are usually in arrears for no more than $20 - $25. The Company does occasionally write off uncollectible accounts when someone moves and Company personnel are unable to communicate and obtain payment. There were eight customer accounts written off in 2007 with account balances totaling approximately $1,060. The Company does not use an outside collection agency.

Complaints and Inquiries

Customers with questions or concerns may call the Company contact number appearing on the bill. Company personnel in the business office respond to customer calls and forward them to the appropriate individuals, as required. An emergency contact cell phone number is provided when customers call outside of business hours. Emergency calls are usually handled by the general manager or the president. Company personnel do not document the nature of complaints and inquiries that are received.

A review of Commission complaint/inquiry records for the past three years showed one customer contact in 2006 and one in 2008. Both of the contacts pertained to low water pressure concerns.

Customer Communication

Outside of monthly billings, the Company rarely communicates with its customers. Letters have been used to notify customers about rate case activity.

Findings, Conclusions, and Recommendations

The following discussion presents a summary of the findings, conclusions, and recommendations pertaining to the Company's customer service operations. The information presented in this section focuses on the following issues that require Company management's attention:

- Bill Delinquency
- Written Service Applications
- Customer Rights and Responsibilities Documentation
- Fireproof Storage
- Complaint and Inquiry Documentation

Bill Delinquency

Customer bills are considered delinquent after 20 days. Payment terms stated on customer bills indicate that payment is due by the 20th of the month. Although past due notices are not mailed to delinquent customers until the 25th of the month, the bill indicates that customers would be delinquent on the 21st day of the month if they have not remitted payment.

The Company's tariff and Commission Rule 4 CSR 240-13.020(7) provide customers 21 days to pay before the bills are considered delinquent. Commission Rule 4 CSR 240-13.020(7) states:

> A monthly billed customer shall have at least twenty-one (21) days and a quarterly billed customer shall have at least sixteen (16) days from the rendition of the bill to pay the utility charges, unless a customer has selected a preferred payment date in accordance with a utility's preferred payment date plan. . .

Changing the due date to the 21st of the month on customer bills would ensure compliance with the Company's tariff and the Commission's rule.

THE EMSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:

> *Modify the information on customers' bills to allow at least 21 days before bills are considered delinquent.*

Written Service Applications

The Company does not currently use a written service application when customers apply for service. Company personnel stated that most customers come into the business office to apply for service. The bookkeeper notes the basic information that is needed to set up the

account; however, a standard application form is not used. The Company's tariff, Rule 4, (Sheet No. 10) states:

> A written application for service, signed by the customer, stating the type of service required and accompanied by any other pertinent information, will be required from each customer before service is provided to any unit. Every customer, upon signing an application for any service rendered by the Company, or upon taking of service, shall be considered to have expressed consent to the Company's rates, rules and regulations.

In addition to being required by the tariff, a signed and dated application from customers requesting service would provide useful documentation of the customers' agreement to the terms by which water service is provided.

THE EMSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:

> *Develop and initiate use of a written service application that is used when new customers apply for service.*

Customer Rights and Responsibilities Documentation

The Company has not prepared a brochure documenting the rights and responsibilities of the Company and its customers. The development of such a brochure and its prominent display and availability to customers is required by Commission Rule 4 CSR 240-13.040(3) which states:

> A utility shall prepare, in written form, information which in layman's terms summarizes the rights and responsibilities of the utility and its customers in accordance with this chapter. . . This written information shall be displayed prominently, and shall be available at all utility office locations open to the general public, and shall be mailed or otherwise delivered to each residential customer of the utility if requested by the customer. The information shall be delivered or mailed to each new customer of the utility upon the commencement of service and shall be available at all times upon request.

The information available in a brochure would provide useful facts relating to billing procedures, payment requirements, customer deposits, discontinuance of service, inquiries and complaints, and access to the Company, Commission, and the Office of Public Counsel. An informational brochure would be a valuable educational resource for new and existing customers.

THE EMSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:

> *Develop and distribute to all current and future customers a brochure specifying the rights and responsibilities of the utility and its customers.*

Fireproof Storage

Critical customer records and account data are not kept in fireproof storage. While customer billing system data is backed up monthly on a floppy disk, this data and other valuable customer account information is kept in file cabinets that are not fireproof.

The lack of fireproof storage has several detrimental effects. In the event of a disaster, the documents and information maintained in the office could be lost or destroyed. It would be difficult for the Company to re-create its records and nearly impossible to have an accurate record of delinquent amounts owed to the Company. Securing Company's documents such as customer applications for service, customer account data, customer payments, and other pertinent Company information in fireproof storage would minimize the risk of loss and the cost and labor-intensive process required to re-create customer data should a disaster occur.

THE EMSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:

> *Acquire and utilize fireproof storage for critical customer records and account data.*

Complaint and Inquiry Documentation

The Company does not keep a record of all complaints and inquiries that are received. Rules conveying customer contact documentation requirements that are applicable to water companies are contained in Commission Rule 4 CSR 240-13. In the section titled "Inquiries" of 4 CSR 240-13.040(5), it states:

> A utility shall maintain records on its customers for at least two (2) years which contain information concerning: ... (B) The number and general description of complaints registered with the utility;

The availability of documented customer contact information would enable Company management to evaluate why customers contact the Company and to determine if any corrective measures could be taken to reduce customer contacts and improve customer satisfaction. The availability of documentation regarding customer contacts would also help to show the Company's responsiveness in addressing customer issues.

THE EMSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:

> *Develop and implement a process for documenting customer contacts and maintain this information for at least two years.*

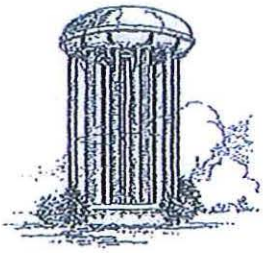
APPENDIX D

HYDRO-SPEC INSPECTION REPORT,

DATED JULY 27,2009

UNDATED RIVERFORK WATER COMPANY RESPONSE TO HYDRO-SPEC INSPECTION REPORT

Hydro-Spec, Inc. 1-800-611-TANK
P.O.Box 491
Nevada, MO 64772



July 27, 2009

TO: Riverfork Water Co.
FROM: Chris Barrett
RE: Water standpipe inspection

In late June, we inspected your water storage standpipe and found the following:

The standpipe is steel, 10 ft. in diameter and 100 ft. tall.
The roof entry hatch is 24 in. dia., and cover lid is downlipped and unlocked.
The exterior access ladder is 15 ft. up from base, and has a notched-rail safety system installed, but should be raised 6 ft. to extend up high enough to allow access onto roof without having to disengage from it. There is no safety handrail around roof perimeter.
The roof vent is inadequate, and has been moved from its normal center location . A plate was welded flat where the vent was originally located and an antenna post has been installed directly in the middle of the roof which makes movement on the roof exterior very limited.
The overflow pipe is a stub type at the top, 6 in. ia dia. and has a screen clamped over the opening.
There are 2 (two) 24 in. dia. manway entry hatches near the base of the tank on opposing sides.
The tank was drained and all sediment was removed from inside.
The interior epoxy is in poor condition and should be removed and recoated.
The exterior paint is in poor condition, with lots of peeling patches and rusted areas, as well as algae growth.
The influent pipe is 12 in. tall from floor, and the effluent pipe is 8 ft. tall, both are 6 in. dia. steel with flanges.
There is no interior ladder.

See page 2 for recommendations.

Recommendations for Riverfork Water Co. standpipe

The antennas on the limited roof area should be remounted on a steel bracket located to one side of the tank, out of the way for maintenance work.

The stub overflow pipe, 6 in. dia. should be extended to within 24 in. of grade, with a flap cover and inside screen It should be steel with appropriately sized attachment brackets welded at 10 ft. intervals, and pipe should be 4-6 in. away from tank to allow for proper cleaning & painting.

A 42 in. high safety handrail should be installed around roof perimeter for OSHA. The notched-rail fall restraint system should be moved up the ladder 4-6 ft. to allow for use clear to the top. Ladder siderails should be extended upward and incorporated into safety railing. A locking ladder climb gate should be installed to meet current MO DNR guidelines.

A new, frost-proof 6 in. double-screened vent should be installed. Tapco makes a good one, and they can be reached @ 573-764-7255.Rental tanks are also available from them.

The influent line inside should be extended up with 6 in. steel or plastic pipe to within 10-15 ft. of overflow level for better chlorine dispersion, retention and circulation. This will also help keep the tank from "sweating" so much near the base and decrease the algae growth rate.

The tree growth nearby should be trimmed back.

The interior should be sandblast cleaned to SSPC-SP-10 near-white standards and recoated with NSF approved epoxy from Tnemec Co., inc or Sherwin-Williams. Specification guidelines are available from them free of charge. Tnemec-888-798-6363 Sherwin-Williams 417-623-2147 Joplin.

Exterior should be commercial standard blast cleaned and recoated.

Chlorination equipment should have a seperate area through an addition to the wellhouse for OSHA and MO DNR guidelines.

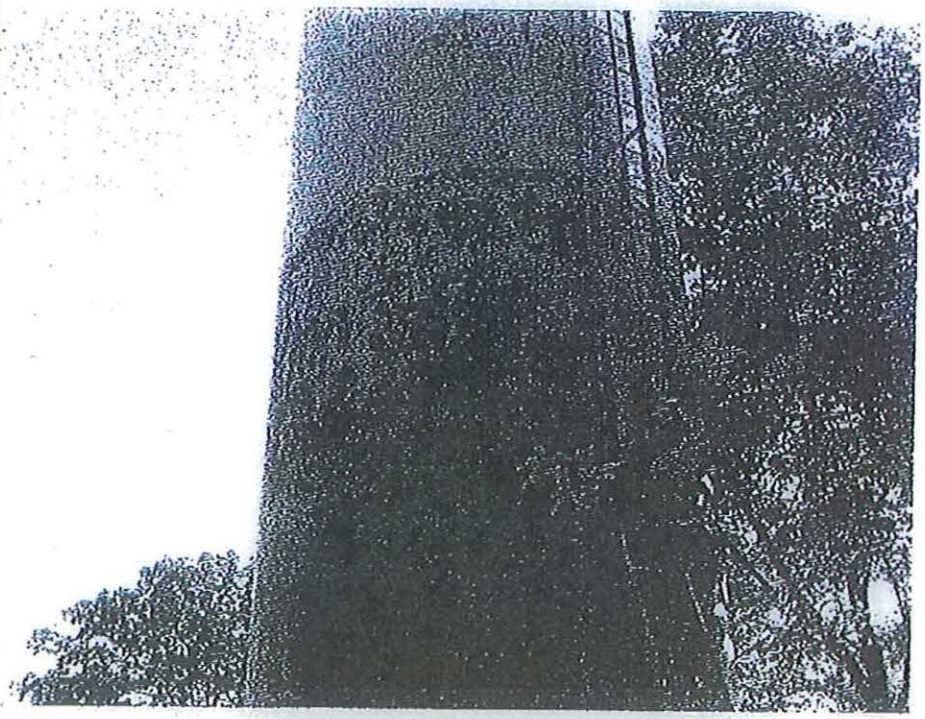
there is already a security fence around site.

These recommendations should be forwarded to your system engineer for the purpose of drawing up project specifications and bid forms to comply with MO statutes.

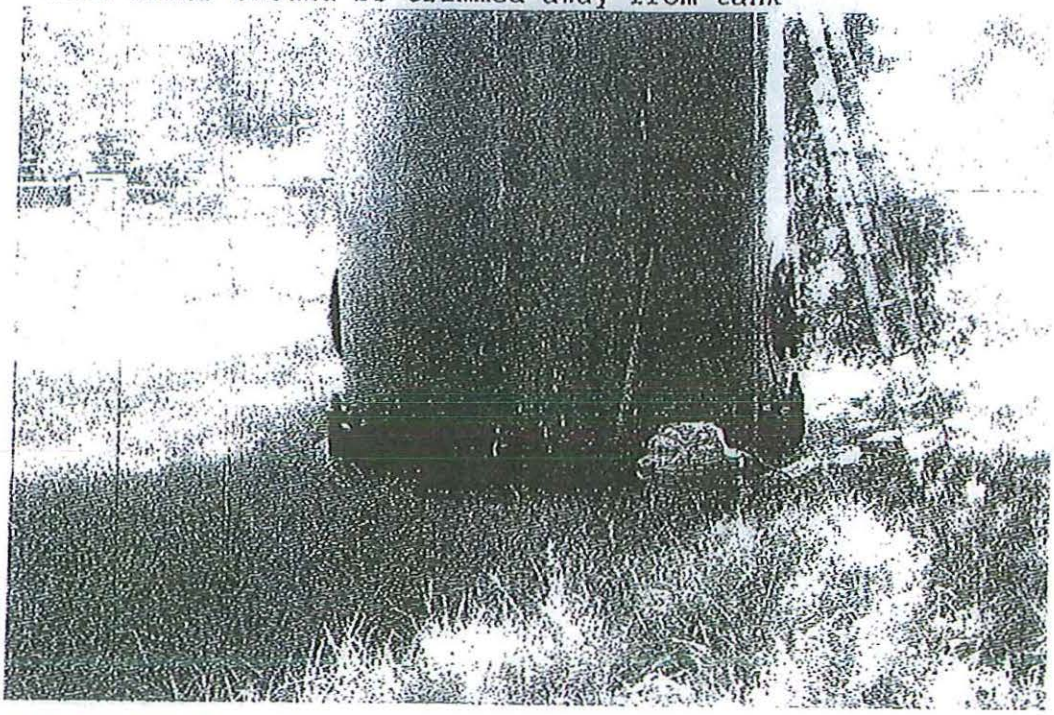
Please contact me if you have any questions, or need any further information. Estimated cost: $ 45,000-70,000.00.

Sincerely,

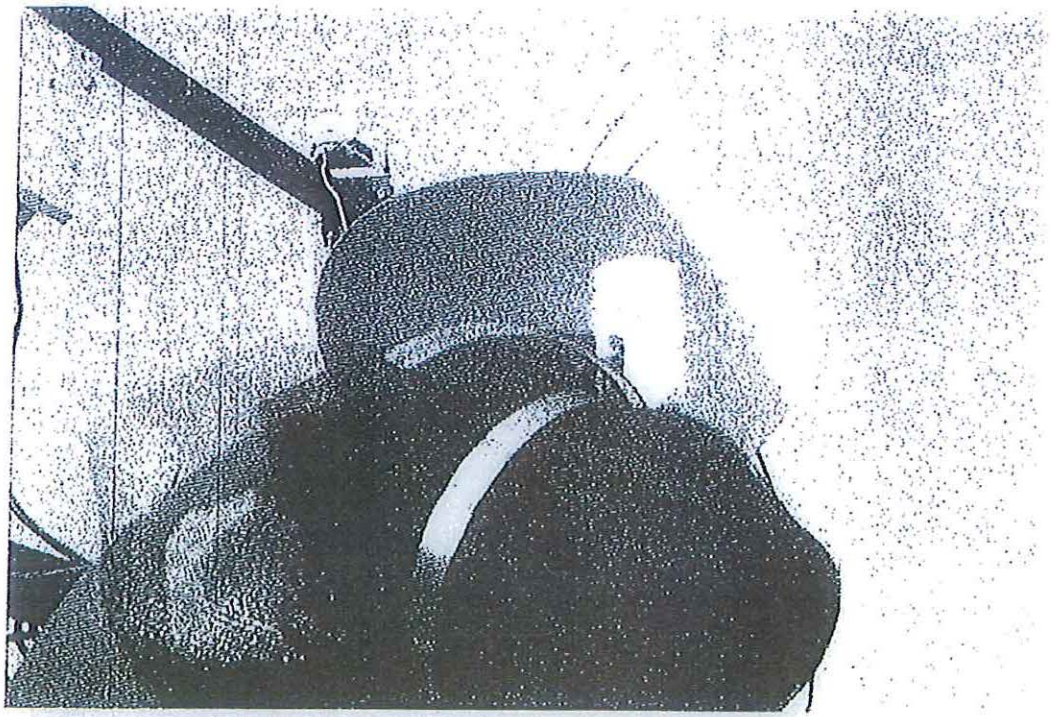
Chris Barrett, pres.



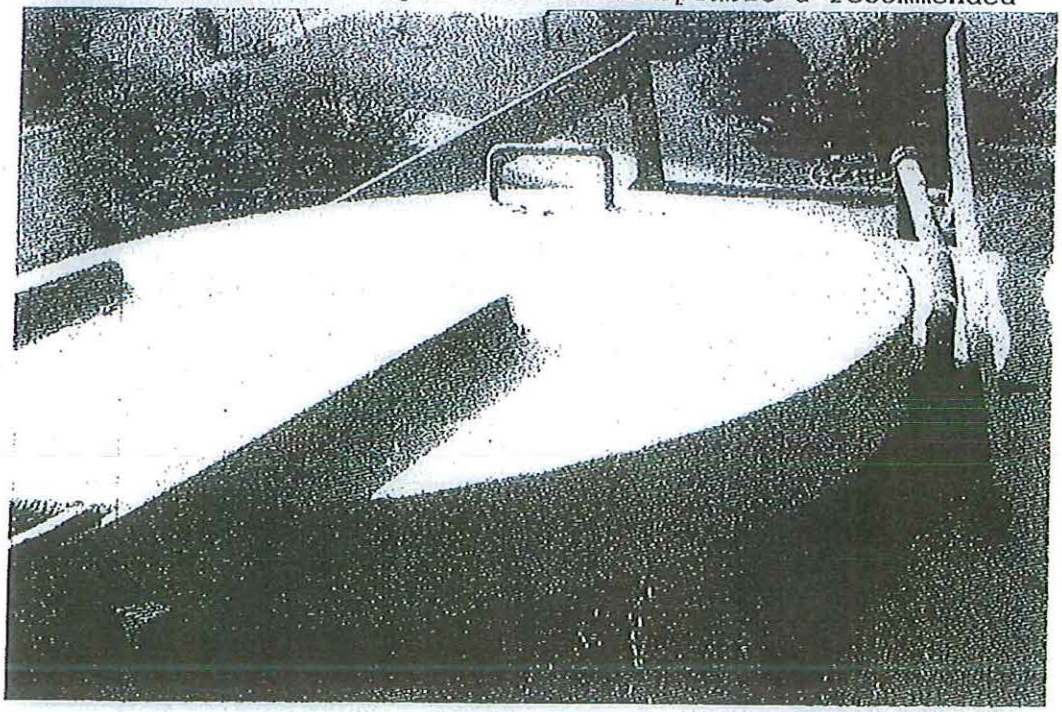
Exterior coating is peeling and covered with algae
Tree limbs should be trimmed away from tank



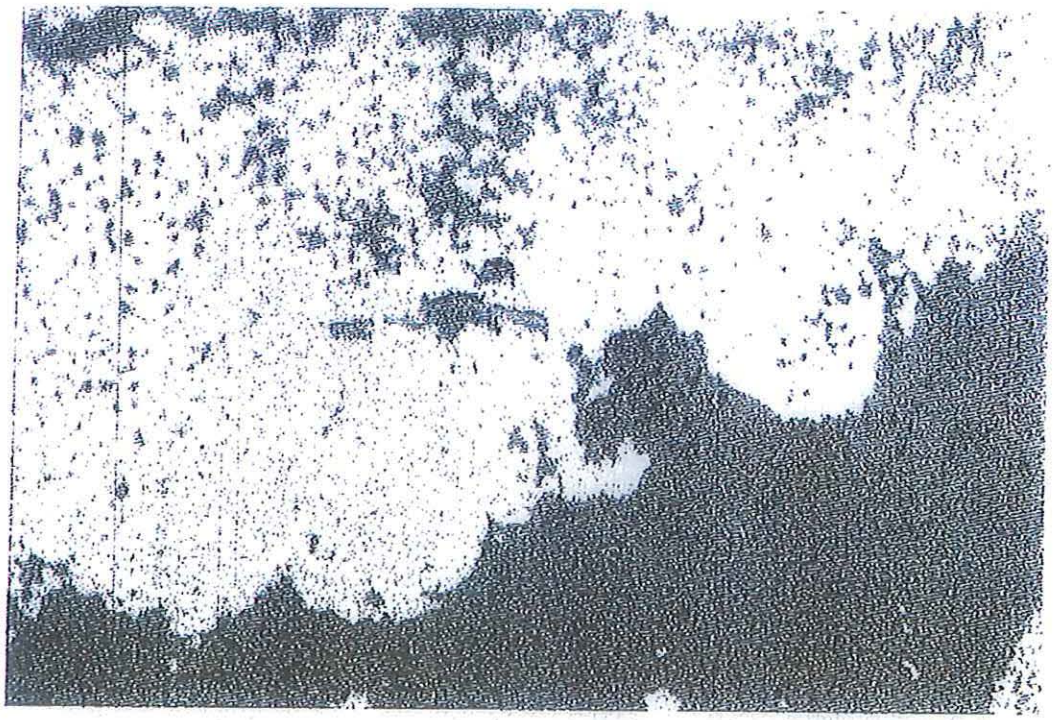
There are 2 - 24 in. dia. manway hatches near base. Anchor bolts are adequate but rusted



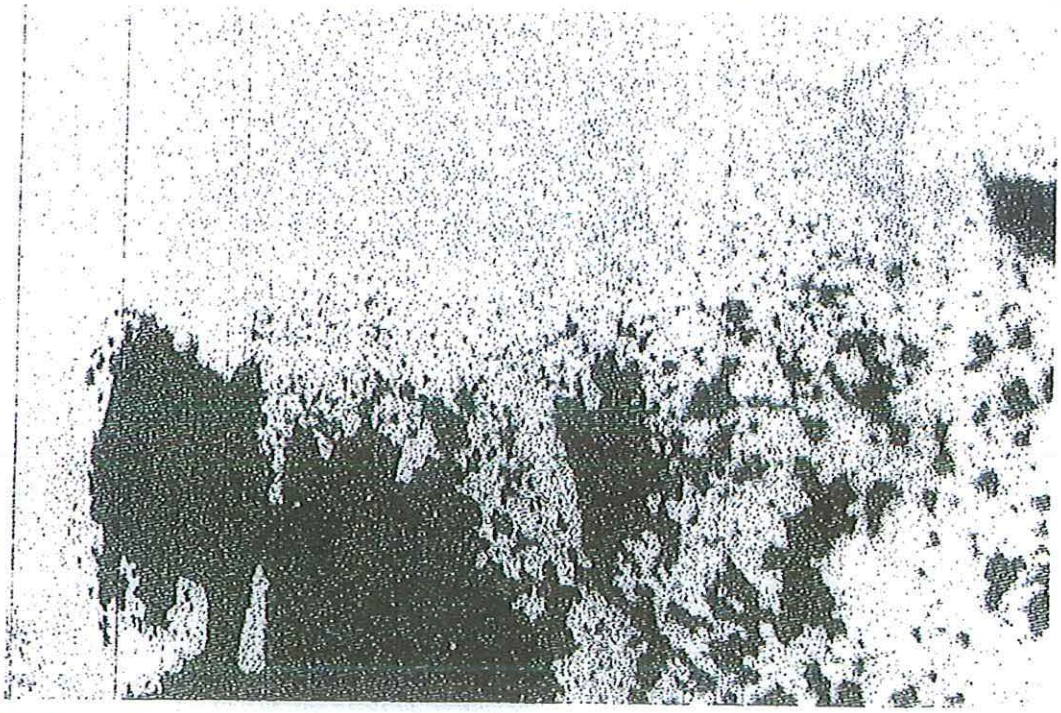
Roof vent should be replaced. It should be rainproof and properly capped. A Tapco vent is acceptable & recommended



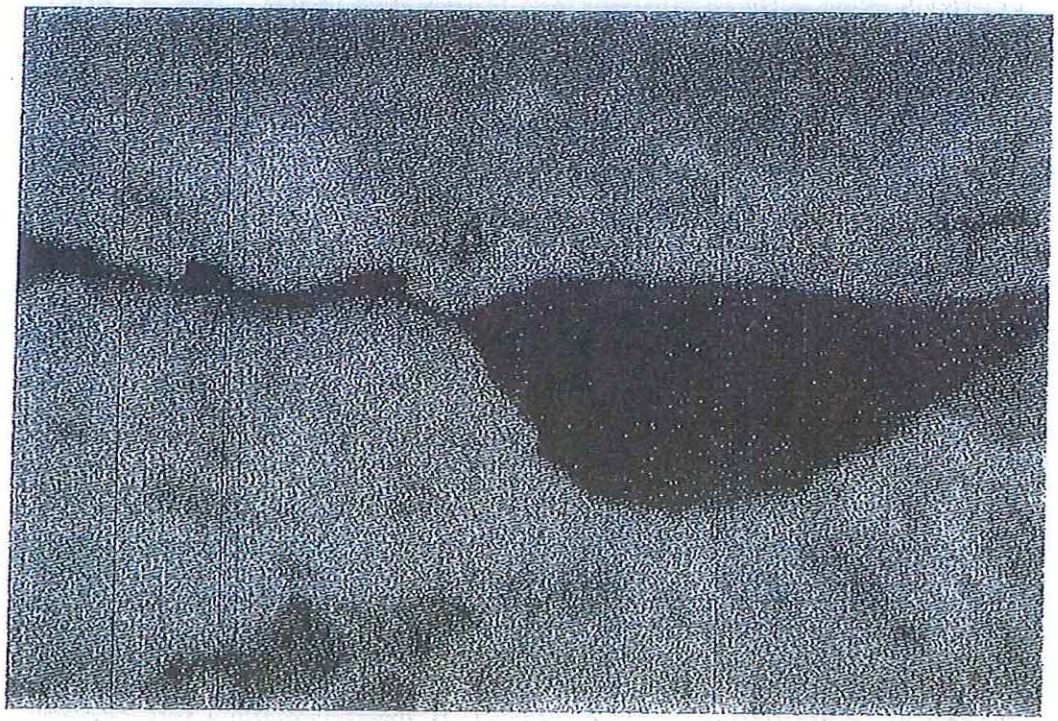
Roof entry hatch is not locked. Access ladder stops short with improper siderail. There should be a 42 in. high handrail around top. Antennaes should be mounted to the side on a seperate pole so as not to interfere with maintenance



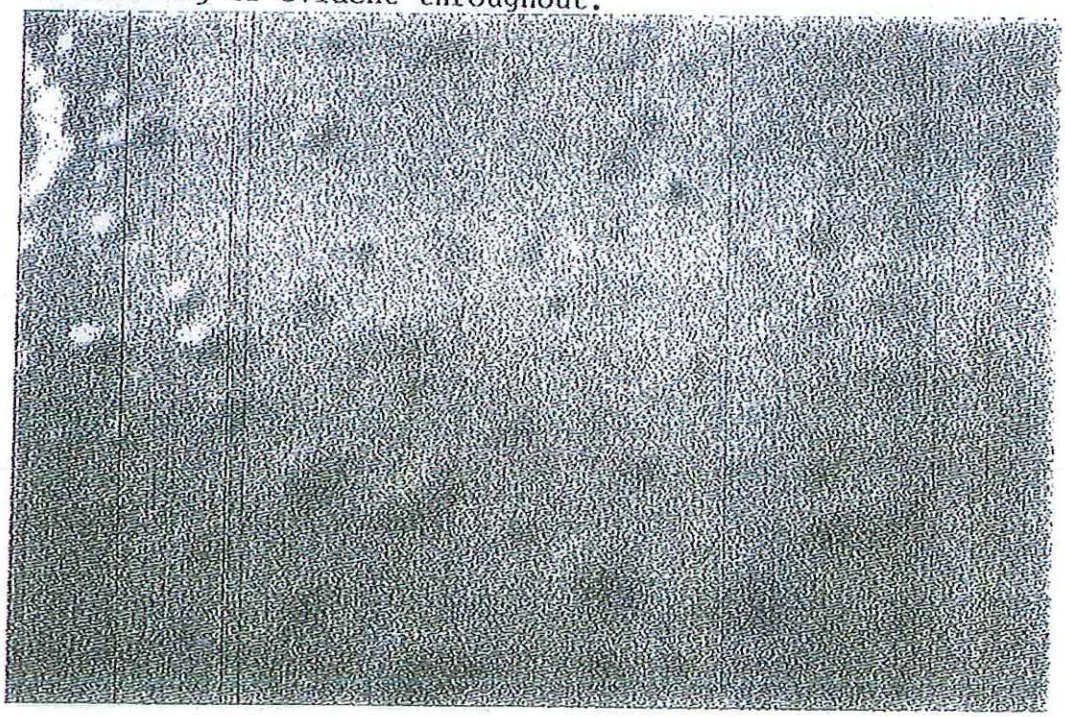
Exterior coating has failed, and should be cleaned & recoated



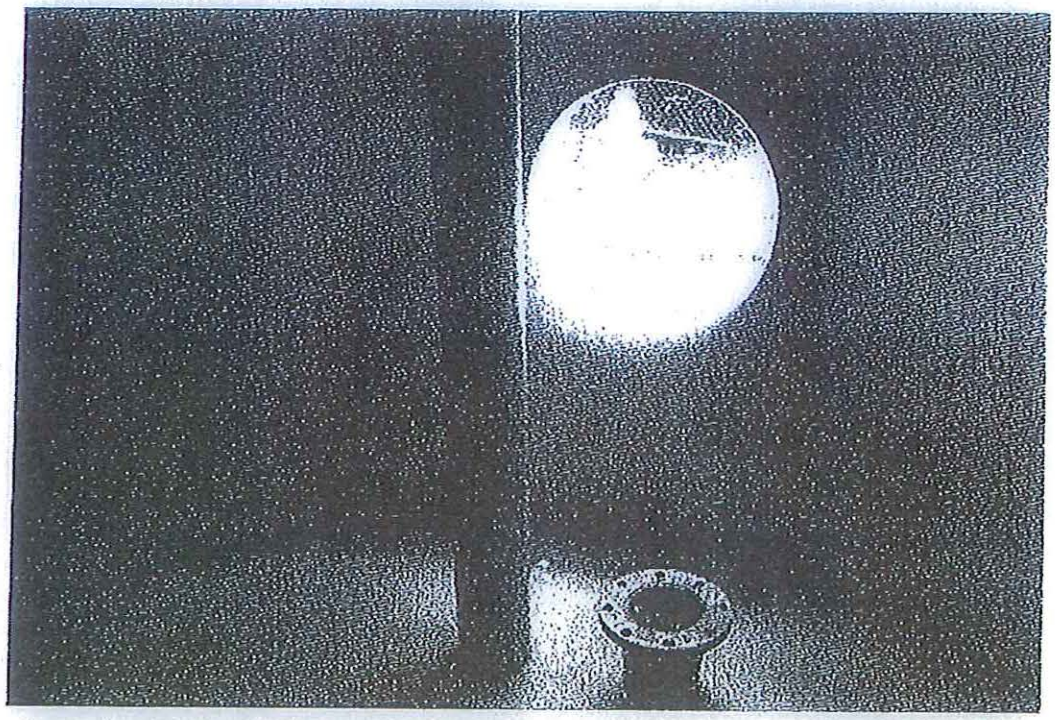
Rust and peeling paint outside



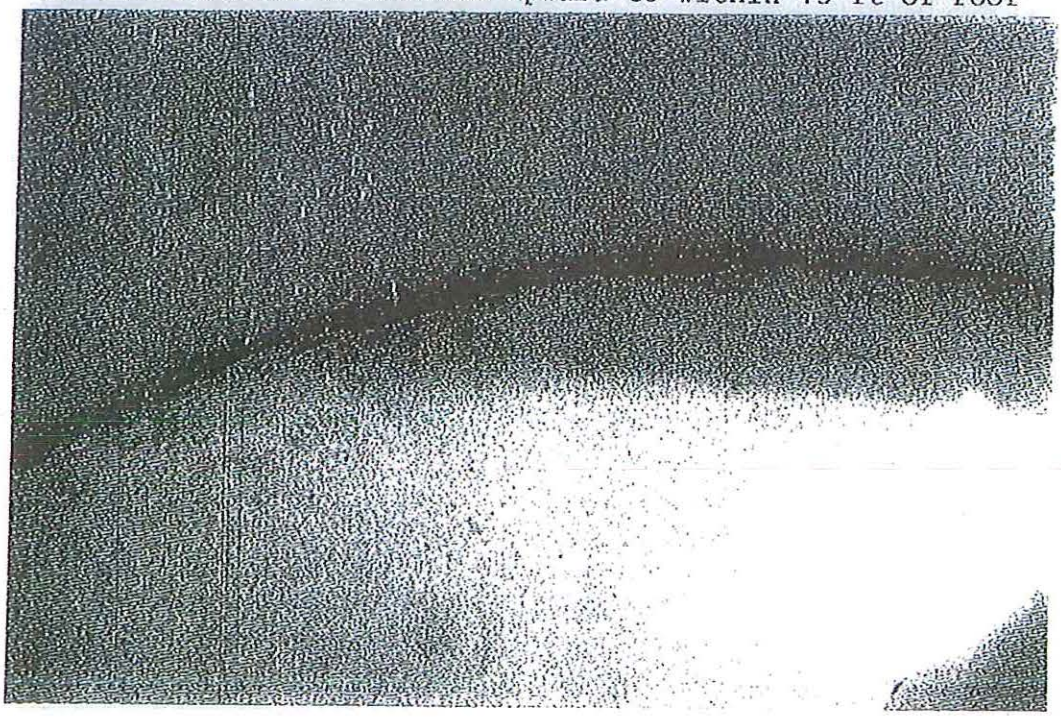
Interior epoxy coating is in poor condition. Rust and blistering is evident throughout.



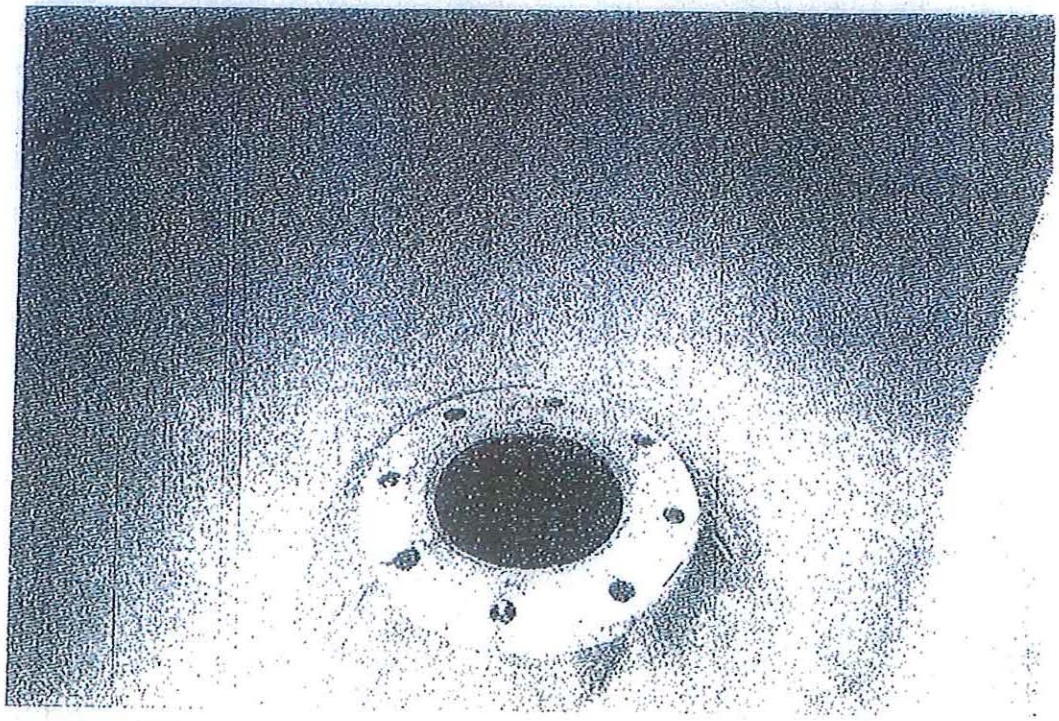
Blisters are common throughout interior epoxy.



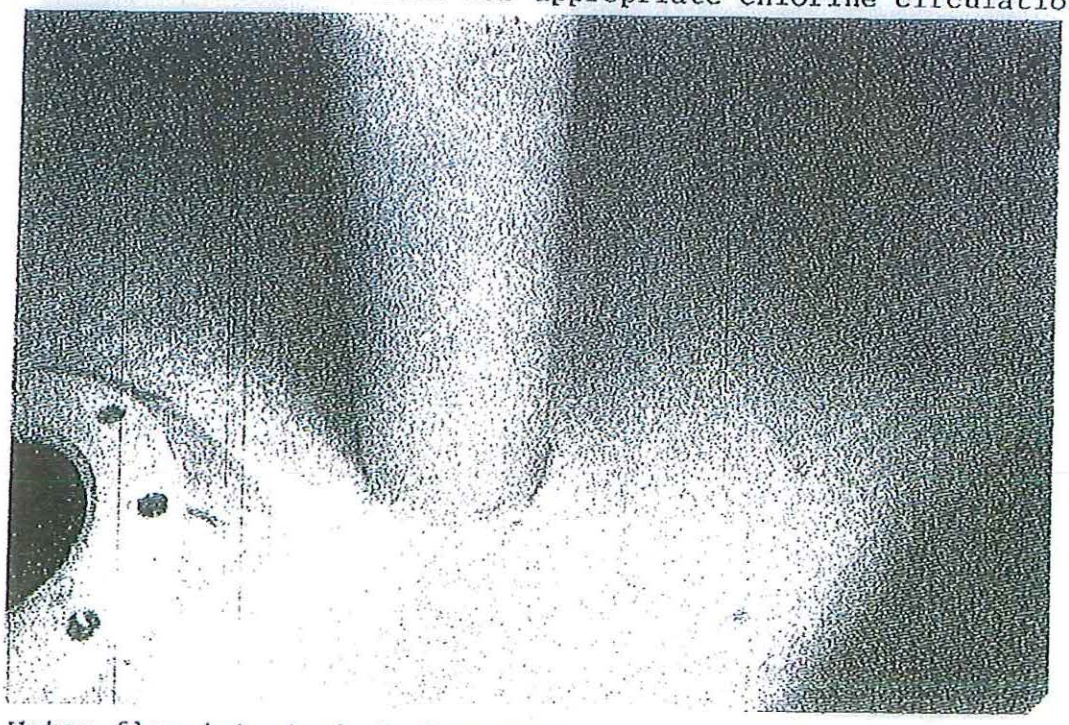
Influent(short) & effluent(8 ft tall) pipes are shown
Influent should be extende upward to within 15 ft of roof



Rust along floor to wall seam, blisters on floor evident



6 in. influent pipe(steel) should be extended upward to within 15 ft. of overflow level for appropriate chlorine circulation



Water flow into tank during refilling. All sediment was removedprior to refilling and sampling and return to service

Riverfork Water Company

Here is our proposal for improvements to the Riverfork Water Company water system. Our last payment for the purchase of the system is October 2009. Upgrades to the system can be used for rate increases, but with a depreciation schedule there is a significantly long payback. This will require that we obtain funding for the up front investment. In these economic times, banks are reluctant to lend money. I'm not sure if there is any grant money for private water systems – maybe you can help us with that. We want to have the best water system in the State so there is no reluctance on our part except for spending money we don't have. There are improvements that are not on the inspection report that we want to make. We are proposing to take this step by step in order to utilize any profits for upgrades. There also must be consideration for emergency expenses, which could alter the timing of the improvements.

1. Well Capacity – not included on report. The subdivision has been expanded several times since the original design. The well does not keep with demand during peek usage times, such as mornings when automatic yard sprinklers are on and residents are getting ready to leave for the day. At these times there is a decrease in pressure, but never below DNR minimum. As part of the agreement to allow a new subdivision (25 lots) to connect onto this system, 6 inch pipes were used and we were given a place to drill a new well. This well would have capacity to supply the entire system plus an additional 40 lots which could be added later; probably a long time in the future. There is a well driller who would drill the well and allow us to make payments over an extended time. This would help greatly with funding. With a new well, improvements would be made to the original well head and this well would be on standby. We would like to have this done by December 31, 2010.
2. Improvements to the standpipe – at the time of the inspection, Hydrospec verbally indicated that the interior coating could last another four or five years and the exterior could be repainted in a couple of years. These improvements were included on the report, but there was no time frame provided. Therefore we would look to having this work plus other improvements to the standpipe completed by December 31. 2012.
3. We will make sure that the trees are trimmed and an attachment to well house for the chlorine feed system are completed by December 31, 2009

APPENDIX E

MISSOURI DEPARTMENT OF NATURAL RESOURCES

INSPECTION REPORT OF RIVERFORK WATER COMPANY, DATED FEBRUARY 4, 2015

STATE OF MISSOURI
Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

February 4, 2015

Mr. Hollis "Bert" Brower, Jr., President
Riverfork Water Company
P.O. Box 1080
Nixa, MO 65714

Dear Mr. Brower:

Enclosed is the *Report of Inspection* for the community water system serving Riverfork Ranch Estates in Stone County. This report is believed to be self-explanatory. I trust you will direct your attention to the following recommendations which are more thoroughly discussed within the report:

- seal all casing openings except for the properly constructed vent;
- either install booster pumps or remedy low-pressure occurrences by other means by February 14, 2015;
- perform public notification for the continuing failure to correct a Significant Deficiency, namely the failure to remedy low-pressure, and certify its completion;
- paint the exterior of the well casing and discharge piping;
- install a drawdown gauge and begin ground water level measurements;
- install pump-to-waste piping of adequate diameter to permit full velocity wasting of water directly from the well;
- determine the amount of separation between the storage tank inlet and outlet pipe openings the next time a tank interior inspection is performed;
- install valves on the inlet and outlet piping to the storage tank;
- clean and paint the exterior of the storage tank;
- modify the storage tank overflow pipe to terminate between 12 and 24 inches above a drainage inlet structure or splash plate;
- empty the storage tank piping vault of water, identify and seal all leaks, reconstruct the vault so that it is drained or provided with a sump, and repair/replace piping as needed;
- cut and remove trees, and repair the automobile damage to the security fence;
- develop and institute an adequate tank inspection program;
- begin a storage tank water level monitoring and adjustment program;
- develop and institute a valve maintenance program and replace inoperable valves. Install new valves in the distribution system to meet a spacing of 800-feet or one-block intervals;
- install flush hydrants at each dead end main;
- remove fire hydrants from water mains not designed to carry fire flow;

- develop and institute an adequate main flushing program;
- develop and institute an adequate pressure-testing program; and
- provide sufficient staffing to operate and maintain an adequate level of service for all public water systems owned and operated by Water Technology or its affiliated companies.

Riverfork Ranch Estates public water system entered into a *Bilateral Compliance Agreement* (BCA) on January 12, 2015 to address the persistent low-pressure found in parts of the Eagle Landing subdivision. Please note that while said BCA requires the installation of booster pumps as the most viable corrective action to these low-pressure occurrences, the department is willing to entertain other remedies as long as they can be implemented within 30 days of your agreement to the BCA (by February 14, 2015). Failure to comply with the terms of the BCA or remedy the low-pressure by February 14, 2015, will result in escalated enforcement action which could include monetary penalties.

For questions concerning the BCA or other remedies to the low-pressure, please contact Mr. Wally Miller by calling 417-891-4300 or via mail at the Southwest Regional Office, 2040 West Woodland, Springfield, MO 65807-5912. Unless otherwise requested within the report, all correspondence and questions concerning this inspection report should be directed to Ms. Kristen Pattinson at this same office.

Sincerely,

SOUTHWEST REGIONAL OFFICE

Mark Rader, Chief
Drinking Water Section

MDR/ccl

Enclosure

c: Mr. Jim Busch, Public Service Commission
Ms. Misty Lange, Public Drinking Water Branch
Mr. Stephen Randolph, P.E., President, Riverfork Homeowners Association
Mr. Brent Weis, Public Drinking Water Branch

209.pdwp.RiverforkRanchEstates.mo5036315.x.2015.02.04.fy15.ins.x.cwc.doc

MISSOURI DEPARTMENT OF NATURAL RESOURCES
REPORT OF INSPECTION
COMMUNITY PUBLIC WATER SYSTEM
RIVERFORK RANCH ESTATES
STONE COUNTY, MISSOURI
PUBLIC WATER SYSTEM ID NUMBER MO5036315

February 4, 2015

INTRODUCTION

A priority inspection was made of the community public water system serving Riverfork Ranch Estates by Mr. Charles Collins of the Missouri Department of Natural Resources (department) Southwest Regional Office on January 8, 2015. Mr. Hollis "Bert" Brower, Jr., was present representing the facility during the inspection. The purpose of the inspection was to determine compliance with Missouri Safe Drinking Water Law and Regulations prior to initiating enforcement action against this system. Because Riverfork Ranch Estates is a privately-held water utility that sells water to its customers, it is also regulated by the Missouri Public Service Commission (PSC).

DISCUSSION

The Riverfork Ranch Estates public water system is centered on the intersection of Missouri State Highway M and Equine Valley Road in the northeast corner of Stone County. This water system serves approximately 370 people through 148 service connections in the Riverfork Ranch Estates, East Bluff and Eagle's Landing subdivisions. Based upon the number of connections and persons served, this system is classified as a community public water system.

Well #1, the existing well, was drilled in 1988 to a total depth of 723 feet and cased with 351 feet of six-inch steel casing that was pressure grouted to 85 feet using the Halliburton method. The remaining 85 feet of grout was pumped from the top to complete the seal. This construction is sufficient to meet the minimum standards required for a public water system well and is considered state-approved. A 15-horsepower submersible pump is set at 590 feet and has a stated pumping rate of 44 gallons per minute (gpm), and while the well had a static water level of 220 feet at the time the pump was set (August 12, 2002), the present static water level is unknown.

Water from the well is disinfected using a 40 gallon per day (gpd) peristaltic chlorine feed pump coupled with a 30-gallon chlorine solution tank that is sealed and properly vented to the outside atmosphere. This chlorination system is located inside the well house, and while it is now a sealed system, escaping chlorine gas might account for some of the corrosion observed on metal components in the well house. Currently, the system is feeding a 12% sodium hypochlorite solution, and the free chlorine residual measured at the entrance to the distribution system was 2.6 mg/L at the time of the inspection. It is important to note that while all community public water systems must obtain written authorization (a construction permit) from the department

prior to construction, alteration, or extension of the water system, this chlorination system was installed by a previous owner without the required construction permit.

System storage and pressure are provided by a 10-foot diameter 100-foot tall standpipe that has a total capacity of approximately 57,000 gallons. Pressure inside the well house at the time of inspection was approximately 32 pounds per square inch (psi), considerably less than the operating pressure expected from a standpipe of this height. Since the inspection, new tank level controls have been installed and the water level (i.e., pressure) adjusted upward. During a January 23 re-visit, this inspector found pressure inside the well house at 41 psi, an increase of nine pounds. This standpipe was constructed with separate inlet and outlet lines, so is providing some amount of chlorine contact time necessary for proper disinfection. However, the separation between the inlet and outlet pipe openings is unknown so the actual amount of contact time cannot be determined. We encourage you to determine and document the amount of separation (baffling factor) the next time a tank interior inspection is performed.

Department records indicate the distribution system consists of two-inch, four-inch, and six-inch polyvinyl chloride (PVC) water mains. Department records also indicate the fire hydrants located in Riverfork Ranch Estates and East Bluff Subdivision are positioned on four-inch water mains as opposed to six-inch mains that were approved in the 1988 construction permit. The minimum pipe size allowed for a water main serving fire hydrants and providing fire flow/fire protection is six-inch diameter. If it is the intention of Riverfork Water Company to provide fire flow, the distribution system must be upgraded to meet this minimum diameter. If fire flow is not to be provided, the fire hydrants must be removed as they present the potential for contaminating the water system. It should be noted that a sanitary survey conducted by this office in October 2002 determined the well pumping capacity and standpipe storage volume inadequate for fire flow.

This same sanitary survey also stated the well pump is not capable of meeting future demand while allowing for aquifer recharge. In addition, the survey indicated the existing standpipe does not have the capacity for providing instantaneous peak flow. These calculations were based on 130 connections, the well producing 66 gallons per minute (gpm), utilization of a 10-horsepower booster pump, and a maximum daily usage of 39,000 gallons. However, at this time the number of connection has increased to 148, the well is producing only 44 gpm, the booster pump has been removed, and the average daily usage has increased. Due to these changes and the recent documentation of low pressure, the department strongly encourages the water system conduct an updated engineering review of the system and make the necessary upgrades per the engineering review.

Daily chlorine residual monitoring is being performed using a permanently-installed Sensorex Model FCL402D continuous free chlorine residual analyzer, which inputs signal to an Advantage Controls water process controller. The controller takes that signal, as well as signals from other

sensors including flow, chlorine solution tank liquid level, standpipe pressure, and temperature and pH, and processes them for communication through the internet to allow remote observation of system performance and control. Each of these control functions will include user-settable relay control settings along with a high- and low-alarm setting and limit timer. As previously mentioned, the free chlorine residual entering the distribution system was measured by the inspector at 2.6 mg/L. However, the residual reading obtained from the continuous free chlorine residual analyzer was 1.524 mg/L, a difference of approximately 1.1 mg/L. When Mr. Brower was asked about this discrepancy, he admitted that he cannot remember the last time the sensor was calibrated. In addition, he conceded that his choice of the 0 – 2.0 mg/L chlorine sensor probe was wrong, and that a 0 – 5.0 mg/L probe would better serve to measure the full spectrum of chlorine residuals allowed by regulation.

Because some distribution mains are equipped with fire hydrants, this system requires a DS-II operator's license. Mr. Brower possesses a DS-III operator's certificate, and therefore meets this requirement.

During the inspection, two drinking water samples were collected from the front outside hydrant at 1822 Finley River Road and submitted for microbiological analysis. The samples tested Total Coliform absent or "safe". The total residual chlorine level was 2.6 mg/L at the time and location of sampling.

MONITORING AND SAMPLING HISTORY

This public water system has not incurred any monitoring or maximum contaminant level violations during the last 24 months.

UNSATISFACTORY FEATURES

The Ground Water Rule specifies eight elements integral to an effective inspection of a public water system. The eight elements are: Source (protection, physical components, and condition); Treatment; Distribution System; Finished Water Storage; Pumps, Pump Facilities, and Control; Monitoring, Reporting, and Data Verification; Water System Management and Operations; and Operator Compliance with State Requirements. Your public water system was evaluated for compliance with these eight elements.

Significant Deficiencies

Significant Deficiencies cause, or have the potential to cause, the introduction of contaminants into water delivered to customers. The Ground Water Rule (GWR) requires the public water system to consult with the department within 30 days of receiving this report to determine what actions will be taken to correct the Significant Deficiency. Please inform the department on your course of action by phone or mail no later than **March 6, 2015, otherwise a violation will be issued.**

The system must also contact the department within 30 days of correcting a Significant Deficiency. In total, the system has 120 days from the date of this letter to either complete the required corrective actions, or enter into an approved corrective action plan, which provides a schedule for completion of the remaining Significant Deficiencies. If the Significant Deficiency is not resolved within 120 days or another department-approved date, **then a violation will be issued**.

1. The casing was not effectively sealed against the entrance of water under all conditions which is a Significant Deficiency per 10 CSR 60-4.025(4)(A)4.A. Specifically, the drawdown tube through the split seal and casing top-plate was not adequately sealed.

   Condensate water and debris entering unsealed openings in the well are a significant source of questionable and unsafe bacteriological samples. The openings for electrical wires and the drawdown tube should be sealed with a mechanical seal or silicone caulk. The sanitary seal on submersible pumps should be in good condition and properly installed and should not be cut. All imperfections around the base of a vertical turbine pump should be sealed with silicone caulk.

   Seal all casing openings with either mechanical seals or silicone caulk except for the properly constructed vent. Please provide a photograph demonstrating all openings in the casing have been sealed to document compliance.

2. The public water system failed to maintain a minimum positive pressure of 20 pounds per square inch (psi) at a residence on Eagles Lane from August 22 to August 24, 2012 as required by Safe Drinking Water Regulation 10 CSR 60-4.080(9). Specifically, the pressure dropped below 20 psi ten times in 48 hours.

   The suggested minimum operating pressure is 35 pounds per square inch gauge (psig), and the legal minimum pressure is 20 psig. This pressure level is required to keep contamination from entering the system and to operate some household appliances. The public water system must investigate the cause of the low pressure and make the necessary corrections. Common causes include large main leaks, valves inadvertently left closed, well failure, main diameter too small to carry peak flows, mains extended into areas with too high an elevation for the system pressure, and pressure surges (water hammer) caused by pump start/stop.

   A sanitary survey report dated January 2003 stated the well pump is not capable of meeting future demand while allowing for aquifer recharge. The survey also indicated the existing standpipe does not have the capacity for providing instantaneous peak flow. This calculation was based on 130 connections, the well producing 66 gpm, utilization of

a 10-horsepower booster pump, and a maximum daily usage of 39,000 gallons. However, at the time of inspection the number of connections had increased to 148, the well was producing only 44 gpm, the booster pump has been removed, and the average daily usage has increased.

By February 14, 2015, the public water system shall either install booster pumps as required by the *Bilateral Compliance Agreement* entered on January 12, 2015, or shall remedy these low-pressure occurrences by other means as long as it can be implemented by February 14. Failure to remedy the low-pressure by that date will result in escalated enforcement action which could include monetary penalties. A pressure recorder has been placed on the system to determine if low pressure still persists within in the water system in light of the increased pressure at the standpipe.

3. The public water system failed to correct a Significant Deficiency noted in the previous *Report of Inspection*, which is a Significant Deficiency per 10 CSR 60-4.025(1)(C)5.A and 10 CSR 60-4.025(4)(A)4.G.

The following Significant Deficiency cited in the September 6, 2012 *Report of Inspection* has not been corrected or adequately addressed:

- Failed to maintain a minimum positive pressure of 20 psi in the distribution system.

By February 14, 2015, the public water system shall either install booster pumps as required by the *Bilateral Compliance Agreement* entered on January 12, 2015, or shall remedy these low-pressure occurrences by other means as long as it can be implemented by February 14. Failure to remedy the low-pressure by that date will result in escalated enforcement action which could include monetary penalties.

Violations of Missouri Safe Drinking Water Regulations

These violations can result in enforcement action if repeated or not corrected. Some violations are more serious than others, and this is explained in the comments.

4. The public water system failed to certify to the department that public notification has been made as required by Safe Drinking Water Regulation 10 CSR 60-8.010(10). This proof of public notification is for the continuing failure to correct a Significant Deficiency, namely the failure to remedy low-pressure.

Public water systems are required to submit proof to the department that public notification has been made within 10 days of the date the notice was to have been made. This proof to the department is provided through certification of compliance with public notification regulations and a representative copy of the public notice. Instructions for public notification and certification to the department are provided to the public water system after every violation.

The public water system shall perform public notification and certify its completion in accordance with the *Bilateral Compliance Agreement* entered on January 12, 2015. Failure to comply with this requirement will result in escalated enforcement action which could include monetary penalties. For direction and assistance, please contact Ms. Shelby Miller, Public Drinking Water Branch, by calling 573-751-5331.

Department Recommendations

These deficiencies are important and the public water system should give serious consideration to correction. However, these deficiencies are not normally subject to enforcement action unless the department determines that these are contributing to the failure of the public water system to provide an adequate volume of safe water to customers at sufficient pressure.

5. The public water system does not have adequate emergency electrical power.

When power failure would result in cessation of minimum essential service, an alternate power supply should be provided to meet average day demand. Each public water system should have an emergency electrical power source which may include a permanent or portable generator at each well and pump station, a tractor connection at each well or pump station, or service from two power companies.

The department recommends providing sufficient emergency electrical power to operate all pumps that are essential to maintaining water supply and pressure.

6. The well casing and parts of the discharge piping and appurtenances were not protected against physical damage.

The well casing and all exposed piping and appurtenances should be protected against deterioration, physical damage, and freezing.

The department recommends painting the exterior of the well casing and discharge piping to protect it from corrosion.

7. The well is not equipped with a means of measuring ground water levels.

A well should be equipped with a means of measuring ground water level, which is normally a drawdown tube and gauge. The tube is blown free of water with an air tank or hand pump. The gauge will read the feet of water standing over the pump. When the pump is started, the gauge reading will decline as the well water level falls and the feet of water over the pump decreases. When the gauge stabilizes, this will represent the feet of water over the pump at pumping condition. If the depth of the pump setting is known, these readings can be converted to static water level and pumping water level. These

water levels tend to decline during prolonged droughts and during periods of heavy pumping by all wells in the vicinity. Decline of an adequate water level over the pump may result in pumping of accumulated oil from oil lubricated vertical turbine pump and may result in pumping of air and ultimate pump failure. It is important to have wells equipped with drawdown tubes and gauges and to periodically measure and record the static and pumping water levels. Drawdown tubes can only be installed when the pump is pulled.

The department recommends installing a drawdown gauge and beginning ground water level measurements. In addition, consider installing a new drawdown tube the next time the well pump is pulled for repair or replacement.

8. The well discharge piping is not provided with a means of pumping to waste.

A well should be equipped with a means of pumping to waste to permit test pumping and control of each well, to allow disinfection and flushing of the well, and to permit wasting of water that is not of sufficient quality to put into distribution to customers. This pump-to-waste piping should be of equal or greater diameter than the well drop pipe and all connecting piping to allow wasting at the full velocity and rate of the well pump, and should be constructed to waste to the outside at least one pipe diameter above a concrete splash pad to prevent erosion. This discharge piping should never be directly connected to a sewer or discharge into a floor drain without the proper two-pipe diameter air gap.

The department recommends installing pump-to-waste piping of adequate diameter to permit full velocity wasting of water directly from the well. This pump-to-waste piping should be located as close to the well as feasible but before any treatment injection point. Preferably, this piping will be located after the totalizing master meter so the volume of water wasted can be measured.

9. The chlorination system may not meet contact time. The standpipe was constructed with separate inlet and outlet lines so is providing some amount of chlorine contact time necessary for proper disinfection, however the separation between the inlet and outlet pipe openings is unknown so the actual amount of contact time cannot be determined.

Chlorine does not kill bacteria, viruses, or cysts instantly. For free chlorine residual, the contact time of the disinfectant in water is dependent upon pH and temperature. For the worst case scenario of pH between 6-9 and the water temperature of 5°C, the Chlorine Concentration (C) multiplied by the time (T) shall equal 8 mg min. per liter. The time is dependent upon the baffling configuration, the flow, and size of the tanks. You can hire an engineer to determine this or you can contact the Southwest Regional Office by calling 417-891-4300 and speak with a Public Drinking Water Engineer who will calculate your

CT value for you. You will need to provide the following information: number of tanks, their configuration (where are the inlet and outlet pipes), the layout of the tanks (in series or parallel), the size of the tanks in gallons, and the maximum flow rate of all pumps in gallons per minute. Please note it is the responsibility of the public water system to assure that adequate detention time is provided for a chlorinated system. For more information on CT values, please refer the Guidance Manual for Surface Water System Treatment Requirements and the draft Missouri Guidance Manual for Inactivation of Viruses in Groundwater.

The department recommends determining the amount of separation between the inlet and outlet pipe openings the next time a tank interior inspection is performed. Once this information is obtained, you can contact the Southwest Regional Office by calling 417-891-4300 and speak with a Public Drinking Water Engineer who will calculate your CT value for you.

10. The storage tank needs exterior painting.

Steel tanks without adequate paint coating will quickly deteriorate from corrosion. Tanks must have the exteriors cleaned and painted, and if the tank interiors have not been inspected in the past three years, they should be inspected, cleaned, and repainted as necessary. Note that interior paint must be approved by Missouri Department of Natural Resources Public Drinking Water Branch.

The department recommends cleaning and painting the exterior of the storage tank. If the interior has not been inspected in the past three years, it should be inspected, cleaned, and repainted with Missouri Department of Natural Resources Public Drinking Water Branch approved paint as necessary.

11. The overflow pipe on the storage tank does not terminate at an elevation between 12 and 24 inches above the ground. Specifically, the overflow pipe currently terminates at the uppermost elbow out the top of the tank.

The storage tank overflow pipe should terminate near the ground so that the screen can be readily checked and replaced and so that dangerous accumulation of ice does not form during winter overflows.

12. The overflow pipe on the storage tank does not discharge over a drainage inlet structure or splash plate.

The storage tank overflow pipe should be over a drainage inlet structure or a splash plate to catch or disperse the overflow water and prevent erosion from undermining the storage structure.

For Unsatisfactory Features #11 and #12, the department recommends modifying the storage tank overflow pipe to terminate between 12 and 24 inches above a drainage inlet structure or splash plate.

13. The storage tank piping vault is not designed and/or constructed to be water-tight and drained. At the time of inspection, the storage tank piping vault was partially-filled with water and the piping submerged (see photograph). Note the considerable tuberculation of the metal piping from being submerged under water, demonstrating the importance of keeping this vault dry.

    Vaults for valves, piping and other equipment associated with finished water storage facilities should be designed and constructed for items such as safety requirements, plumbing and electrical codes, construction in a flood plain, etc. Vaults should be adequately ventilated/ heated and lighted, designed to restrict unauthorized access, designed with sufficiently-large accessways and climb ladders, and water-tight with provisions to be drained/pumped to daylight.

    The department recommends emptying the storage tank piping vault of water and drying it to determine if the leak is from the tank. Once all leaks have been identified and sealed, reconstruct the vault so that it is drained to the surface of the ground or provided with a sump. Thoroughly clean the piping to determine the extent of damage from corrosion and repair/replace piping as needed. If left unchecked, corrosion will continue and eventually result in failure of the piping.

14. The public water system does not have adequate security fencing around the storage tank and well house. Specifically, the northeast corner of the security fence is laid over from an automobile accident and trees have been allowed to grow up through the south-half of the security fence, thereby providing a means of ingress over the fence.

    Safety, security and risk-reduction measures are important, and should be implemented to reduce the water system's vulnerabilities. All water system facilities should be evaluated and re-designed to include measures to provide protection against vandalism, sabotage, terrorist acts, or access by unauthorized personnel. These protection measures should include: a) locked security doors; b) windows sized or barred to prevent access; and, c) security fencing around vulnerable areas of drinking water facilities (for example, wellheads, manholes, pump houses, treatment buildings, and storage tanks).

    The department recommends cutting and removing the trees, and repairing the automobile damage to the security fence. Once this work is completed, it may be necessary to re-stretch and repair the barbed wire on top of the fence.

15. The public water system does not have an adequate tank inspection program for sanitary risks.

The public water system should have a sanitary risk tank inspection program with the following elements: a) Each tank should be inspected annually for sanitary risk and after each fecal coliform positive sample; b) Inspectors should look for unscreened vents; unscreened overflows; any openings left by painting crews; missing rivets in the peaked roof; a poor fit between the peaked roof and bowl wall; a two-inch frame on the hatch; a poor hatch lid fit; openings in the decorative finial ball; the hatch lid hasp and padlock; an open hatch (wind can blow a very heavy lid open if not secured at the hasp); openings at electrical conduits; observe water for feathers, dead birds, nesting material, dead insects , and dead bats; observe the interior wells for mud dauber nests, bird droppings, insects, daylight shining through openings, and bats; look for evidence of vacuum (caved in areas on the tank walls or roof and bent support rods with crinkled areas where these attach); try to determine the likely cause of vacuum (frost plugging of metal screens, an ice plug in a vent, and evidence of ice extrusion out the hatch); and look for openings at vacuum damage sites.

The department recommends developing and instituting an adequate tank inspection program for sanitary risks.

16. The public water system is not making full use of the storage tank capacity during automatic fill cycles. Specifically, the pressure reading indicated a water level in the tank of 74 feet, or roughly 75% of the tank capacity.

Once each month, the public water system should read and record the filling pump-start/stop pressures and corresponding elevations, time, and date for each elevated tower, standpipe and ground level unpressurized storage tank. Calculate and record the volume between filling pump start/stop elevations and the tank bottom (or withdrawal pump low flow shut down on ground tanks with booster pumps). Adjust filling pump start/stop points as needed to maximize the full use of the storage tank capacity.

The department recommends maintaining a storage tank water level monitoring and adjustment program.

17. Valves in water mains are not provided at 500-feet intervals in commercial districts, 800-feet or one-block intervals in residential districts, and one-mile intervals in rural districts. In addition, the public water system does not have a valve exercise program so the existing valves are not known to operate.

Valves are needed to isolate small portions of the distribution for repairs and new construction. This isolation is essential in minimizing the number of customers affected by the outage and potential contamination.

The department recommends installing additional valves in the distribution system to meet a spacing of 500-feet intervals in commercial districts, 800-feet or one-block intervals in residential districts, and one-mile intervals in rural districts.

18. The public water system is not maintaining an adequate valve maintenance program.

The public water supply should have a valve maintenance program which includes exercising every valve annually, repairing valves as needed, and recording exercising and repairs on the individual valve record sheets.

The department recommends maintaining an adequate valve maintenance program.

19. Dead end mains are not equipped with flush hydrants.

All dead end mains should be eliminated by looping where practical. If these cannot be eliminated, each dead end main must be equipped with a flush hydrant to allow stale or contaminated water to be eliminated.

The department recommends installing flush hydrants at each dead end main.

20. The public water system has installed fire hydrants on water mains not designed to carry fire flow. Specifically, fire hydrants located in Riverfork Ranch Estates and East Bluff Subdivision are positioned on four-inch water mains, which are too small to provide the minimum 250 gpm required to support fire flow.

When fire protection is to be provided, system design should be such that fire flows and facilities meet the classification criteria of the state Insurance Services Office (ISO). The minimum size of a water main providing fire protection and serving fire hydrants shall be six (6) inch in diameter. Larger mains shall be required if, during the withdrawal of the required fire flow, the minimum residual pressure of 20 pounds per square inch cannot be maintained throughout the distribution system. Water mains not designed to carry fire flows shall not have fire hydrants connected to them.

The department recommends either removing those fire hydrants that are on water mains not designed to carry fire flow, or obtaining a construction permit from the Missouri Department of Natural Resources Public Drinking Water Branch and construct water mains of sufficient capacity to meet the required fire flow while maintaining the minimum residual pressure of 20 pounds per square inch throughout the distribution system. To obtain this construction permit, submit two copies of an engineering report, plans, and specifications each bearing the seal of a professional engineer registered in Missouri along with an application for a construction permit to Missouri Department of Natural Resources, Public Drinking Water Branch, P.O. Box 176, Jefferson City, Missouri 65102, 573-751-5331.

21. The public water system does not have an adequate main flushing program.

The public water system should have a main flushing program with the following elements: a) Pressure gauges with fittings for fire hydrants and hose bibs, a Pitot tube/gauge, and employees trained in the use of this equipment; b) Flush at a minimum main velocity of 2.5 feet per second and try to achieve five feet per second. This will require calculating the gallons per minute flow needed for each size main and measuring the flow achieved at each hydrant with the Pitot tube/gauge. To achieve this velocity may require partially isolating some sections with valves to increase flow or opening more than one hydrant. Do not flush at a main velocity above eight feet per second to minimize aspiration. Do not allow pressure to fall below 20 psig anywhere during flushing; c) Design a flushing procedure to begin at the wells and move outward through the distribution system; d) Flush the entire system at least semi-annually. Supplies with extensive red water or taste/odor problems may have to conduct an entire system flushing more frequently. Additional periodic small area flushing may be needed to control local red water problems and taste/odor problems or to maintain chlorine residual in dead end mains. On small area flushing, determine that this does more good than harm in relieving red water or taste/odor environmental concerns. If small area flushing is not effective, use only entire system flushing; e) Open and close all valves and hydrants SLOWLY to minimize water hammer; f) Flush each section until the water runs clear; g) Manage the tower water levels during flushing to prevent pulling the levels too low. On systems with minimum fire flow capability, this may require starting with full towers, turning on well pumps manually before the minimum tower level is achieved, and allowing some recovery time; h) Record the Pitot tube reading, gpm, ft/sec, whether the hydrant was wide open or number of turns open (if restriction to prevent aspiration is required), the valve open/close configuration at each hydrant, and the number of minutes to achieve clear water; i) Restore all valves to the proper open/close positions. Record this so no valves are missed; j) When flushing is complete, collect special bacteria samples throughout the system. Flushing can cause bacteriological problems through aspiration; k) Keep record of all red water, sediment, and taste/odor customer environmental concerns; l) Redesign the flushing procedure based on the results and effectiveness of the flushing. If positive bacteria samples resulted from the flushing, immediately disinfect the entire system. To prevent bacteria in future flushings, lower velocities but do not go below 2.5 ft/sec, increase chlorine level to 2 mg/L on chlorinated systems for a few days prior to flushing, or add chlorine to the towers at 2 mg/L for unchlorinated systems. Note that adding chlorine to systems not normally chlorinated may cause a great deal of colored water; m) Once an effective flushing procedure is designed and optimized, the procedure can be followed until major changes are made in the system at which time the flushing procedure will have to be redesigned.

The department recommends developing and instituting an adequate main flushing program.

22. The public water system is not maintaining an adequate pressure-testing program.

The public water system should have a pressure testing program with the following elements: a) Records with time, date, and location of each low pressure environmental concern received from customers; b) Pressure gauges with fittings for fire hydrants and hose bibs, portable pressure recorders, and employees trained in the use of this equipment; c) Conduct pressure surveys of the system and record results annually and after every environmental concern if the cause of the environmental concern was not previously identified. The pressure survey should be designed to identify the cause of low pressure including large, irregular industrial users, lawn irrigation during summer droughts, peak usage times, leaks, undersized mains, high elevation areas, inadequate well capacity, inadequate storage capacity, and pressure surges from well pump start/stop (water hammer); and, d) Plan improvements based on records generated by this program.

The department recommends developing and instituting an adequate pressure-testing program.

23. The public water system is not adequately staffed. This citation is based upon the operational deficiencies cited above, and upon Mr. Brower's own verbal concession that Water Technology of the Ozarks, his water and wastewater service company, is understaffed.

The public water system should have adequate staff properly equipped and trained to do the following: a) Collect all required samples; b) Test and record chlorine residuals daily; c) Check well operations daily; d) Inspect towers for sanitary defects annually and after any fecal coliform positive samples; e) Promptly repair all main breaks and leaks with proper disinfection and flushing; f) Flush and disinfect the entire system after each bacteria MCL violation; g) Inspect every new construction project daily; h) Conduct an entire system main flushing annually and more often as needed; i) Attend operator license certification and renewal training and other training as needed; j) Conduct a leak detection program; k) Conduct a pressure survey at least annually and as needed after low-pressure environmental concerns; l) Perform preventive maintenance on all mechanical equipment; m) Conduct well water level monitoring quarterly; n) Conduct a valve exercising program annually; o) Keep the water map continually updated; p) Conduct cross connection inspections of each industry/business annually and maintain Class I/II device testing records; q) Install and remove customer meters as needed; r) Test all customers' meters on a ten-year frequency and change out as needed; s) Read water meters; t) Install mains; u) Keep records of all these activities; v) Plan for future improvements. Some of these activities can be performed by properly trained contractors, but if this is done, the public water system needs to inspect these activities.

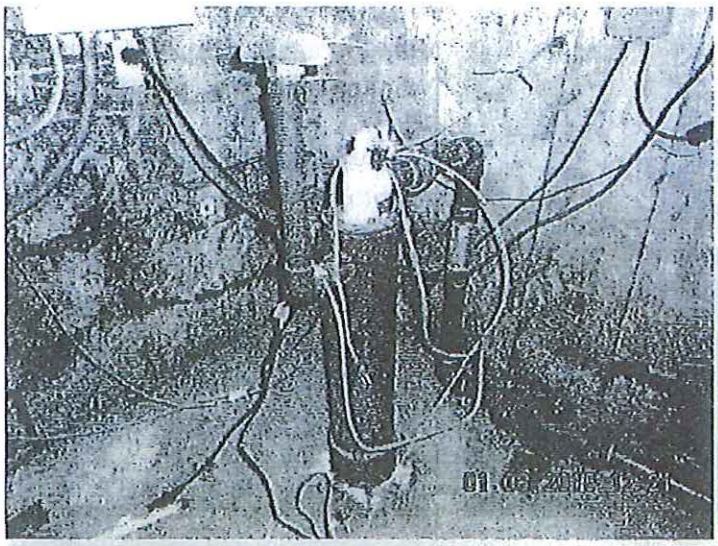
The department recommends that Water Technology of the Ozarks provide adequate staffing to operate and maintain the level of service described above for all public water systems owned and operated by Water Technology or its affiliated companies.

SUBMITTED BY:

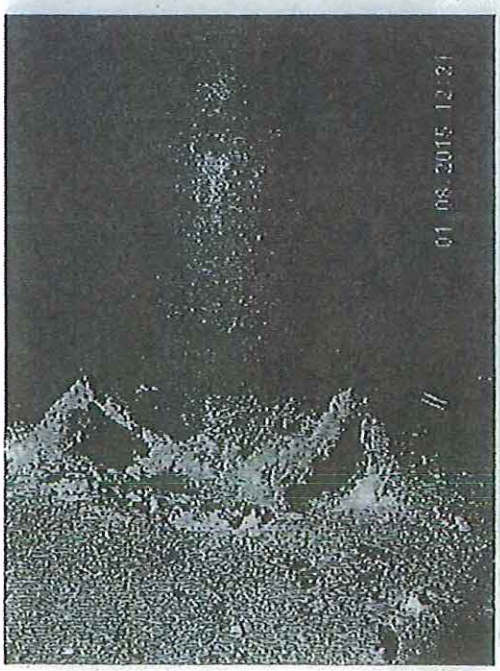
Charles Collins
Environmental Specialist

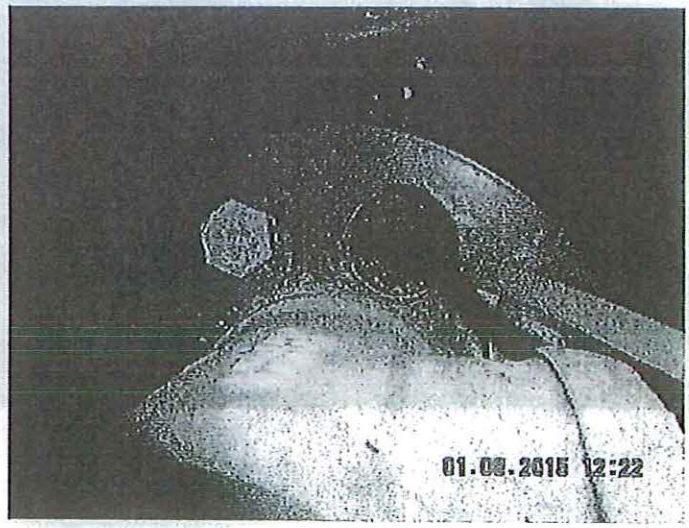
APPROVED BY:

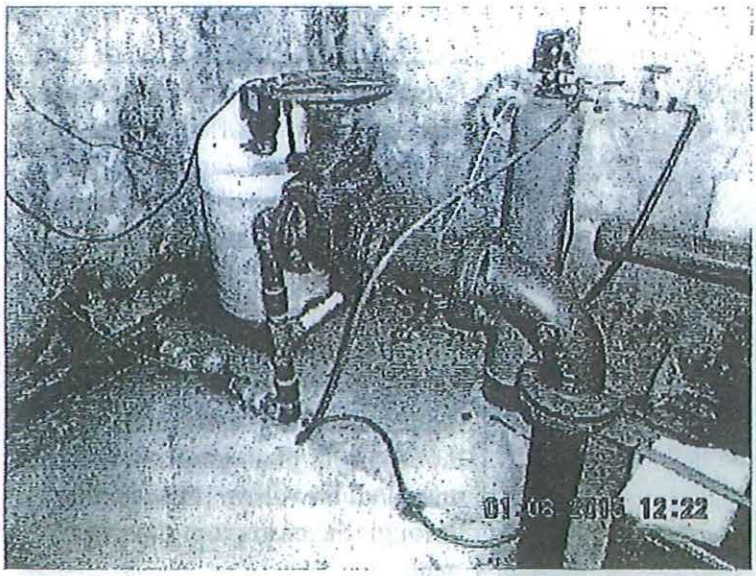
Kristen Pattinson, Chief
Drinking Water Compliance Unit



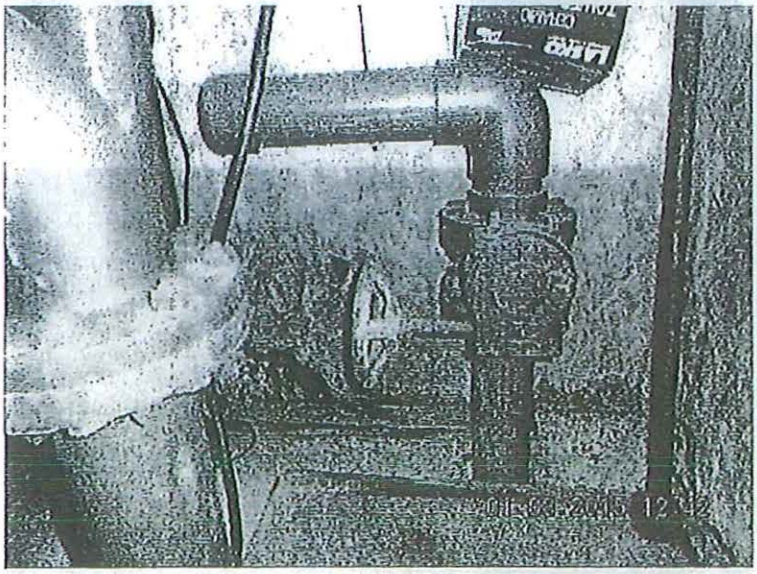
Location: Riverfork Ranch Estates
Photographer: Charles Collins
Photograph Date: January 8, 2015
Comments: Upper-left photograph shows the well head (note the corrosion on the lower one-third of casing), and lower-left photograph is a close-up of the corroded casing (note the existing well head is a replacement of the original). Lower-right photograph shows the unsealed drawdown tube opening through the casing top plate and seal.

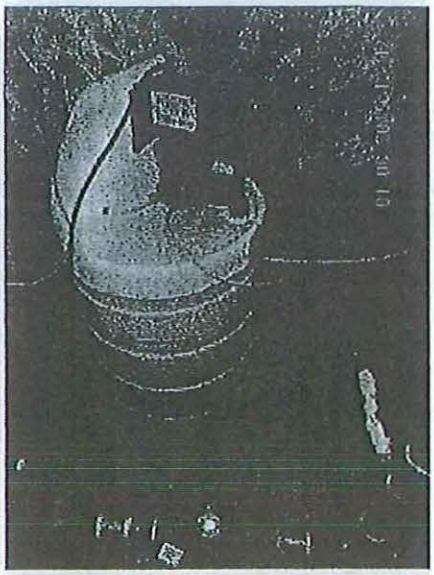


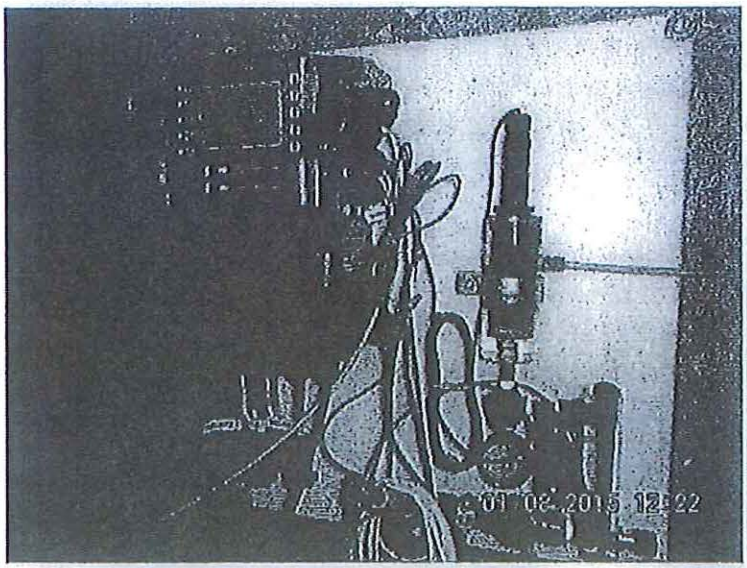


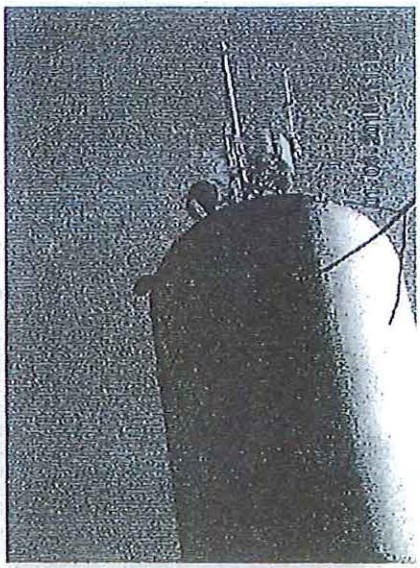


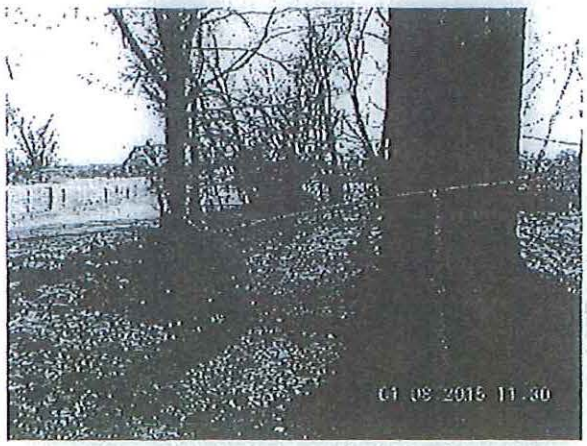
Location: Riverfork Ranch Estates
Photographer: Charles Collins
Photograph Date: January 8, 2015
Comments: Upper-left photograph shows the well discharge piping (note the corrosion on the unpainted bolts). Lower-left photograph is of "booster pump piping" that was retro-fitted to the system. Lower-right photograph shows the chlorination equipment.

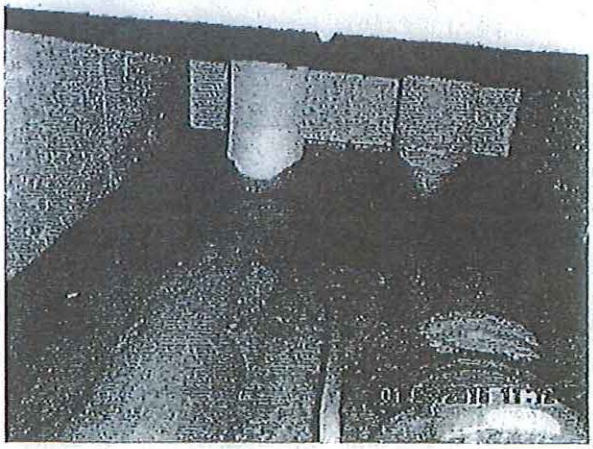












Location: Riverfork Ranch Estates
Photographer: Charles Collins
Photograph Date: January 8 and January 23, 2015
Comments: Upper-left photograph shows the remote monitoring equipment being utilized by the owner. Upper-right photograph shows the storage tank overflow pipe terminating after the upper elbow. Lower-left photograph shows the damage to the perimeter security fence and trees grown up in the fence line. Lower-right photograph shows the storage tank piping vault with standing water. Note the considerable tuberculation of the metal piping from being submerged under water, demonstrating the importance of keeping this vault dry.