

November 13, 2014

Mr. J. Michael DiGiglia
Gieger, Laborde & Laperouse, LLC
Suite 4800, One Shell Square
701 Poydras Street
New Orleans, LA 70139

Ms. Machele Lee Hall
Tulane Environmental Law Clinic
6329 Freret Street
New Orleans, LA 70118

Re: Beauregard Parish Water District 3 Final Audit Reports

Dear Mr. DiGiglia and Ms. Hall;

Enclosed is the Final Audit Report attached as Appendix A and the Final Action Plan attached as Appendix B and the Other Suggestions Report as Appendix C. Please take appropriate action. In addition, a new Appendix D has been added. This appendix contains the comments of RESTORE, one of the settling parties. These comments were reviewed in detail, however a complete, detailed response to all the RESTORE comments is considered beyond the scope of the audit activities. Therefore it is intended that these comments and questions by RESTORE, be evaluated and taken into consideration by Water District 3, as may be warranted when action items are planned and completed.

As previously established, the overall goal of the audit process is to identify deviations from the Safe Drinking Water Act (SDWA) statutory and regulatory requirements as defined by the Settlement Agreement (SA) and the regulatory checklist. In respect to the USEPA's regulatory requirements, use of the Louisiana LDHH regulations are also used to help determine the compliance with the SDWA requirements. As previously agreed, Booth Environmental Services, LLC (BES) has worked as an independent auditor for the Settling Parties. The following information is provided as a summary of audit activities.

1. The audit scope is as described in the SA. There are 9 elements of the audit scope as listed below:
 1. General preparation for the audit and preparation and submission of the proposed audit checklist.
 2. Conduct initial meeting with Settling Parties. Finalize audit scope and checklist.
 3. Field audit activities.
 4. Audit report.
 5. Draft Action Plan.
 6. 'Other Suggestions' Report
 7. Confer with Settling Parties about disagreements, concerns or suggestions with respect to Draft Action Plan.
 8. Finalize Action Plan.

9. Conduct Public Meetings as requested.
2. The dates the Field Audit Activities of the audit were conducted are as follows:
 - a. Preliminary background document reviews and checklist development occurred August 5, 6, 7, 19, 21, and 24, 2014.
 - b. The audit commenced on August 25, 2014 with the kick off meetings.
 - c. Onsite auditing activities at the water production facilities and distribution system took place: August 27, 29, 2014, September 2, 3, 17, 19, 2014 and October 8, 2014.
 - d. BES Office review of checklist item rules and other information occurred September 24, 25, 30, October 1, and 2, 2014.
 - e. Audit Report drafting and other related analysis occurred the weeks of October 6th and 13th.
3. Identification of the audit team members:
 - a. Audit team members were as follows:
 - David Booth, CHMM, QEP Principal Environmental Scientist
 - Ian Booth, Class IV Water System Manager as Peer Reviewer
 - Other BES Staffing for miscellaneous tasks
4. Identification of the company representatives and regulatory personnel observing the audit:
 - a. Water District 3 representatives observing or participating in the audit were:
 - Ray Hauser, WD3 General Manager
 - Kyle Mills, WD3 Well Operator
 - Harry Simmons, WD3 Well Operator
 - Bruce W. Butts, WD3 Office Manager
 - Jeremy Joffrion, WD3 Distribution Supervisor
 - b. Regulatory representatives observing or participating in the audit were:
 - Steven Joubert, LDHH Regional Engineer.
5. Summary of the audit process, including any obstacles or conflicts encountered:
 - a. The audit process was conducted in an open environment. All records requested were produced quickly and efficiently, where they existed. It was found that in limited cases not all records could be produced. These data gaps were outlined in the audit report.
 - b. Field activities were conducted under normal operating conditions of WD3. Observations of work activities were conducted to make compliance and knowledge determinations. All activities were available for review and open to investigation. Overall, the process went very well with no conflicts in time or personnel availability or any other issues.

SUMMARY of AUDIT FINDINGS: This audit has been performed as described above. This audit has addressed the approved checklist items as agreed upon by both Settling Parties prior to the beginning of the audit. In this section of the report, the detailed findings are

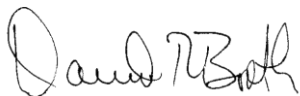
summarized for each scope item as contained in Appendix A, please see Appendix A for the detailed descriptions of these items.

1. WD3 failed to comply with the Unregulated Contaminant Monitoring Rule (UCMR3) in 2013. WD3 failed to report and file information required by the USEPA and failed to follow the USEPA monitoring schedule for the required items in 2013.
2. WD3 is not consistently meeting the required disinfectant residual levels in the water delivered to the distribution system.
3. Distribution system disinfection deficiencies exist which need to be corrected and improved. These include maintaining the minimum free chlorine residual of 0.5 mg/l throughout the entire water system at all times and documenting disinfection practices for new line extensions and repairs.
4. WD3 is not compliant with the Total Coliform and Disinfection Rule sample plan, recently approved by the LDHH. This is a work in progress, but needs to be completed as soon as practical.
5. There were reporting deficiencies detected for the submission of Disinfection Byproduct monitoring data by WD3 to the LDHH for DBP Stage 2 monitoring and other reporting for UCMR3 non-compliances to the USEPA.
6. There were miscellaneous recordkeeping deficiencies and improvements which need to be made in the historic records.

The detailed Final Report is attached as Appendix A and the Final Action Plan is attached as Appendix B for your review and development of a formal response as described in the SA. The Other Suggestions Report is attached as Appendix C.

We have conducted all audit activities in good faith and in compliance with the guidance contained in the SA directives as described in our scope of work. If you have any questions, please call the undersigned at 337-474-7325.

Sincerely,

A handwritten signature in black ink, appearing to read "David R. Booth". The signature is stylized with a large, looped "D" and a cursive "Booth".

David R. Booth QEP, CHMM
Principal Environmental Scientist

APPENDIX A

FINAL REPORT OF FINDINGS

Regulatory

REPORT OF FINDINGS

INTRODUCTION: This audit has been performed as described in the Settlement Agreement (SA) and the approved scope of work to the fullest extent practical. This audit has addressed the following work items as required by the SA. In this section of this Appendix the findings are listed in as much detail as possible and examples or pertinent documents are referenced for better understanding or evidence of a condition or observation. Regulatory citations are given where possible for additional clarity. Each finding or observation is identified as one of three categories. In this appendix, BES is addressing regulatory categories in which there are findings or questions regarding regulatory compliance. These will be listed separately as findings from the SDWA, the USEPA's Primary Drinking Water Regulations, and the LDHH Sanitary Code for Drinking Water.

1.0 Safe Drinking Water Act (SDWA)

Summary: The SDWA language pertains mostly to the requirements of the Administrator of the USEPA and secondly to the Administrator of the State Authorities who are granted primacy to administer the program, such as the Louisiana LDHH. There are some requirements of the water systems expressed at a level of detail to which an evaluation of whether or not the system is in compliance or not is warranted. Those items which were identified are listed below when concerns were identified:

1.1 Section 1445 (4)(B)(V) Required Information: Information is required to be given for water systems covered by the Unregulated Contaminant Monitoring Rule (UCMR) in Section 1445 (a)(2).

Observation: WD3 had complied with UCMR 2 monitoring requirements and participated in the program in the 2010-2012 timeframe as evidenced by lab results and other paperwork on file. However, the WD3 Operator was not familiar with the UCMR 3 program. This program required a registration and other pertinent information to be submitted to the USEPA as referenced above. This has not happened. When the USEPA and the LDHH were contacted independently and the database checked it was determined that WD3 had not yet registered and provided the required information for the UCMR 3 program. When the UCMR file was reviewed in WD3 offices a letter from the USEPA dated May 7, 2012 was found which explained that the system was subject to the UCMR 3 program. The sampling was scheduled for 2013 but never conducted.

Recommendation: WD3 should contact the USEPA and provide all required information and should reschedule sampling as soon as practical in order to meet regulatory required deadlines, as may be possible.

1.2 Section 1445 (a)(1)(B) Recordkeeping: In this section information is required to be kept "... to determine whether such person has acted or is acting in compliance with this title..."

Observation: There were instances of a lack of records of pertinent daily operations. For example, daily changes made to chlorination feed rates made in order to raise a noncompliant level of chlorine residual in the distribution system were not recorded.

Recommendation: Make a record on the daily operational log when changes are made as corrective actions to clearly demonstrate that operational changes were made to maintain compliance with the SDWA.

1.3 Section 1445 (a) UCMR Requirements: In this section, notification of the availability of results shall be given to persons served by the system. The public may make recommendations for contaminants if they are present and in concentrations which affect public health.

Observation: This was not done due to the fact that these samples were not taken on schedule.

Recommendation: Once the UCMR 3 study is completed, the sample information should be made publicly available through such means as WD3 normally utilizes for water well results. Examples of these means could include the Consumer Confidence Reports, notices in water bills, website postings and or public informational meetings.

2.0 40 CFR 141 Safe Drinking Water Regulations

2.1 Part 141.31 (b) Reporting: This section states "Except where a different reporting period is specified in this part, the supplier of water must report to the State within 48 hours the failure to comply with any national primary drinking water regulation (including failure to comply with monitoring requirements) set forth in this part. Part 141.40(a) states that failure to monitor is a monitoring violation.

Observation: The UCMR 3 information submittal omission and 2013 monitoring omission constitute a failure to comply with national drinking water regulations and monitoring requirements.

Recommendation: WD3 should make the required notification for this and all other non-compliances, which are applicable at this time. WD3 should also request that the sampling schedule be modified to allow WD3 to meet

monitoring responsibilities in the expanded time frame but prior to the end of the UCMR3 program.

- 2.2 **Part 141.33 Record Maintenance:** This section requires record maintenance for certain time periods. Public water systems must retain records of chemical analysis for a period of 10 years. Public water systems must also maintain copies of all Sanitary Surveys conducted by the agencies, the water system itself or any consultant for the water system for a period of 10 years. Responses to Sanitary Surveys must also be kept for the same period of time.

Observation: In general, recordkeeping was very good at the WD3 water system. There were however a few cases of missing documents which are required to be kept onsite as described above.

- There were no copies of the Sanitary Surveys for the years 2004 or for 2007.
- There were no Lead and Copper sampling results or records for the year 2008 sample event.
- There were some missing results for water wells for the September 21, 2009 sampling event for wells listed previously as No. 3, 4 and 7. Only wells 2 and 6 are reported by the DHH.
- There was an omission (by the LDHH) in the water well sampling results of February 8, 2012 where the results for East Allen Water System Sample No. AD63868 were attached to the WD3 report instead of the Longville sample results. Therefore the Longville sample results are not on file as required.

Recommendation: WD3 should complete the files with missing information which can be gathered from the LDHH records.

- 2.3 **Part 141.35 Unregulated Contaminant Monitoring Rule (UCMR):** This section requires a number of actions of the regulated water system. They include the following:

- 2.3.1 Reporting is required in Part 141.35(b) and (c).
- 2.3.2 Reporting of results is required Part 141.35(c)(6).
- 2.3.3 Following the USEPA schedule is required Part 141.35(c)(5).
- 2.3.4 The responsibility is on the system to contact USEPA if there is an issue or a problem Part 141.35(b)(2) and (4).
- 2.3.5 The UCMR sample plan must be submitted and approved Part 141.35(c)(3)(iii)
- 2.3.6 Failure to monitor is a monitoring violation Part 141.40(a)(6).

Observation: The UCMR 3 monitoring program has not been initiated by WD3. The system operator, was familiar with UCMR2 but not with UCMR3. No registration was filed by WD3 according

to the system operator. Independent inquiries were made of the national UCMR hotline and with the LDHH both of which confirmed that WD3 had not registered nor sampled for the UCMR3 contaminant list. The UCMR file was reviewed and a letter dated May 7, 2012 signed by Gregory Carroll, USEPA was found stating that WD3 was subject to UCMR3.

Recommendation: Make the required notification and request that the sampling schedule be modified to allow WD3 to meet monitoring responsibilities in the expanded time frame but prior to the end of the UCMR3 program in 2015.

2.4 **Part 141.629 Reporting and Recordkeeping:** The requirements for the Stage 2 DBP monitoring program include the following.

2.4.1 Reporting is required to the State within 10 days of any quarter in which monitoring is required to take place. Reporting must include the following elements:

- 2.4.1.1 Number of samples taken
- 2.4.1.2 Dates of samples and results
- 2.4.1.3 Arithmetic averages of historic results.
- 2.4.1.4 A statement of whether the MCL was exceeded or not.
- 2.4.1.5 Other requirements as may be applicable.

Observation: The DBP files were reviewed and no records for the years 2004 and 2007 were to be found. Chemical analysis records are to be kept for at least 10 years. In addition there was no clear documentation of the reporting of results for the Stage 2 DBP quarterly or annual samples. The system operator explained that the laboratory, Ana Labs, would report the results. Ms. Caryn Benjamin with the LDHH confirmed that individual reporting is still the LDHH requirement. Ana Labs, when questioned, explained that their batch sample results submission to the State was for backup purposes only and that systems should be individually be reporting to the State as well.

Recommendation: Replace the missing records by contacting the laboratory or by contacting the DHH offices. Make the required submission of all results for DBP Stage 2 and document that submission. Make all future submissions no later than the 10th of the month following the quarter in which the monitoring event takes place.

3.0 LDHH Chapter 51 Part XII

3.1 Section 307 Person in Responsible Charge: This section explains that the person in responsible charge of a potable water system must "... take all measures and precautions..." to ensure compliance with the code.

Observation: The findings of this audit constitute items which must be addressed under this section of the State Health Code.

Recommendation: Take all measures and precautions as recommended to ensure compliance with the code as may be required and document those actions.

3.2 Section 309 Plant supervision and control: This section states the requirements that all water supplies shall be under the supervision and control of a Certified Operator as per Act 538 R.S. 40:1141-1151. RS 40:1149 states that "... it shall be unlawful for any person to perform the duties of an operator, as defined herein, without being duly certified under the provisions of this part." The term "Operator" is defined as "...the individual, as determined by the Committee of Certification, in attendance on site of a water supply system or sewerage system and whose performance, judgment, and direction affects either the safety, sanitary quality, or quantity of water or sewage treated or delivered." Water Production certifications are required of all facilities (7305.B). Water Treatment certifications are not required for systems which only do simple chlorination of well water, such as WD3. Water distribution systems certifications are required of those who are involved in the conveyance of water from the treatment plant to the premises of the consumer (7305.C). Based on a population a Level III Certification is required.

Observation: There are 2 Water Well System Operators as per the definitions of Act 538 and the LDHH Health Code Section 7300 in employment with WD3. These are Kyle Mills ID no. 8351 and Harry Simmons ID no. 4074. Both are certified at Level III or higher in Water Production, Treatment and Distribution as required. In addition, there are approximately 7 other Operations Personnel employed which are associated with the Distribution System. Of these, only one employee was listed as a Certified Operator: Jeremy Joffrion ID no. 36528. He is listed as a Level III Water Production, Treatment and Distribution Operator. The WD3 Board Policy No. 105, organizational chart, lists two positions for which a Distribution Certification would normally be required. These are "Distribution Supervisor" and "Asst. Dist. Supervisor". No other determination was made by the auditor regarding the status of the other employees other than two are meter readers. Approximately 4 employees may be operating the distribution system without a Certification.

Recommendation: New operations employees may apply for an Operator-in-Training Certificate under Section 7317. This gives two years

for new employees to work as an operator under a certified individual while they qualify for their certification. WD3 should evaluate all Operations Personnel and determine if any are operating without the proper certifications and provide for their eventual certification. Final determinations should be confirmed by the LDHH Operator Certification Staff in Baton Rouge or the Committee of Operator Certification.

3.3 Section 311 Daily Records: This section requires that daily operational records be kept on forms approved by the LDHH and reported or submitted when requested by the LDHH.

Observation: Partial daily records were being maintained, however the records were not complete. These records were not being kept on LDHH approved forms and they were not being kept in a consistent manner nor are operators recording corrections to operating conditions to correct non-compliances. It was observed that two different daily record forms were being used by the Water Well Operators. Each form has a different list of sample points which are used by each operator. Neither of the forms had documentation of being approved by the LDHH for use in recordkeeping. Prior to the audit, there were no notations of corrective actions for events such as low chlorine residual values found during daily site inspections. An example of this was seen for the dates of August 26-31, 2014 at sample point "System 2" when the chlorine residual levels were consistently less than the minimum required 0.5 mg/l. There was no record of any operational changes or corrective actions made to raise the residual for 6 days even though changes should have been made. Signature blocks were provided on the forms but Operator signatures were not consistently provided on the forms.

Recommendation: First, if WD3 desires to use forms other than that required by the LDHH, WD3 should submit one of these forms for approval and only use forms approved by the LDHH. A record of that approval should be kept on hand. Secondly, operators should record on the forms all corrective actions taken for issues and deficiencies such as raising chlorine feed rates to adjust for low chlorine residuals. Thirdly, operators should sign or initial the signature blocks on the daily forms.

3.4 Section 327 Water Well Requirements: This section states a number of minimum requirements for water wells in potable water service. There was a requirement that outer well casings extend a minimum of 50 feet in depth. There is also a requirement that all well casings extend a minimum of 12 inches above grade.

Observation: There was inadequate information onsite to review water well casing depths. All water wells except one complied with the minimum height above grade. Water well No. 2 at the Ball Road location

has a casing which only has a height of approximately 10 inches and is not compliant with this LDHH requirement.

Recommendation: It is recommended that water well files be upgraded with all available information on each water well and that information be maintained until the plugging and abandonment of the well at some future point. It is also recommended that upon the next event where work is done on the Ball Road Well No. 2 that the casing height be raised to be at least 12 inches above grade.

3.5 Section 335 Water Distribution System Minimum Pressure: This section states the requirement that all water supplies be operated and maintained to have a minimum positive pressure of 15 psi at all service connections at all times.

Observation: Pressure appeared to be adequate during the field observations and during monitoring activities. However it was noted that the operators do not have a reliable pressure gauge system to ensure that this requirement is complied with. There are some (but few) pressure gauges located in the distribution system. Some of the existing ones at sample points were inoperative. The operators do not take pressure readings across the system to ensure that this requirement is met and that compliance is recorded.

Recommendation: WD3 should supply all sample points with operative pressure gauges and the operators should make daily observations and record the readings to clearly demonstrate that WD3 is compliant with the requirements of Section 335 and to help troubleshoot when pressure issues arise.

3.6 Section 353(A) System Disinfection Requirements: This section requires new systems and new parts of existing systems be disinfected with a minimum chlorine residual of 50 mg/l for a period of not less than 3 hours with a final residual of not less than 5 mg/l. A reapplication is required if the minimum residual is not maintained after the 3 hour wait.

Observation: The Distributions Operator, Jeremy Joffrion, was interviewed and it was determined that distribution personnel have an unwritten practice of disinfecting new water line extensions prior to placing them into service. They work closely with the Water Well Operator in order to arrange for coliform testing for new portions of the system as well. The practice was to place an amount of granulated calcium hypochlorite into segments of the new line and to add water and then flush with water. Residuals are not checked upon completion and it was impossible to know if they were compliant or not. There was no time limit nor any method of testing the concentration prior to flushing to ensure that

the requirements of Section 353 A were met. There is no demonstration or any records that this requirement is being met.

Recommendation: WD3 should provide a written procedure for the distribution personnel and for repair contractors to follow when disinfecting new extensions and repairs prior to placing them into service. This procedure should provide for documentation of meeting the requirements and conditions of the rule for this activity.

3.7 Section 353(C) System testing prior to use: This section requires new systems and new parts of existing systems pass coliform testing prior to be placed into customer service. Sampling should only occur on lines which have been disinfected as per Section 353(A).

Observation: WD3 does have a good practice of testing coliform prior to placing line extensions into service. A comparison of line extension projects and sample records was conducted. Most construction projects had coliform samples taken during the period reviewed from January 2014 to May 2014. There was one project which did not appear to have samples taken. The contractor invoice for Mike Smith Construction referenced WO No. 2996 for a project on Vincent Road. There was no Vincent Road sample on record. There was however a sample for 639 Patterson Road that same month. It is not clear if this sample was for the referenced project.

Recommendation: Confirm the location for the project and determine if this sample cleared that project. Continue the practice of clearing the new extensions for coliform contamination as required above.

3.8 Section 355 A.2. Plant Disinfectant Levels: This section specifies what levels of chlorine residual are required relative to the pH of the water. The table in this section specifies that for higher pH water, higher chlorine residuals are required as the water enters the distribution system. Records of testing results must be kept.

<u>pH</u>	<u>Residual Required</u>
up to 7	0.5 mg/l
7 to 8	0.6 mg/l
8 to 9	0.8 mg/l
Above 9	1.0 mg/l

Based on the regulation, and based on pH testing performed during the audit at the appropriate Points of Entry (POE) the water production plants would require the following minimum chlorine residuals:

Ragley	1.0 mg/l
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Longville	0.6 mg/l
Ball Road	0.6 mg/l
Hwy 27	0.8 mg/l
Longacre	0.8 mg/l
Hwy 26	0.8 mg/l

Observation: A brief review of the chlorine residual records indicated clearly that these minimum chlorine residual values are not met consistently. When the records for August 1-4, 2014 and September 5-7 were reviewed, it was observed that there were 15 instances of 42 where a POE did not meet the minimum required values of chlorine residual. It was also observed that while there is pH testing equipment onsite, pH readings are seldom taken at any of the facilities by the operators.

Recommendation: The water system operators should be retrained on these points and treatment goals be clearly stated and chlorine feed rates increased to reliably meet these required values at all times. In addition, pH testing should be conducted on a regular basis and chlorine residuals maintained in accordance with the pH values. Weekly testing is recommended.

3.9 Section 355 Mandatory Disinfection: This recently updated section has a requirement that the minimum free chlorine disinfectant residual be no less than 0.5 mg/l at all times at all points. Records of testing results must be kept on forms approved by the LDHH and maintained as required by the NPDW requirements.

Observation: Daily chlorine records were reviewed for 2014. Overall the records were well organized, well kept and mostly complete. Typical chlorine residual values were between 0.75 and 1.50 throughout the system. However, there were numerous instances of lower than allowed chlorine residual values of 0.50 mg/l. Some of these occurred for consecutive days at a time and it is unknown if these conditions were recognized by operations staff as out of compliance. Each instance constitutes a noncompliance. There is a pattern of repetitious events to which there is no documented response or correction apparent. There was one incident where there was no sample taken and tested at all. Examples of lower than allowed values during the first part of 2014 were as follows:

March 2014

- 1- System 2 at 0.20 mg/l
- 2- System 2 at 0.38 mg/l
- 4- System 6 No sample
- 28- Ragley at 0.41 mg/l
- 28- System 2 at 0.46 mg/l
- 29- System 2 at 0.46 mg/l

30- System 2 at 0.46 mg/l

April 2014

- 1- System 2 at 0.25 mg/l
- 2- Ragley Plant at 0.47 mg/l
- 2- System 2 at 0.36 mg/l
- 3- System 2 at 0.27 mg/l
- 11- System 2 at 0.47 mg/l
- 17- Ragley at 0.46 mg/l
- 17- System 2 at 0.40 mg/l
- 18- System 2 at 0.40 mg/l
- 28- System 3 at 0.25 mg/l
- 28- Ball Road at 0.36 mg/l

May 2 Longville Plant 0.47 m g/l

June 15 to 17 Longville all less than 0.50 mg/l

June 23 Longville at 0.38 mg/l

June 24 Longville at 0.42 mg/l

July 2014 Longville and Ragley have numerous readings less than 0.50 mg/l

August 2014

- 1- Longville 0.40 mg/l
- 2- Longville at 0.31 mg/l
- 3- Longville at 0.30 mg/l
- 3- System 1 at 0.38 mg/l
- 4- Longville at 0.37 mg/l
- 4- System 1 at 0.30 mg/l
- 6- System 2 at 0.37 mg/l
- 11- System 2 at 0.46 mg/l
- 26- System 2 at 0.37 mg/l
- 27- System 2 at 0.46 mg/l
- 28- System 2 at 0.24 mg/l
- 29- System 2 at 0.39 mg/l
- 30- System 2 at 0.27 mg/l
- 31- System 2 at 0.20 mg/l

Recommendation: WD3 should review the new requirements for the 0.5 mg/l minimum chlorine residual with all personnel and document all operational changes which are made to bring the system back into compliance with that standard when lower than normal residuals are detected.

3.10 Section 903 A. Louisiana Total Coliform Rule: Requires that monitoring plans be developed which list addresses and descriptions which allow persons to easily find the sample points. The plan must be approved by the LDHH. In addition, it is required that sample results be kept on record for a minimum of 5 years.

Observation: It was observed that the required sample plan was developed and approved by the LDHH. It did contain sample point descriptions as required and the number of sample points as required. However, all sample points have yet to be installed and some sample points are not accurately located or identified as per the approved plan. This was recognized as a work in progress but needs to be completed. Regarding recordkeeping, the majority of the records were on file and well organized. However, the January through September 2011 records were not present and represent a record keeping noncompliance.

It was also noted that the coliform sample forms (LAB8(R 12/08)) had varying descriptions and sometimes errors in the listing of the locations by street address and by intersections. Examples of this are seen on May 5, 2014 when for sample S979532 the site was incorrectly listed as 1147 instead of “1146 at carwash” and again when for sample S979528 the site was listed as “Hwy 113 at Hwy 1147” instead of “Hwy 113 at Hwy 394” and at other times this site is apparently listed as “Hwy 113 at Dry Creek”. Other inconsistencies appear during each round of monthly samples.

Recommendation: First the sample point establishment are recognized to be a work in progress. This work should be completed in the field in a timely manner and once the required number of sample points are installed, the sample plan must be updated and resubmitted for approval by the LDHH regional engineer.

Secondly, it is recommended that in order to minimize the potential confusion of the identity of coliform sample points that each sample point be labeled or signed in the field by the sample point identification number listed in the approved sample plan. For each sample submitted to the LDHH for analysis these official identifications should be listed on their approved forms. These sample point identification numbers are listed by their location type. Examples are: POE-001, TCR-004, MRT-026, etc.

Lastly, the missing documents should be found or requested from the LDHH and replaced in the files to bring this record back into compliance.

3.11 Section 903 E. Louisiana Total Coliform Rule: Requires that coliform samples alternate between all approved sample sites.

Observation: It was observed that there are 20 coliform samples being taken per month as required. It was observed that there is a new sampling plan on file with the LDHH which lists 30 sampling locations. However, it was observed that the same 20 locations were being sampled from month to month instead of being rotated monthly. This was evidenced by comparing the April, May and June 2014 sampling sites listed on the LDHH sampling forms.

Recommendation: WD3 should establish a rotational system for the Total Coliform sampling program as required in Section 903 E.

3.12 Section 1110 E. Records: It is required in this section that records of pH calibration be maintained for 3 years.

Observation: There is a pH meter at the Ragley plant along with proper buffers for calibration. These buffers were found to be current and not out of date. The Water Well operator stated that the pH meter is used on occasion, but that there was no record of calibration being made and retained on file.

Recommendation: WD3 should continue to calibrate the pH meter daily when it is used and begin to keep a pH calibration log and maintain these records for a minimum of 3 years.

APPENDIX B

FINAL ACTION PLAN

FINAL ACTION PLAN

INTRODUCTION: This Final Action Plan has been developed as described in the Settlement Agreement (SA) and the approved scope of work to the fullest extent practical. It is based on the findings of the Audit Report. As required in the SA Section 5 'Draft Action Plan' the Auditor shall include with the Audit report a plan that identifies all reasonable corrective measures and a proposed implementation schedule for corrective action ("Draft Action Plan") based on each of the identified corrective measures. The Draft Action Plan has now become the Final Action Plan with only minor clarifications. Reasonable options are listed below for all audit items along with a reasonable time frame for completion. The completion times are based on the relative urgency. Urgent matters are given a 10 business day time frame. The other action items are given relative dates ranging from weeks to months depending on the urgency of each item. For clarification, the start date for this schedule is set to be the issuance date of the Final Action Plan of November 13, 2014. Some items should be addressed as soon as possible or prior to the next event. The start date of November 13, 2014 will not relieve any regulatory or legal requirement to accomplish some items.

1.0 Safe Drinking Water Act (SDWA)

Summary: The SDWA language pertains mostly to the requirements of the Administrator of the USEPA and secondly to the Administrator of the State Authorities who are granted primacy to administer the program, such as the Louisiana DHH (LDHH). There are some requirements of the water systems expressed at a level of detail to which an evaluation of whether or not the system is in compliance or not is warranted. Those items which were identified are listed below when concerns were identified:

1.1 Section 1445 (4)(B)(V) Required Information: Information is required to be given for water systems covered by the Unregulated Contaminant Monitoring Rule (UCMR) in Section 1445 (a)(2).

Observation: WD3 had complied with UCMR 2 monitoring requirements and participated in the program in the 2010-2012 timeframe as evidenced by lab results and other paperwork on file. However, the WD3 Operator was not familiar with the UCMR 3 program. This program required a registration and other pertinent information to be submitted to the USEPA as referenced above. This has not happened. When the USEPA and the LDHH were contacted independently and the database checked it was determined that WD3 had not yet registered and provided the required information for the UCMR 3 program. When the UCMR file was reviewed in WD3 offices a letter from the USEPA dated May 7, 2012 was found which explained that the system was subject to the UCMR 3 program. The sampling was scheduled for 2013 but this sampling was never conducted.

Recommendation: WD3 should contact the USEPA and provide all required information and should reschedule sampling as soon as practical in order to meet regulatory required deadlines, as may be possible.

Other Options: Other than no action, there is not any option available for this item.

Time Frame: This notification action should be completed as soon as possible, no later than 10 days following the issuance of the final action plan. Sampling should be rescheduled for completion as per instructions from the USEPA but no later than the 2015 completion deadline.

1.2 Section 1445 (a)(1)(B) Recordkeeping: In this section information is required to be kept "... to determine whether such person has acted or is acting in compliance with this title..."

Observation: There were instances of a lack of records of pertinent daily operations. For example, daily changes made to chlorination feed rates made in order to raise a noncompliant level of chlorine residual in the distribution system were not recorded. In the matter of disinfection of water mains and new extensions, no records were being kept for those operations which would demonstrate compliance with those requirements.

Recommendation: Make a record on the daily operational log when changes are made as corrective actions to clearly demonstrate that operational changes were made to maintain compliance with the SDWA. Secondly, records should be maintained which demonstrate that proper disinfection methodology was conducted when placing water mains and repaired locations into service.

Other Options: Other than no action, there is not any option available for this item. There are options regarding the type of record to be maintained. The record could be in the simple form of a paper format. It could also be electronic and performed in the field using an electronic tablet if desired.

Time Frame: This action should be completed as soon as possible, no later than 10 days following the issuance of the final action plan.

1.3 Section 1445 (a) UCMR Requirements: In this section notification of the availability of results shall be given to persons served by the system. The public may make recommendations for contaminants if they are present and in concentrations which affect public health.

Observation: This was not done due to the fact that these samples were not taken on schedule.

Recommendation: Once the UCMR 3 study is completed, the sample information should be made publicly available through such means as WD3 normally utilizes for water well results. Examples of these means could include the Consumer Confidence Reports, notices in water bills, website postings and or public informational meetings.

Other Options: There are no other known options available for this issue.

Time Frame: This item should be completed once sampling is completed by the time of the issuance of the following Consumer Confidence Report (CCR) which is by July 1 of each year.

2.0 40 CFR 141 Safe Drinking Water Regulations

- 2.1 **Part 141.31 (b) Reporting:** This section states “Except where a different reporting period is specified in this part, the supplier of water must report to the State within 48 hours the failure to comply with any national primary drinking water regulation (including failure to comply with monitoring requirements) set forth in this part. Part 141.40(a) states that failure to monitor is a monitoring violation.
- 2.2 **Part 141.33 Record Maintenance:** This section requires record maintenance for certain time periods. Public water systems must retain records of chemical analysis for a period of 10 years. Public water systems must also maintain copies of all Sanitary Surveys conducted by the agencies, the water system itself or any consultant for the water system for a period of 10 years. Responses to Sanitary Surveys must also be kept for the same period of time.

Observation: In general, recordkeeping was very good at the WD3 water system. There were however a few cases of missing documents which are required to be kept onsite as described above.

- There were no copies of the Sanitary Surveys for the years 2004 or for 2007.
- There were no Lead and Copper sampling results or records for the year 2008 sample event.
- There were some missing results for water wells for the September 21, 2009 sampling event for wells listed previously as No. 3, 4 and 7. Only wells 2 and 6 are reported by the DHH.
- There was an omission (by the LDHH) in the water well sampling results of February 8, 2012 where the results for East Allen

Water System Sample No. AD63868 were attached to the WD3 report instead of the Longville sample results. Therefore the Longville sample results are not on file as required.

Recommendation: WD3 should complete the files with missing information which can be gathered from the LDHH records.

Other Options: None

Time Frame: These missing records should be requested from the LDHH within 6 months.

- 2.3 **Observation:** The UCMR 3 information submittal omission and 2013 monitoring omission constitute a failure to comply with national drinking water regulations and monitoring requirements.

Recommendation: WD3 should make the required notification for this and all other non-compliances which are listed in this report. WD3 should also request that the sampling schedule be modified to allow WD3 to meet monitoring responsibilities in the expanded time frame but prior to the end of the UCMR3 program.

Other Options: Other than no action, there is not any option available for this item. Notification should be in written form, however a phone consultation with regional LDHH engineers may be helpful in the process and they may have more specific instructions.

Time Frame: This notification action should be completed as soon as possible, no later than 48 hours following the issuance of the final action plan. Sampling should be as instructed by USEPA for the UCMR3 by the end of the 2015 sampling period.

- 2.4 **Part 141.35 Unregulated Contaminant Monitoring Rule (UCMR):** This section requires a number of actions of the regulated water system. They include the following:

- 2.4.1 Reporting is required in Part 141.35(b) and (c).
- 2.4.2 Reporting of results is required Part 141.35(c)(6).
- 2.4.3 Following the USEPA schedule is required Part 141.35(c)(5).
- 2.4.4 The responsibility is on the system to contact USEPA if there is an issue or a problem Part 141.35(b)(2) and (4).
- 2.4.5 The UCMR sample plan must be submitted and approved Part 141.35(c)(3)(iii)
- 2.4.6 Failure to monitor is a monitoring violation Part 141.40(a)(6).

Observation: The UCMR3 monitoring program has not been initiated by WD3. The system operator, was familiar with UCMR2 but not with UCMR3. No registration was filed by WD3 according to the system operator. Independent inquiries were made of the national UCMR hotline and with the LDHH both of which confirmed that WD3 had not registered nor sampled for the UCMR3 contaminant list. The UCMR file was reviewed and a letter dated May 7, 2012 signed by Gregory Carroll, USEPA was found stating that WD3 was subject to UCMR3.

Recommendation: Make the required notification and request that the sampling schedule be modified to allow WD3 to meet monitoring responsibilities in the expanded time frame but prior to the end of the UCMR3 program in 2015.

Other Options: Other than no action, there is not any option available for this item.

Time Frame: This notification action should be completed as soon as possible, no later than 10 days following the issuance of the final action plan. Sampling dates should be determined by the USEPA but should be no later than the end of the 2015 sampling period.

2.5 Part 141.629 Reporting and Recordkeeping: The requirements for the Stage 2 DBP monitoring program include the following.

- 2.5.1 Reporting is required to the State within 10 days of any quarter in which monitoring is required to take place. Reporting must include the following elements:
 - 2.5.1.1 Number of samples taken
 - 2.5.1.2 Dates of samples and results
 - 2.5.1.3 Arithmetic averages of historic results.
 - 2.5.1.4 A statement of whether the MCL was exceeded or not.
 - 2.5.1.5 Other requirements as may be applicable.

Observation: The DBP files were reviewed and no records for the years 2004 and 2007 were to be found. Chemical analysis records are to be kept for at least 10 years. In addition there was no clear documentation of the reporting of results for the Stage 2 DBP quarterly or annual samples. The system operator explained that the laboratory, Ana Labs, would report the results. Ms. Caryn Benjamin with the LDHH confirmed that individual reporting is still the LDHH requirement. Ana Labs, when questioned, explained that their batch sample results submission to the State

was for backup purposes only and that systems should be individually be reporting to the State as well.

Recommendation: Replace the missing records by contacting the laboratory or by contacting the DHH offices. Make the required submission of all results for DBP Stage 2 and document that submission. Make all future submissions no later than the 10th of the month following the quarter in which the monitoring event takes place.

Other Options: Other than no action, there is not any option available for this item.

Time Frame: This reporting action should be completed as soon as practical, no later than 30 days following the issuance of the final action plan. The missing DBP results should be replaced within 6 months.

3.0 LDHH Chapter 51 Part XII

3.1 Section 307 Person in Responsible Charge: This section explains that the person in responsible charge of a potable water system must "... take all measures and precautions..." to ensure compliance with the code.

Observation: The findings of this audit constitute items which must be addressed under this section of the State Health Code.

Recommendation: Take all measures and precautions as recommended to ensure compliance with the code as may be required and document those actions.

Other Options: Other than no action, there is not any option available for this item.

Time Frame: All actions to ensure compliance with the code should take place according to the implementation schedule listed for each item in the report.

3.2 Section 309 Plant supervision and control: This section states the requirements that all water supplies shall be under the supervision and control of a Certified Operator as per Act 538 R.S. 40:1141-1151. RS 40:1149 states that "... it shall be unlawful for any person to perform the duties of an operator, as defined herein, without being duly certified under the provisions of this part." The term "Operator" is defined as "...the individual, as determined by the Committee of Certification, in attendance on site of a water

supply system or sewerage system and whose performance, judgment, and direction affects either the safety, sanitary quality, or quantity of water or sewage treated or delivered.” Water Production certifications are required of all facilities (7305.B). Water Treatment certifications are not required for systems which only do simple chlorination of well water, such as WD3. Water distribution systems certifications are required of those who are involved in the conveyance of water from the treatment plant to the premises of the consumer (7305.C). Based on a population a Level III Certification is required.

Observation: There are 2 Water Well System Operators as per the definitions of Act 538 and the LDHH Health Code Section 7300 in employment with WD3. These are Kyle Mills ID no. 8351 and Harry Simmons ID no. 4074. Both are certified at Level III or higher in Water Production, Treatment and Distribution Operator as required. In addition, there are approximately 7 other Operations Personnel employed which are associated with the Distribution System. Of these, only one employee was listed as a Certified Operator: Jeremy Joffrion ID no. 36528. He is listed as a Level III Water Production, Treatment and Distribution Operator. The WD3 Board Policy No. 105, organizational chart, lists two positions for which a Distribution Certification would normally be required. These are “Distribution Supervisor” and “Asst. Dist. Supervisor”. No other determination was made by the auditor regarding the status of the other employees other than two are meter readers. Approximately 4 employees may be operating the distribution system without a Certification.

Recommendation: New operations employees may apply for an Operator-in-Training Certificate under Section 7317. This gives two years for new employees to work as an operator under a certified individual while they qualify for their certification. WD3 should evaluate all Operations Personnel and determine if any are operating without the proper certifications and provide for their eventual certification. Final determinations should be confirmed by the LDHH Operator Certification Staff in Baton Rouge or the Committee of Operator Certification.

Other Options: Other options for ensuring compliance with this portion of the Louisiana Health Code are several. One option would be to seek a ruling or determination by the Louisiana Operator Certification Committee regarding the status of any questionable employee to seek a determination that certification is not required. This could also be done at the Staff level of the Operator Certification Office of LDHH in Baton Rouge. Other options include hiring currently certified operators as new employees and finally contracting out positions which require certified personnel where none are available could be a temporary measure if additional certified personnel are needed on an interim basis.

Time Frame: This issue may take time to resolve. The implementation schedule shall be as follows:

1. For all existing or new personnel who perform operator duties, register them as ‘Operators in Training’ under Section 7317 and begin the two year period of training to prepare them for full certification. Their application shall be completed within 60 days.
2. For any employees whose operational status may not be clear and a judgment is desired from the LDHH Operator Certification Office, this shall be requested within 90 days.
3. For any employees whose operational status may not be clear and a judgment is desired from the Louisiana Committee of Certification, this shall be requested within 120 days.
4. If contract operations personnel are desired as a temporary measure, this shall be addressed and contract personnel in place in 90 days.

3.3 Section 311 Daily Records: This section requires that daily operational records be kept on forms approved by the LDHH and reported or submitted when requested by the LDHH.

Observation: Partial daily records were being maintained, however the records were not complete. These records were not being kept on LDHH approved forms and they were not being kept in a consistent manner nor are operators recording corrections to operating conditions to correct non-compliances. It was observed that two different daily record forms were being used by the Water Well Operators. Neither of the forms had documentation of being approved by the LDHH for use in recordkeeping. Prior to the audit, there were no notations of corrective actions for events such as low chlorine residual values found during daily site inspections. An example of this was seen for the dates of August 26-31, 2014 at sample point “System 2” when the chlorine residual levels were consistently less than the minimum required 0.5 mg/l. There was no record of any operational changes or corrective actions made to raise the residual for 6 days even though changes should have been made. Signature blocks were provided on the forms but Operator signatures were not consistently provided on the forms.

Recommendation: First, if WD3 desires to use forms other than that required by the LDHH, WD3 should submit one of these forms for approval and only use forms approved by the LDHH. A record of that approval should be kept on hand. Secondly, operators should record on

the forms all corrective actions taken for issues and deficiencies such as raising chlorine feed rates to adjust for low chlorine residuals. Thirdly, operators should sign or initial the signature blocks on the daily forms.

Other Options: The basic option in this instance should be to utilize the LDHH forms for the recording of daily chlorine residuals. It has a location for actions taken for corrections and changes, and a location for the operator initials. Other options include having the WD3 paper forms approved or the use of electronic forms which should also be approved by the LDHH.

Time Frame: The use of LDHH forms should begin as soon as possible no later than 14 days following the issuance of the final action plan. If approvals are to be sought, the request for approvals should be submitted no later than 14 days following the issuance of the final action plan.

3.4 Section 327 Water Well Requirements: This section states a number of minimum requirements for water wells in potable water service. There was a requirement that outer well casings extend a minimum of 50 feet in depth. There is also a requirement that all well casings extend a minimum of 12 inches above grade.

Observation: There was inadequate information onsite to review water well casing depths. All water wells except one complied with the minimum height above grade. Water well No. 2 at the Ball Road location has a casing which only has a height of approximately 10 inches and is not compliant with this LDHH requirement.

Recommendation: It is recommended that water well files be upgraded with all available information on each water well and that information be maintained until the plugging and abandonment of the well at some future point. It is also recommended that upon the next event where work is done on the Ball Road Well No. 2 that the casing height be raised to be at least 12 inches above grade.

Other Options: Records of well installation are likely to exist at the WD3 consulting engineer's offices. Copies of pertinent water well data could be provided for the WD3 files for each of the wells. Water well drillers may also have pertinent information on file if none is available elsewhere.

Time Frame: Due to the volume of information which may be available and the time needed for collecting and the low level of urgency related to these work items a 12 month timeframe is established for the completion of this work item. Upon the next event where work is done on the Ball Road Well No. 2 that the casing height shall be raised to be at least 12 inches above grade.

3.5 Section 335 Water Distribution System Minimum Pressure: This section states the requirement that all water supplies be operated and maintained to have a minimum positive pressure of 15 psi at all service connections at all times.

Observation: Pressure appeared to be adequate during the field observations and during monitoring activities. However it was noted that the operators do not have a reliable pressure gauge system to ensure that this requirement is complied with. There are some (but few) pressure gauges located in the distribution system. Some of the existing ones at sample points were inoperative. The operators do not take pressure readings across the system to ensure that this requirement is met and that compliance is recorded.

Recommendation: WD3 should supply all sample points with operative pressure gauges and the operators should make daily observations and record the readings to clearly demonstrate that WD3 is compliant with the requirements of Section 335 and to help troubleshoot when pressure issues arise.

Other Options: There are other mechanisms for reading system pressures than localized pressure gauges. There are constantly streaming pressure sensor systems which can be tied into the WD3 SCADA systems with alarms which can be set to alert certified operators so adjustments can be made prior to reaching critically low pressures. The options for these systems are many and are to be found in the general market place. It is an engineering function to evaluate and select the most promising automated pressure monitoring system.

Time Frame: For the completion of this work item the establishment of a deadline of 12 months following the issuance of the final action plan.

3.6 Section 353(A) System Disinfection Requirements: This section requires new systems and new parts of existing systems be disinfected with a minimum chlorine residual of 50 mg/l for a period of not less than 3 hours with a final residual of not less than 5 mg/l. A reapplication is required if the minimum residual is not maintained after the 3 hour wait.

Observation: The Distributions Operator, Jeremy Joffrion, was interviewed and it was determined that distribution personnel have an unwritten practice of disinfecting new water line extensions prior to placing them into service. They work closely with the Water Well Operator in order to arrange for coliform testing for new portions of the system as well. The practice was to place an amount of granulated calcium

hypochlorite into segments of the new line and to add water and then flush with water. Residuals are not checked upon completion and it was impossible to know if they were compliant or not. There was no time limit nor any method of testing the concentration prior to flushing to ensure that the requirements of Section 353 A were met. There is no demonstration or any records that this requirement is being met.

Recommendation: WD3 should provide a written procedure for the distribution personnel and for repair contractors to follow when disinfecting new extensions and repairs prior to placing them into service. This procedure should provide for documentation of meeting the requirements and conditions of the rule for this activity.

Other Options: WD3 could adopt AWWA line disinfection standards and utilize a form for record keeping purposes as required by the SDWA. WD3 could utilize a third party testing firm to document compliance with the applicable standard, however this is not considered necessary. WD3 could have a non-distribution person such as the water well operator conduct the confirmation of meeting the requirements of this section and recording the results as a demonstration of compliance.

Time Frame: Compliance with this item should occur within 90 days from the issuance of the final action plan.

- 3.7 Section 353(C) System testing prior to use:** This section requires new systems and new parts of existing systems pass coliform testing prior to be placed into customer service. Sampling should only occur on lines which have been disinfected as per Section 353(A).

Observation: WD3 does have a good practice of testing coliform prior to placing line extensions into service. A comparison of line extension projects and sample records was conducted. Most construction projects had coliform samples taken during the period reviewed from January 2014 to May 2014. There was one project which did not appear to have samples taken. The contractor invoice for Mike Smith Construction referenced WO No. 2996 for a project on Vincent Road. There was no Vincent Road sample on record. There was however a sample for 639 Patterson Road that same month. It is not clear if this sample was for the referenced project.

Recommendation: Confirm the location for the project and determine if this sample cleared that project. Continue the practice of clearing the new extensions for coliform contamination as required above.

Other Options: None

Time Frame: The location of the project and sample should be confirmed in 30 days from the issuance of the final action plan.

- 3.8 **Section 355 A.2. Plant Disinfectant Levels:** This section specifies what levels of chlorine residual are required relative to the pH of the water. The table in this section specifies that for higher pH water, higher chlorine residuals are required as the water enters the distribution system. Records of testing results must be kept.

<u>pH</u>	<u>Residual Required</u>
up to 7	0.5 mg/l
7 to 8	0.6 mg/l
8 to 9	0.8 mg/l
Above 9	1.0 mg/l

Based on the regulation, and based on pH testing performed during the audit at the appropriate Points of Entry (POE) the water production plants would require the following minimum chlorine residuals:

Ragley	1.0 mg/l
Longville	0.6 mg/l
Ball Road	0.6 mg/l
Hwy 27	0.8 mg/l
Longacre	0.8 mg/l
Hwy 26	0.8 mg/l

Observation: A brief review of the chlorine residual records indicated clearly that these minimum chlorine residual values are not met consistently. When the records for August 1-4, 2014 and September 5-7 were reviewed, it was observed that there were 15 instances of 42 where a POE did not meet the minimum required values of chlorine residual. It was also observed that while there is pH testing equipment onsite, pH readings are seldom taken at any of the facilities by the operators.

Recommendation: The water system operators should be retrained on these points and treatment goals be clearly stated and chlorine feed rates increased to reliably meet these required values at all times. In addition, pH testing should be conducted on a regular basis and chlorine residuals maintained in accordance with the pH values. Weekly testing is recommended.

Other Options: One option to meeting this requirement is to have an automated chlorination feed system. This would adjust the chlorinator based on both the pH value and the resulting chlorine residual value and maintain a value compliant with the requirement.

Time Frame: This item needs to be addressed as soon as possible. The personnel retraining should be accomplished as soon as possible but no later than 10 days following the issuance of the final action plan. Procedures for corrective action should be issued as soon as possible but no later than 30 days following the issuance of the final action plan. Evaluations for automated systems, if desired, should be completed within 12 months following the issuance of the final action plan and installation within 12 months following that date.

3.9 Section 355 Mandatory Disinfection: This recently updated section has a requirement that the minimum free chlorine disinfectant residual be no less than 0.5 mg/l at all times at all points. Records of testing results must be kept on forms approved by the DHH and maintained as required by the NPDW requirements.

Observation: Daily chlorine records were reviewed for 2014. Overall the records were well organized, well kept and mostly complete. Typical chlorine residual values were in the 0.75 to 1.50 range throughout the system. However, there were numerous observations of lower than allowed chlorine residual values. Some were for consecutive days and it was difficult to determine if these were recognized by operations staff as out of compliance conditions by operators. Each instance constitutes a noncompliance. Examples of lower than allowed values during the first part of 2014 were as follows. There is a pattern of repetitious events to which there is no documented response or correction apparent. In one incident there was no sample taken and tested.

March 2014

- 1- System 2 at 0.20 mg/l
- 2- System 2 at 0.38 mg/l
- 4- System 6 No sample
- 28- Ragley at 0.41 mg/l
- 28- System 2 at 0.46 mg/l
- 29- System 2 at 0.46 mg/l
- 30- System 2 at 0.46 mg/l

April 2014

- 1- System 2 at 0.25 mg/l
- 2- Ragley Plant at 0.47 mg/l
- 2- System 2 at 0.36 mg/l
- 3- System 2 at 0.27 mg/l
- 11- System 2 at 0.47 mg/l
- 17- Ragley at 0.46 mg/l
- 17- System 2 at 0.40 mg/l
- 18- System 2 at 0.40 mg/l

28- System 3 at 0.25 mg/l
28- Ball Road at 0.36 mg/l

May 2 Longville Plant 0.47 m g/l

June 15 to 17 Longville all less than 0.50 mg/l

June 23 Longville at 0.38 mg/l
June 24 Longville at 0.42 mg/l

July 2014 Longville and Ragley have numerous readings less than 0.50 mg/l

August 2014

1- Longville 0.40 mg/l
2- Longville at 0.31 mg/l
3- Longville at 0.30 mg/l
3- System 1 at 0.38 mg/l
4- Longville at 0.37 mg/l
4- System 1 at 0.30 mg/l
6- System 2 at 0.37 mg/l
11- System 2 at 0.46 mg/l
26- System 2 at 0.37 mg/l
27- System 2 at 0,46 mg/l
28- System 2 at 0.24 mg/l
29- System 2 at 0.39 mg/l
30- System 2 at 0.27 mg/l
31- System 2 at 0.20 mg/l

Recommendation: WD3 should review the new requirements for the 0.5 mg/l minimum chlorine residual with all personnel and document all operational changes which are made to bring the system back into compliance with that standard when lower than normal residuals are detected. Flushing of the water lines with adequate volumes of water may be needed to bring noncompliant residuals up to good levels.

Other Options: There are several options to the daily checking of chlorine residual samples in the field by the certified operator. One of these options is to install an on-line chlorine residual analyzer which is tied into the SCADA system to alert operations personnel when residuals are diminishing but before a non-compliance takes place. Another helpful item would be to install automatic flushing systems which will maintain a fresher water in the troublesome lines where low chlorine residual is a recurring issue. This would help ensure a safer fresher water in dead end line areas and help maintain the required chlorine residual of 0.5 mg/l.

Time Frame: This item needs to be addressed as soon as possible. The personnel retraining should be accomplished as soon as possible but no later than 10 days following the issuance of the final action plan. Procedures for corrective action should be issued as soon as possible but no later than 30 days following the issuance of the final action plan. Evaluations for automated systems, if desired, should be completed within 12 months following the issuance of the final action plan and installation within 12 months following that date.

- 3.10 **Section 903 A. Louisiana Total Coliform Rule:** Requires that monitoring plans be developed which list addresses and descriptions which allow persons to easily find the sample points. The plan must be approved by the LDHH. In addition, it is required that sample results be kept on record for a minimum of 5 years.

Observation: It was observed that the required sample plan was developed and approved by the LDHH. It did contain sample point descriptions as required and the number of sample points as required. However, all sample points have yet to be installed and some sample points are not accurately located or identified as per the approved plan. This was recognized as a work in progress but needs to be completed. Regarding recordkeeping, the majority of the records were on file and well organized. However, the January through September 2011 records were not present and represent a record keeping noncompliance.

It was also noted that the coliform sample forms (LAB8(R 12/08)) had varying descriptions and sometimes errors in the listing of the locations by street address and by intersections. Examples of this are seen on May 5, 2014 when for sample S979532 the site was incorrectly listed as 1147 instead of "1146 at carwash" and again when for sample S979528 the site was listed as "Hwy 113 at Hwy 1147" instead of "Hwy 113 at Hwy 394" and at other times this site is apparently listed as "Hwy 113 at Dry Creek". Other inconsistencies appear during each round of monthly samples.

Recommendation: First the sample point establishment are recognized to be a work in progress. This work should be completed in the field in a timely manner and once the required number of sample points are installed, the sample plan must be updated and resubmitted for approval by the LDHH regional engineer.

Secondly, it is recommended that in order to minimize the potential confusion of the identity of coliform sample points that each sample point be labeled or signed in the field by the sample point identification number listed in the approved sample plan. For each sample submitted to the LDHH for analysis these official identifications should be listed on their

approved forms. These sample point identification numbers are listed by their location type. Examples are: POE-001, TCR-004, MRT-026, etc.

Lastly, the missing documents should be found or requested from the LDHH and replaced in the files to bring this record back into compliance.

Other Options: None

Time Frame: Sample point establishment should be completed within 6 months. The use of the formal sample point identification numbers should begin immediately with the next round of coliform samples. The missing records should be replaced within 6 months.

3.11 Section 903 E. Louisiana Total Coliform Rule: Requires that coliform samples alternate between all approved sample sites.

Observation: It was observed that there are 20 coliform samples being taken per month as required. It was observed that there is a new sampling plan on file with the LDHH which lists 30 sampling locations. However, it was observed that the same 20 locations were being sampled from month to month instead of being rotated monthly. This was evidenced by comparing the April, May and June 2014 sampling sites listed on the LDHH sampling forms.

Recommendation: WD3 should establish a rotational system for the Total Coliform sampling program as required in Section 903 E.

Other Options: None

Time Frame: This rotation of sample points should begin as soon as possible not later than the next monthly sampling for coliform following the issuance of the final action plan.

3.12 Section 1110 E. Records: It is required in this section that records of pH calibration be maintained for 3 years.

Observation: There is a pH meter at the Ragley plant along with proper buffers for calibration. These buffers were found to be current and not out of date. The Water Well operator stated that the pH meter is used on occasion, but that there was no record of calibration being made and retained on file.

Recommendation: WD3 should continue to calibrate the pH meter daily when it is used and begin to keep a pH calibration log and maintain these records for a minimum of 3 years.

Other Options: None

Time Frame: The creation of a pH calibration log should begin with the next use of the pH meter, but not longer than 45 days from the issuance of the final action plan.

APPENDIX C

OTHER SUGGESTIONS REPORT

REPORT OF FINDINGS

INTRODUCTION: This overall audit has been performed as described in the Settlement Agreement (SA) and the approved scope of work to the fullest extent practical. This audit has addressed all work items as required by the SA. In the previous submission, the Regulatory Audit Report (Appendix A) and the Action Plan (Appendix B) were delivered. In this submission, the Other Suggestions Report (Appendix C) is being delivered. The findings are listed in as much detail as possible and examples or pertinent documents are referenced for better understanding or evidence of a condition or observation. Regulatory citations or other references are given where applicable for additional clarity.

4.0 Safe Drinking Water Act (SDWA)

- 4.1 In Section 1433 (a)** water systems serving populations greater than 3,300 persons must conduct a vulnerability analysis (VA). In section (a)(2) the system must certify to the Administrator that is was completed by June 30, 2004.

Observation: There was no record of the VA on file at WD3.

Recommendation: While it is assumed that the VA was conducted, it is no longer on file. This record is no longer required to be kept on site and this is not a violation of the requirements. However, it is appropriate in today's world of natural disasters and terrorist activities that as a good management tool, the VA be resurrected and used as a basis for the Emergency Response Plan (ERP) addressed below.

- 4.2 In Section 1433 (b)** it is required that an Emergency Response Plan (ERP) be prepared and a certification provided to the Administrator and a record kept of this for 5 years.

Observation: There was no record of the ERP on file at WD3.

Recommendation: While the requirement for record holding time has been exceeded, it is recommended that the District prepare or review and update the ERP for use during natural disasters or as a defense against potential terrorist activities. The ERP would serve the Water District well if an event occurs. The ERP should be kept on file, updated annually and employees trained on their parts during an emergency.

- 4.3 Regarding the Source Water Quality Assessment (SWQA) Report, in Section 1453 (a)(7)** of the SDWA it states that the State shall make the results of the SWQA available to the public.

Observation: It is noted that it is primarily the State's responsibility to make this report available to the public. However, a copy of the SWQA was found to be on file in the Ragley Water Plant and has been made available at the main WD3 office. It was reviewed by the auditor. The listing of water wells in this study were found to be inconsistent with the actual wells in Water District Three. This is not a fault of the District, but by the report authors and the LDEQ. It was found that the oil and gas tank battery located just south of the Ragley Water Plant was not listed on the inventory of potential sources of contaminants. This site (S/N 203997) is located approximately 350 feet from the nearest water well which is more than the 100 foot minimum required distance for sources of contaminants for water wells found in LDHH Part XII 327(2). In the SWQA, Oil and Gas tank batteries are listed as a moderate risk item in the SWQA report.

Recommendation: This tank battery should be kept in mind as a potential ground water contamination source and considered by the Water District as a potential source of contaminants in future planning and expansions. It is recommended that this document be kept on file for future use as an awareness tool for potential well contamination sources. One practical defense against this and other potential sources is for new wells to be constructed with a conductor casing. This gives an added layer of protection for the water well and the source of potable water for the system.

- 4.4 In Section 1458 (a)** there is responsibility for the USEPA to identify and conduct special studies for Subpopulations which are at greater risk for contaminants than the general population. A report was required from the USEPA in 4 years and periodically thereafter as new information warranted. Studies on harmful substances were required.

Observation: This SDWA requirement is in place to help ensure the protection of special populations 'at greater risk' in the general public by the USEPA.

Recommendation: WD3 may wish to communicate this fact to their customers during communication events in the future. In addition, WD3 may wish to communicate the public's concerns with sodium and pH to the USEPA for consideration during future studies and contaminant evaluations.

5.0 Ten State Standards Review

- 5.1 Section 2.8.2** Physical facilities should have a laboratory sink and auxiliary facilities (such as restrooms, and a sewerage system).

5.2 Additionally, in the Louisiana Health Code **Sections 301 and 305 of Part XIII. Sewage Disposal** it requires that all “premises” be provided with plumbing fixtures as required in the code and that they be connected to sewerage systems. Furthermore, a person shall not directly or indirectly discharge or allow to be discharged, the effluent from any plumbing fixture to a ditch, water body or to the surface of the ground.

5.3 Section 9.1 Sanitary Waste must receive treatment via onsite treatment approved by reviewing authority.

Observation: It was noted that there were laboratory sinks in most water well site buildings. However in no case were there approved sanitary waste treatment facilities present. Even the Ragley water plant, where two operators have desks, computers and office facilities did not have restroom facilities. These facilities do qualify as “premises” as defined by the Health Code as a place where persons may work or congregate. These auxiliary facilities as required by the 10SS and as also required by Louisiana Sanitary Code in Sections 301 and 305 of Part XIII. Sewage Disposal.

Recommendations: WD3 should provide restrooms for sanitary waste treatment facilities in each case where sanitary wastewater is generated. Particularly at manned work stations such as the Ragley water plant where multiple operators maintain offices and require such facilities.

5.4 Section 2.16 An Operations and Maintenance Manual for the System should be provided.

Observation: When questioned, the Water Well Operator did not have an O&M manual on file for the potable water systems. There is no written guidance on how to operate these specific water plants. There were some limited equipment manuals present for recent projects such as Hwy 26 well and tank equipment, but nothing which ‘includes a parts list and parts order form, operator safety procedures and an operational trouble-shooting section’ As required by the 10SS and as good practice would deem practical.

Recommendations: WD3 should develop a set of standard operating procedures for the well systems for current personnel which includes equipment information as well as safety information and troubleshooting specifics for the water equipment onsite at the six water well systems. This will become invaluable for current and future operators as they are brought on board and trained.

5.5 Section 3.2.1.3 Standby Power should be provided.

Observation: Standby Power generators were present at 5 of the 6 water well facilities. WD3 has done well to make these provisions. The only site without backup power was the Longville well system which also only has one well. It was explained by the Well System Operator that the system can be run and kept up to the minimum pressures by operating all the other wells and the Longville well is not needed to accomplish this.

Recommendations: WD3 should test the various water well systems annually during non-emergency conditions to ensure that this situation continues to be true and that it is sufficient to operate without the Longville well and to ensure that conditions have not changed.

5.6 Section 3.2.4.4 Water Well Records. All well records should be retained until the well has been abandoned.

Observation: Few water well records were present in the files at WD3. A good single page water well summary sheet was provided with well history and was found to be helpful. However, the original driller's reports and engineering reports along with initial water quality analysis is needed and should be kept by WD3 for all wells.

Recommendations: WD3 should work with their consulting engineering staff to pull together all available records of each well and develop onsite files for future use as stated in Section 3.2.4.4.

5.7 Section 7.0.18 Disinfection should be by AWWA C652. Tanks are required to be disinfected at different times such as following construction or repair.

Observation: Regarding water samples for coliform clearance testing for the new tank at Hwy 26. It was observed that only one coliform sample was used to determine that the tank was clear. This is typical and acceptable in Louisiana for water systems. However, in AWWA C652 two samples are proscribed to be taken no sooner than 24 hours apart to define clearance for a tank for acceptable use as a potable water storage unit.

Recommendations: WD3 should consider this guidance from the 10SS and determine if AWWA C652 will be used as the guideline for future tank clearance or if the LDHH one sample methodology will continue to be used.

5.8 Section 8.9.2 Disinfection of repaired water mains should be in accordance with AWWA C651.

Observation: The Distributions Operator, Jeremy Joffrion, was interviewed and it was determined that distribution personnel have an

unwritten practice of disinfecting new water line extensions prior to placing them into service. They work closely with the Water Well Operator in order to arrange for coliform testing for new portions of the system as well. The practice was to place an amount of granulated calcium hypochlorite into segments of the new line and to pressurize with water chlorinating it and then flush the line with water. This is a good practice, however chlorine residuals were not checked upon completion and it was impossible to know if they were compliant with the standards or not. There was no minimum hold time period followed nor any method of testing the concentration prior to flushing or following flushing to ensure that the requirements of Section 353 A were met.

Recommendations: To improve the good practice of disinfection of water lines, WD3 should review and evaluate AWWA C651 and follow that process or review it and construct a Board Policy addressing the specific steps and procedures for line and repair parts disinfection. This procedure should be written and the process should be required for all contract personnel and WD3 personnel to follow in the field when conducting repairs or constructing new extensions to the existing system.

5.9 Section 8.9.2 Underwater crossings at least 15 ft. wide should have:

5.9.1 Two feet of ground cover

5.9.2 Water tight joints

5.9.3 Valves and taps at both ends for sampling and leakage checks.

Observation: The Distribution Supervisor was interviewed and explained their new methods which were used for creek crossings. He described a ‘welded joints, direct bury’ method which included both sides of the crossing had valves for isolation and ‘meter connections’ for testing the line.

Recommendations: WD3 should continue to use methods consistent with Section 8.9.2 above to ensure the adequacy of the water mains at creek crossings and to maintain high quality water at all times. A written board policy should be developed based on this 10SS Section 8.9.2 so that these standards are defined and made requirements and specifications in future crossings so that safe potable water is achieved and maintained.

6.0 Other Issues and Items

6.1 Water Well Aquifer Sources was a topic of much concern for some customers. The general question was why should the wells be drilled through the Chicot Aquifer into other aquifers with different water quality? During the review process it appeared to the auditor that there were several things going on with this topic. Firstly, it was apparent that the USEPA leaves the

source water determination up to the State DHH. The DHH has a process of review and evaluation for new water systems and supplies to help ensure that high quality and healthy water sources become the sources for communities. Each well that gets drilled goes through that process of review and approval with the DHH. All submissions must be designed by a Professional Engineer. Certainly there are choices and decisions which have to be made. It appeared to the auditor that the overriding guideline in the past was to avoid the shallower higher iron and manganese content groundwater which would require more expensive filtration equipment and treatment techniques in preference for the deeper aquifers which had low iron, low manganese and low hardness.

WD3 is advised to be careful in future decision making and to weigh all the potential factors regarding all water quality parameters such as sodium, and pH as well as iron and manganese in future expansions and water well management.

6.2 Sodium in the source water was an issue of concern from some water system customers. This may be a legitimate concern for some water system customers and if so, medical advice should be sought for all sodium sources consumed not only the water. In 2012, water well data listed the sodium levels of the active water wells in WD3 from “very low- sodium” content of 6.7 mg/l to a “low-sodium” level of 113 mg/l. The USEPA has evaluated sodium and the need to regulate it in drinking water and has not yet chosen to do so. A lot can be said both in favor of the current levels and against the current levels of sodium. Action may be taken to protect the sensitive individuals who may not tolerate the existing sodium levels. The simplest action is to install a home sized Reverse Osmosis water treatment unit to reduce the sodium and other minerals to very low levels in the drinking water. This can be done for about \$600 per installation with a \$200 annual refurbishment fee. This approach can provide immediate protection to anyone who needs it and does not want to wait for other more expensive and controversial solutions to be developed at future times. It is recommended to all Settlement Parties that this solution be considered to address any immediate risk or concern with the sodium content of the potable water.

6.3 Water Well Numbers: There is a history of mislabeling of water wells by the DHH during sampling, and in the SWAP report for the water wells. There is some level of confusion which must be cleared up from this point forward. Some small issues in the past may never be corrected but are not considered critical in nature. The Operator of WD3 provided the auditor with a current list of wells which appeared to be correctly listed for all well sites. This listing should be considered the official list and should be used during each sampling, repair, and other work for reference purposes. The identification of each well should be placed on the well in the field and maintained over time so that it is correctly referred to in the future. All drawings and references used in the water system should be updated or corrected using these ‘official’

water well designations. Other alternatives do exist for naming, however a system should be adopted by WD3 and made official and all references should be made in that manner. That list developed by WD3 is provided below:

1. L1 - Longville Well
2. R1 – Ragley North Well
3. BR1 – Ball Road South Well
4. BR2 – Ball Road Remote Well
5. LA1 – Long Acre South Well
6. R5 – Ragley Remote Well
7. BR3 – Ball Road North Well
8. 26-1 – Hwy 26 West Well
9. 27-1 – Hwy 27 Plant
10. TW-1 – Hwy 27 Test Well
11. LA-2 – Long Acre North Well
12. R3 – Ragley South Well
13. 26-2 – Hwy 26 East Well

6.4 Records of Maintenance: There is no overall maintenance record system at WD3. For example, while preventative chlorinator maintenance is conducted by operators on a regular basis, there is no log of that maintenance recorded. It is advised that this written log be created for all maintenance conducted and kept in a bound log or in a suitable electronic format. It is best if the date, equipment worked on, the operator performing the maintenance and a list of parts used and a summary of the problem and changes made is kept in the log. This will provide information for use at future times when maintenance is needed or if other personnel are performing the maintenance. This comment is for both plant maintenance as well as distribution system maintenance.

6.5 Concerns Regarding the pH of the water: There were concerns regarding the pH of the water produced. There is no primary health standard for pH, however there is a non-enforceable secondary standard range of 6.5 to 8.5 Standard Units (SU). The auditor conducted independent pH readings using a calibrated pH meter and found the following to be the values of water entering the system from the storage tanks. It may be seen that three of the six water producing sites are above the secondary standard for pH. The pH has a definite effect on the effectiveness of the chlorine used as a disinfectant and may have other impacts as well. It is recommended that the WD3 consider trimming the pH by chemical addition to bring it into the range of the secondary standard.

- Longville Tank – 7.69 SU
- Ragley Tank – 9.20 SU

- Ball Road Tank – 7.62 SU
- Long Acre Tank – 8.64 SU
- Hwy 26 Tank – 8.79 SU
- Hwy 27 Tank – 8.34 SU

6.6 Arsenic Concerns: There were concerns expressed regarding the levels of arsenic in the water of WD3 in the past. The auditor reviewed water well chemical analysis reports for the wells for the past 10 years and did not find any exceedance of the Maximum Contaminant level for arsenic. The MCL was changed in 2006 and the level dropped from 50 ppb to 10 ppb. The system appears to have been in compliance and to be in compliance with that standard at this time.

6.7 Consumer Confidence Reports (CCR): There were a number of issues regarding the CCR process. Issues were that there should be more information regarding the sodium content, that it should be more explanatory and comprehensive, to provide more than boiler plate which is provided by the DHH, and to cover more than the minimum required. It is understandable that many water systems put out that which the DHH provides in a trusting and honest effort to be compliant. However, sometimes that may not enough and more information is warranted. These concerns and the need for more pertinent information should be strongly considered by WD3. The DHH provided boiler plate does leave a lot to be desired in many cases. The CCR requirement does provide a wonderful opportunity to communicate with the end users of the water and to provide important information. It can be a useful tool if developed as such and can go a long way to build confidence with the customer base. The WD3 website can be the launching pad for this communication tool and can be very interactive if approached in a creative manner. To be sure, WD3 must provide the minimum, but more is better and recommended for careful consideration.

6.8 Public Participation: The auditor reviewed the WD3 Board Policy on Public Participation and found it to be adequate. The written policy appeared to be a document different than the experiences which were reported and described in complaints as issues that needed to be fixed. It is recommended that the written policy be administered in a fair manner, respectfully allowing the customer input into the planning and or decision making processes when appropriate. A lot of trust and respect needs to be regained by all parties in this overall process and growth and patience needs to occur in this area.

6.9 Water Pressure Concerns: There were some concerns listed regarding high water pressures. The regulations require the maintaining of certain minimum water pressures. The auditor found that there was not an adequate system of working water pressure gauges to allow for the reading and recording of water pressure across the system. It is recommended to the WD3 that a

representative system of water pressure gauges be installed and maintained so that system operators can make and record observations of water pressure on a regular basis. This will allow for the improved management of water pressure across the system as required by the regulations and as needed by the customers.

6.10 Water System Balance: There was a concern raised as to which water from which well certain areas of the distribution system were being served. This is relative to the sodium content, pH values and other related characteristics. There is a practical approach to answer some of these questions and that is to use pH as a surrogate to track water and find the break points of pH between well systems. Other methods would involve sampling for sodium, which can be expensive. There are options to model water in distribution systems and predict where the flows would occur. This is an expensive method as well. It is recommended that WD3 consider these options to determine which sections of the distribution system receive certain water and to communicate that to the customer base via the website or other appropriate methods.

APPENDIX D

RESTORE COMMENTS

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November 11, 2014

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David Booth
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Dear Professors Babich and Hall and Independent Auditor Booth:

RESTORE has read the draft reports submitted by Mr. Booth and we have the following comments:

1. RESTORE is very grateful for what Mr. Booth has done. We see that he put in a tremendous effort. He has covered almost every concern we had. He has covered things we had not even thought about. Every observation he has made and every suggestion that he has presented are clearly explained. We believe that what Mr. Booth has done is a great public service. It should provide a reasonable, practical framework for some immediate improvements in water quality for the 23,000 people served by the Beauregard Waterworks District #3 and, certainly just as importantly it should serve as a longterm guide for the way that the District looks at its major priority, provision of Safe Drinking Water. Through time, with the re-focusing of the attention of the Waterworks management on that principle RESTORE believes that all the problems we have seen can be solved and all of our concerns can be alleviated.

2. In the following specific comments I have incorporated feedback from several of the RESTORE members who studied Mr. Booth's Audit Report (Appendix A), Draft Action Plan (Appendix B), and Other Suggestions Report. We realize that some of what we mention might be covered already but we simply mean to see if perhaps Mr. Booth might find a way to put into the Final reports some added clarifications or emphases which could help us and the Waterworks avoid later differences of interpretation of things.

3. It seems logical that since the second quarterly Public Meeting, proposed now for December 8, 2014 will be dedicated to Mr. Booth's presentation of his Final Reports, that the third quarterly meeting, sometime in March probably, should be a presentation by the Waterworks telling the public what the Waterworks thinks of the elements of the

Reports, item-by-item, with the opportunity for questions and responses by the public in attendance that evening as well as an opportunity for more detailed responses in writing, to be submitted through Tulane as we are doing at this stage. We would hope that a neutral moderator would conduct that meeting.

4. The fourth and final quarterly Public Meeting, sometime in June or July RESTORE would like to reserve for our presentations of things that we would consider to be relevant at that time and for us to provide constructive suggestions for continuation of efforts to improve water quality in our district. Again, we would expect that a neutral moderator would conduct the meeting in a way that all parties would find agreeable.

5. One of the things not precisely covered by Mr. Booth but which RESTORE considers important is the nailing down of exactly how many certified operators are required for this public water supply system that serves 23,000 consumers. RESTORE has contacted EPA Washington, D.C. about this and has been promised a response by a “specialist” “soon,” but we are still waiting. It is amazing to us that such a simple question cannot be answered immediately. Especially given the findings that the Auditor has presented, it seems impossible to expect the existing number of certified operators to be able to do everything required to protect the public, even if the District were to provide all the necessary equipment.

6. Although the District did comply with the Settlement Agreement’s guidance for them to encourage the Police Jury to adopt the LDEQ’s recommended Source Water Protection Ordinance, the Police Jury flatly-refused, again, to even bring it up for discussion. I do not know whether or not anything Mr. Booth might add to his reports would make any difference in that situation, but RESTORE would like for everyone to think about the fact that the *Police Jury’s attitude could be interpreted as reverse guidance that could undermine all the Settling Parties’ good faith attempts to move toward protection of public health through our attempts to insure safe drinking water. It would be a historical disgrace* if all the efforts of the Settling Parties and the Independent Auditor were nullified by the supervisory body signaling the Waterworks to bow up and resist improvements no matter how sensible. Until the Police Jury shows some perception of the gravity of the Safe Drinking Water situation, RESTORE cannot feel comfortable that things are really going to change.

7. Several RESTORE members applauded the Independent Auditor’s focus on proper notifications of the public about various issues and the need for more disciplined and complete record keeping. If those things were done, one member said, “many problems would be eliminated.”

a.) One of the notifications that another member wanted to see more clearly emphasized is **somewhat covered** in the Other Suggestions Report, final sentence: “It is recommended that WD3 consider these options to determine which sections of the distribution system receive certain water and to communicate that to the customer base via the website or other appropriate methods.” **The need that exists is for each person to know the water quality that exists at his or her tap.** The Annual Consumer Confidence Report does not tell anyone that.

We would like to see a recommendation that **separate CCRs be provided by water plant/distribution zone** so that someone receiving water from the Longacre well will know their water chemistry and someone with different water chemistry from the Ragley well will know theirs. (Engineer McCarty testified in his deposition that it is indeed reasonable to expect that people get most of their water from the nearest water plant even though all the pipes in the distribution system are interconnected.)

b) Notification of the involvement of elevated sodium in some specific neighborhoods with the potential for medical problems seems like a fair, moral, proper thing to do, as does the potential involvement of elevated sodium in kidney stone formation, of elevated pH and sodium in fluid and electrolyte balance problems, of elevated pH and sodium in gardening problems. RESTORE would like to see in the Other Suggestions Report some statement about such enhanced education of the consumers since the District is sending to most of them waters with less-than-optimum levels of sodium and pH.

We do see as very important the Independent Auditor's suggestion that the Waterworks "communicate the public's concerns with sodium and pH to the USEPA for consideration during future studies and contaminant evaluations." That Subsection 1458 of the Safe Drinking Water Act, is, in our opinion, quite directly applicable in our circumstances.

(Auditor Booth's provision of an alternative for sodium treatment, house-by-house, raised a question in one RESTORE member's mind: "Is he [auditor] suggesting that the water district provide these filters? Maybe it could be done through an emergency grant so that basically anyone with concerns could have it installed."

At \$600 per home, even if only 1,000 homes needed the sodium reduction Reverse Osmosis system, that is \$600,000. That is more than enough to drill another good well into the Sole Source Aquifer. My personal belief is that going to the good aquifer is a better alternative than house-by-house remediation. Trying to provide all homes currently receiving excessive sodium and pH waters surely would be most practically-accomplished by reperforating and rescreening the existing wells in the high quality Chicot Aquifer.

It does seem logical that the individual consumer should not have to bear the burden of remedying inferior water any more than he should have to accept any other kind of inferior product foisted upon him, especially one that is crucial for survival.)

We have a question about whether or not it would be possible to apply the requirements of the Unregulated Contaminant Rule to the sodium situation now existing at WD3 or would we have to present the situation to EPA Washington, D.C. as an evidence of the need to formally list sodium under that rule or, alternatively, set a national primary standard for it? Either way, this would certainly show that Beauregard Parish pointed out to the entire country a need for extra attention to detail by the Federal

authorities.

Mr. Booth's statement about the District having chosen aquifers on the basis of low iron and manganese is correct, but we would like to have seen also an acknowledgment that the Ball Road Chicot Aquifer wells provide such low iron and manganese water along with neutral pH and low sodium water. The DeRidder wells are drilled into the Sole Source Chicot Aquifer and require no iron or manganese treatments. That need not be said so directly in the Final Reports but at least some mention of the reality proved by the Ball Road Chicot wells provides a hopeful example for future development in this district.

c) Mr. Booth's general statements about the CCRs being a way to provide more than just boilerplate are excellent guidance. WE hope the district will take what he says to heart: "To be sure, WD3 must provide the minimum, but more is better and recommended for careful consideration."

d) When we see on KPLC-TV other parishes' waterworks issuing "boil water" advisories along with notifications of coming outages, we wonder why WD3 does not do the same thing. Non-notification of emergency water shutoff and non-issuance of "boil advisories" came up again just two weeks ago. One of the RESTORE members was in her shower soaped up and suddenly: no water. She called District #3 and said that they had to stop delivery for an undetermined length of time. She was not told what had caused the outage. No boil water advisory was issued. Since that situation occurred just west of Longville the question again arose about whether or not a backup power supply for the Longville well could have prevented the outage. Since the huge South Beauregard School complex, grades Pre-K through 12, is dependent upon the Longville well, it seems imprudent to rely upon cross-connection shunting of water for those children and the rest of Longville when all the other water plants somehow warranted generators. We appreciate that David Booth did point out that the Ten State Standards has such a backup power supply policy for all water plants.

e) On the issue of availability of information and proper record keeping, RESTORE is glad that the Independent Auditor agrees that there are problems with well numbering and naming and information about each well. I did my best to draw together all the critical bits of data I could and put them onto one spreadsheet. I sent a revised, more complete spreadsheet to the parties via Tulane recently. It would be good if the spreadsheet could be reviewed and revised by the Waterworks and its engineers as they go about implementing the Auditor's recommendations about fixing the well information problems.

8. The Independent Auditor noticed that "The written [public participation] policy appeared to be a document different than the experiences which were reported and described in complaints as issues that needed to be fixed." That was a very diplomatic statement. We thank Mr. Booth for his wise advice on that topic.

9. Something that RESTORE remains uncertain about is whether or not the

existing way of chlorinating the water is automatic or manual. Given the calculations Mr. Booth has done to show that the high pH requires extra chlorination, it seems even more essential than ever that the chlorination be automated. It surely will be an extra burden on what are already overworked certified operators to have to now do custom adjustments at each water plant in order to insure death of pathogens. At least if there were machines that could be pre-set to add the necessary amount of chlorine, the risks of public infections would be diminished.

Also, it would seem prudent that if there is a “deviation,” a violation of a DHH safety-based emergency rule, that the District would allow a re-audit every 24 months or at least until they can show sustained compliance.

In conclusion, let me repeat that RESTORE is very grateful for what Mr. Booth has done. There is nothing that we can see in his work that is in any way less-than-constructive. Every bit of it is a help to the 23,000 individual people who drink water from Beauregard Parish Waterworks District #3. Even if most of them never know who really helped them get Safe Drinking Water we know and we feel privileged to have been able to participate with David Booth in the process.

Sincerely,

Michael Tritico, Biologist and President of RESTORE

Restore Explicit Symmetry To Our Ravaged Earth

APPENDIX E

WATER DISTRICT 3
RESPONSE TO OTHER SUGGESTIONS REPORT

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November 18, 2014

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RE: RESTORE v. Beauregard Water Works District No. 3, Civ. Action No. 2:12CV2606
Settlement Agreement Implementation
Written Response to Auditor's Other Suggestions

Dear David:

On behalf of the Beauregard Parish Water Works District No. 3 ("District"), I am providing you with the District's written response to your Other Suggestions as set forth in Paragraph 7 of the Settlement Agreement that was previously reached in the above referenced litigation. I have addressed each item in the Other Suggestions along with the appropriate District's Response and Action Item Timing.

Item:	1.1 Section 1433 (a)
Other Suggestion:	The VA (vulnerability analysis) should be resurrected and used as a basis for the Emergency Response Plan (ERP) addressed below.
District's Response:	The District will resurrect the VA and use it as a basis for the ERP.
Action Item Timing:	The District will resurrect the VA within fourteen (14) days from the date of this letter.

*Mr. David Booth
November 18, 2014
Page 2*

- Item: **1.2 Section 1433 (b)**
- Other Suggestion: It is recommended that the District prepare or review and update the ERP for use during natural disasters or as a defense against potential terrorist activities. The ERP should be kept on file, updated annually and employees trained on their parts during an emergency.
- District's Response: The District will review and update the ERP, as appropriate. The ERP will be kept on file, reviewed annually for any needed updates and used to perform annual training on employees with respect to those portions of the ERP that apply to their specific job responsibilities.
- Action Item Timing: The District will review and update the ERP, as appropriate, within ninety (90) days from the date of this letter. The District will perform the review and training noted above annually thereafter.
- Item: **1.3 Section 1433 (a)(7)**
- Other Suggestion: This tank battery should be kept in mind as a potential ground water contamination source and considered by the Water District as a potential source of contaminants in future planning and expansions. It is recommended that this document be kept on file for future use as an awareness tool for potential well contamination sources. One practical defense against this and other potential sources is for new wells to be constructed with a conductor casing. This gives an added layer of protection for the water well and the source of potable water for the system.
- District's Response: The District will definitely keep in mind the oil and gas tank battery as a potential ground water contamination source and as a potential source of contaminants in future planning and expansions. The District will continue to keep on file the Source Water Quality Assessment Report. The District has no control or authority over the construction of oil and gas wells. That is within the regulatory authority of the Louisiana Department of Natural Resources, Office of Conservation.
- Action Item Timing: None.
- Item: **1.4 Section 1458 (a)**
- Other Suggestion: WD3 may wish to communicate this fact [that it is the USEPA's responsibility to identify and conduct special studies for Subpopulations

which are at greater risk for contaminants than the general population] to their customers during communication events in the future. In addition, WD3 may wish to communicate the public's concerns with sodium and pH to the USEPA for consideration during future studies and contaminant evaluations.

District's Response: The District will place a statement on its website indicating that it is the EPA's responsibility to identify and conduct special studies for Subpopulations which are at greater risk for contaminants than the general population and, if anyone has concerns regarding the presence of any contaminants, naturally occurring compounds or naturally occurring conditions in the water supplied by the District, they can contact the U.S. Environmental Protection Agency (EPA), Office of Water (4100T), 1200 Pennsylvania Avenue, N.W., Washington, D.C. 20460 or call 202-564-5700 to request that EPA conduct a special study for any subpopulations that are at greater risk for contaminants in some of the drinking water supplied by the District than the general population of the District's customers.

The Louisiana Department of Health and Hospitals (LDHH) has appropriately addressed the issue of pH in drinking water above 7.0 and its impact on disinfection in LAC 51:XII.355.A.2 of the Louisiana Sanitary Code. As a result, the District does not believe there is any need to contact any state or federal agency regarding the naturally occurring pH of the water produced by some of its wells. Also, see the response to 3.5 **Concerns Regarding the pH of the Water** below for additional response information.

The EPA posted a page on its website on March 16, 2012 at <http://water.epa.gov/scitech/drinkingwater/dws/ccl/sodium.cfm> related to Sodium being included on the Drinking Water Contaminant Candidate List (CCL) wherein it stated the following about Sodium in drinking water, "This low level of concern is compounded by the legitimate criticisms of EPA's 20 milligrams per liter (mg/l) Drinking Water Equivalency Level (DWEL or guidance level) for sodium. EPA believes this guidance level for sodium needs updating, and is probably low. If a health benchmark for drinking water were established using current information and current drinking water health assessment procedures, it would likely be higher. This revision could establish a new level at which sodium occurrence would not meet the criteria for inclusion on the CCL as a drinking water contaminant of concern." (Emphasis added.) As a consequence, the District does not believe there is a need to contact EPA about the small handful of customers that have expressed concerns with naturally occurring Sodium in some of

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the water supplied by the District. Also, see the response to 3.2 **Sodium in the Source Water** below for additional response information.

Action Item Timing: The District will place the above referenced statement on its website within ninety (90) days from the date of this letter. There is no need for any action item timing with regard to Sodium or pH.

Item: **2.3 Section 9.1**

Other Suggestion: WD3 should provide restrooms for sanitary waste treatment facilities in each case where sanitary wastewater is generated. Particularly at manned work stations such as the Ragley water plant where multiple operators maintain offices and require such facilities.

District's Response: Sanitary sewage, as defined by LAC 51:XIII.101, is not generated at any of the 6 water plant locations except for the potential that exists at the Ragley water plant. At the Ragley water plant, the District will provide a rented portable toilet until a permanent solution can be provided. The District will develop and implement a permanent solution at the Ragley water plant.

Action Item Timing: The District will provide a rented portable toilet at the Ragley water plant within seven (7) days from the date of this letter. The District will implement a permanent solution at the Ragley water plant within one hundred twenty (120) days from the date of this letter.

Item: **2.4 Section 2.16**

Other Suggestion: WD3 should develop a set of standard operating procedures for the well systems for current personnel which includes equipment information as well as safety information and troubleshooting specifics for the water equipment onsite at the six water well systems. This will become invaluable for current and future operators as they are brought on board and trained.

District's Response: The District will develop a set of standard operating procedures for the well systems for current personnel, which includes equipment information as well as safety information and troubleshooting specifics for the water equipment onsite at the six water well systems.

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Action Item Timing: The District will complete the development of the above referenced standard operating procedures for well system within one hundred eighty (180) days from the date of this letter.

Item: **2.5 Section 3.2.1.3**

Other Suggestion: WD3 should test the various water well systems annually during non-emergency conditions to ensure that this situation continues to be true [that minimum pressures can be maintained] and that it is sufficient to operate without the Longville well and to ensure that conditions have not changed.

District's Response: The District will test and document the distribution system annually during non-emergency conditions to ensure that the minimum pressures can be maintained without the Longville well online at the time for as long as the Longville well does not have a standby generator.

Action Item Timing: The District will test and document the pressure of the distribution system, as noted above, within ninety (90) days from the date of this letter and annually thereafter for as long as the Longville well does not have a standby generator.

Item: **2.6 Section 3.2.4.4**

Other Suggestion: WD3 should work with their consulting engineering staff to pull together all available records of each well and develop onsite files for future use as stated in Section 3.2.4.4.

District's Response: The District will work with their consulting engineering staff to pull together all available records for each well and develop onsite files for future use as stated in Section 3.2.4.4 of the Ten State Standards (10SS).

Action Item Timing: The District will have pulled together all available records for each well and develop onsite files for future use within one hundred eighty (180) days from the date of this letter.

Item: **2.7 Section 7.0.18**

Other Suggestion: WD3 should consider this guidance from the 10SS and determine if AWWA C652 will be used as the guideline for future tank clearance or if the LDHH one sample methodology will continue to be used.

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District's Response: The District will consider the guidance from the 10SS and determine if (1) AWWA C652 will be used as the guideline for future tank clearance or (2) the LDHH one sample methodology will continue to be used.

Action Item Timing: The District will make the above determination within ninety (90) days from the date of this letter.

Item: **2.8 Section 8.9.2**

Other Suggestion: To improve the good practice of disinfection of water lines, WD3 should review and evaluate AWWA C651 and follow that process or review it and construct a Board Policy addressing the specific steps and procedures for line and repair parts disinfection. This procedure should be written and the process should be required for all contract personnel and WD3 personnel to follow in the field when conducting repairs or constructing new extensions to the existing system.

District's Response: The District will either review and evaluate AWWA C651 and follow that process or develop a written Board Policy based on AWWA C651 that addresses the specific steps and procedures for line and repair parts disinfection that will be required for all contract personnel and WD3 personnel to follow in the field when conducting repairs or constructing new extensions to the existing system.

Action Item Timing: The District will either adopt and follow AWWA C651 or develop a written Board Policy based on AWWA C651 within one hundred twenty (120) days from the date of this letter.

Item: **2.9 Section 8.9.2**

Other Suggestion: WD3 should continue to use methods consistent with Section 8.9.2 above to ensure the adequacy of the water mains at creek crossings and to maintain high quality water at all times. A written board policy should be developed based on this 10SS Section 8.9.2 so that these standards are defined and made requirements and specifications in future crossings so that safe potable water is achieved and maintained.

District's Response: As the Auditor noted, the District already uses methods consistent with above referenced Section 8.9.2 to ensure the adequacy of the water mains at creek crossings and to maintain high quality water at all times. The District will develop a written Board Policy, based on the 10SS Section

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8.9.2, that will define the standards and specifications and make them requirements for future crossings.

Action Item Timing: The District will develop a written board policy, based on the 10SS Section 8.9.2, that will define the standards and specifications and make them requirements for future crossings within one hundred twenty (120) days from the date of this letter.

Item: **3.1 Water Well Aquifer Sources**

Other Suggestion: WD3 is advised to be careful in future decision making and to weigh all the potential factors regarding all water quality parameters such as sodium, and pH as well as iron and manganese in future expansions and water well management.

District's Response: The District will be careful in future decision making and to weigh all the potential factors regarding all water quality parameters such as sodium, and pH as well as iron and manganese in future expansions and water well management.

Action Item Timing: None.

Item: **3.2 Sodium in the Source Water**

Other Suggestion: The USEPA has evaluated sodium and the need to regulate it in drinking water and has not yet chosen to do so. A lot can be said both in favor of the current levels and against the current levels of sodium. Action may be taken to protect the sensitive individuals who may not tolerate the existing sodium levels. The simplest action is to install a home sized Reverse Osmosis water treatment unit to reduce the sodium and other minerals to very low levels in the drinking water. This can be done for about \$600 per installation with a \$200 annual refurbishment fee. This approach can provide immediate protection to anyone who needs it and does not want to wait for other more expensive and controversial solutions to be developed at future times. It is recommended to all Settlement Parties that this solution be considered to address any immediate risk or concern with the sodium content of the potable water.

District's Response: On March 6, 2012, the EPA posted on its website the following statements related to Sodium being included on the Drinking Water Contaminant Candidate List (CCL), "This low level of concern is compounded by the legitimate criticisms of EPA's 20 milligrams per

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liter (mg/l) Drinking Water Equivalency Level (DWEL or guidance level) for sodium. EPA believes this guidance level for sodium needs updating, and is probably low. If a health benchmark for drinking water were established using current information and current drinking water health assessment procedures, it would likely be higher. This revision could establish a new level at which sodium occurrence would not meet the criteria for inclusion on the CCL as a drinking water contaminant of concern.” (Emphasis added.)

Thus, the District believes that the concerns for naturally occurring Sodium in its drinking water may not be justified based on the above statement from the EPA and the U.S. FDA’s determination and the EPA’s endorsement that “most American adults tend to consume between 4,000 and 6,000 mg of sodium per day” and “therapeutic sodium restricted diets can range from below 1,000 mg to 3,000 mg per day.”

The District has no information or data on those customers who may have been told by their doctors to maintain a therapeutic Sodium-restricted diet due to a diagnosed medical condition and (1) whether those customers have actually made the appropriate dietary changes necessary to stay within the Sodium levels set forth in those doctor-prescribed diets or (2) whether, after making the appropriate dietary changes necessary to stay within the Sodium levels set forth in those doctor-prescribed diets, the naturally-occurring Sodium levels in some of the water supplied by the District are actually preventing such customers from staying below the doctor-prescribed Sodium levels in their daily diet. Thus, the District cannot justify providing home-sized Reverse Osmosis water treatment units to individuals who may have been told by their doctors to maintain a therapeutic sodium-restrict diet due to a diagnosed medical condition both from an absence of reliable data and a cost perspective. Further, the sale of drinking water treatment systems for homes is a large and growing business throughout the US despite being supplied with water that meets SDWA standards. Reverse Osmosis Treatment Systems represent a significant portion of treatment systems being purchased. Throughout the US, the individual residents, not the municipal or rural water systems, pay for those drinking water treatment systems.

RESTORE questioned “whether or not it would be possible to apply the requirements of the Unregulated Contaminant Rule to the sodium situation now existing at WD3 or would we have to present the situation to EPA Washington D.C. as evidence of the need to formally

list sodium under that rule or, alternatively, set a national primary standard for it?” The EPA has stated on its website at <http://water.epa.gov/lawsregs/rulesregs/sdwa/ucmr/> that “EPA uses the Unregulated Contaminant Monitoring (UCM) program to collect data for contaminants suspected to be present in drinking water, but that do not have health-based standards set under the Safe Drinking Water Act (SDWA).” As noted above, Sodium is already included on the Drinking Water Contaminant Candidate List (CCL) but EPA has taken the position that “if a health benchmark for drinking water were established using current information and current drinking water health assessment procedures,” . . . “[T]his revision could establish a new level at which sodium occurrence would not meet the criteria for inclusion on the CCL as a drinking water contaminant of concern.” Because the largest source of Sodium that American’s consume by far is in their food rather than their drinking water, the EPA stated on that same website page “To reduce the risks of adverse health effects due to sodium, consult a physician or registered dietitian to plan a healthy diet that reduces the sodium content in your total food intake.”

Action Item Timing: None.

Item: **3.3 Water Well Numbers**

Other Suggestion: The Operator of WD3 provided the auditor with a current list of wells which appeared to be correctly listed for all well sites. This listing should be considered the official list and should be used during each sampling, repair, and other work for reference purposes. The identification of each well should be placed on the well in the field and maintained over time so that it is correctly referred to in the future. All drawings and references used in the water system should be updated or corrected using these ‘official’ water well designations.

District’s Response: The District will implement the use of the “official” list of water well designations listed in Paragraph 3.3 of the Auditor’s Other Suggestions. The identification of each well using this “official” list will be placed on the well in the field. All currently-used drawings of and references to the water system will be updated using the “official” list of water well designations.

Action Item Timing: The District will implement us of the “official” list of water well designations, placing the “official” well designation on each well in the field and updating currently-used drawings of and references with the

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“official” well designations within one hundred twenty (120) days from the date of this letter.

Item: 3.4 Records of Maintenance

Other Suggestion: It is advised that [a] written log be created for all maintenance conducted and kept in a bound log or in a suitable electronic format. It is best if the date, equipment worked on, the operator performing the maintenance and a list of parts used and a summary of the problem and changes made is kept in the log. This will provide information for use at future times when maintenance is needed or if other personnel are performing the maintenance. This comment is for both plant maintenance as well as distribution system maintenance.

District’s Response: The District will implement the use of a more permanently maintained and accessible maintenance record that will, at a minimum, include the information suggested above for both plant maintenance and distribution system maintenance.

Action Item Timing: The District will implement the use of a more permanently maintained and accessible maintenance record within ninety (90) days from the date of this letter.

Item: 3.5 Concerns Regarding the pH of the Water

Other Suggestion: There is no primary health standard for pH, however there is a non-enforceable secondary standard range of 6.5 to 8.5 Standard Units (SU). The auditor conducted independent pH readings using a calibrated pH meter and found the following to be the values of water entering the system from the storage tanks. It may be seen that three of the six water producing sites are above the secondary standard for pH. The pH has a deffinate (sic) effect on the effectiveness of the chlorine used as a disinfectant and may have other impacts as well. It is recommended that the WD3 consider trimming the pH by chemical addition to bring it into the rage of the secondary standard.

District’s Response: As noted in the Audit Report, LAC 51:XII.355.A.2 of the Louisiana Sanitary Code provides for certain levels of Chlorine residual that must be maintained for different pH ranges that exist above a pH of 7. The District will conduct a feasibility evaluation to determine if it is more cost effective, reliable and more protective of the health of the District’s customers from a permanent operational perspective to (1)

use chemical addition to bring the pH levels down to within the range of the secondary drinking water standard or (2) maintain increased concentrations of Chlorine residual levels for the different ranges of pH above 7, as set forth in LAC 51:XII.355.A.2 of the Louisiana Sanitary Code and Paragraph 3.8 of the Audit Report.

Action Item Timing: The District will conduct the above mentioned feasibility evaluation within one hundred twenty (120) days from the date of this letter. The District will permanently implement the recommended approach determined by the feasibility evaluation within one hundred twenty (120) days after the completion of the feasibility evaluation.

Item: **3.6 Arsenic Concerns**

Other Suggestion: The system appears to have been in compliance and to be in compliance with that standard at this time.

District's Response: The District will continue to maintain compliance with the Arsenic standard.

Action Item Timing: None.

Item: **3.7 Consumer Confidence Reports (CCR)**

Other Suggestion: Issues were that there should be more information regarding the sodium content, that it should be more explanatory and comprehensive, to provide more than boiler plate which is provided by the DHH, and to cover more than the minimum required. It is understandable that many water systems put out that which the DHH provides in a trusting and honest effort to be compliant. However, sometimes that may not enough and more information is warranted. These concerns and the need for more pertinent information should be strongly considered by WD3. The DHH provided boiler plate does leave a lot to be desired in many cases. The CCR requirement does provide a wonderful opportunity to communicate with the end users of the water and to provide important information. It can be a useful tool if developed as such and can go a long way to build confidence with the customer base. The WD3 website can be the launching pad for this communication tool and can be very interactive if approached in a creative manner. To be sure, WD3 must provide the minimum, but more is better and recommended for careful consideration.

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District's Response: The District will maintain the most current Sodium data on its website rather than publish it once per year in the CCR so that its customers will always have access to the most current data.

Action Item Timing: The District will begin to maintain the most current Sodium data on its website within ninety (90) days from the date of this letter.

Item: **3.8 Public Participation**

Other Suggestion: The auditor reviewed the WD3 Board Policy on Public Participation and found it to be adequate. The written policy appeared to be a document different than the experiences which were reported and described in complaints as issues that needed to be fixed. It is recommended that the written policy be administered in a fair manner, respectfully allowing the customer input into the planning and or decision making processes when appropriate.

District's Response: The District believes that it has administered the written Board Policy on Public Participation in a fair manner, respectfully allowing the customer input into the planning and or decision making processes when appropriate. However, the District recognizes that there is always room for improvement. The District also requests that customers who wish to be involved in the public participation process at the board meetings do so with the same fairness and respect.

Action Item Timing: The District will immediately endeavor to improve its administration of the written Board Policy on Public Participation in a fair and respectful manner.

Item: **3.9 Water Pressure Concerns**

Other Suggestion: The auditor found that there was not an adequate system of working water pressure gauges to allow for the reading and recording of water pressure across the system. It is recommended to the WD3 that a representative system of water pressure gauges be installed and maintained so that system operators can make and record observations of water pressure on a regular basis.

District's Response: The District will install and begin to maintain a representative system of water pressure gauges so that system operators can make and record observations of water pressure on a regular basis.

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Action Item Timing: The District will install and begin to maintain a representative system of water pressure gauges within one hundred twenty (120) days from the date of this letter.

Item: **3.10 Water System Balance**

Other Suggestion: There was a concern raised as to which water from which well certain areas of the distribution system were being served. This is relative to the sodium content, pH values and other related characteristics. There is a practical approach to answer some of these questions and that is to use pH as a surrogate to track water and find the break points of pH between well systems. Other methods would involve sampling for sodium, which can be expensive. There are options to model water in distribution systems and predict where the flows would occur. This is an expensive method as well. It is recommended that WD3 consider these options to determine which sections of the distribution system receive certain water and to communicate that to the customer base via the website or other appropriate methods.

District's Response: The source of the water that is serving any particular tap within the water distribution system is a combination of water from multiple wells whose proportions change from day to day. Which wells supplying water to a particular tap and the proportion of water from each well reaching each tap at a given point in time changes from one day to the next based on time of day, day of the week, demand, operational changes and adjustments, wells that are down for maintenance or repair, pressures, flows, temperatures, changing laminar and turbulent flow conditions and other factors. Thus, the suggested approaches to answering the questions raised, such as finding the break points of pH, sampling for Sodium or performing computer flow modeling of the distribution system are not practical because they would only reflect conditions determined at a single point in time and would not be reflective of the dynamic conditions that normally exist from one day to the next. The District is not willing to commit to such an endeavor because it will not produce reliable data, would commit personnel resources that are better used elsewhere and is not necessary to maintain high quality water throughout the system.

It has been suggested by RESTORE that "the need exists for each person to know the water quality that exists at his or her tap." The District already provides this information in the CCR with regard to the primary drinking water standards with respect to the water distribution system as a whole, as required by state and federal regulations. The

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only way for each person to know the water quality that exists at his or her tap is to sample each water tap and run the full suite of analyses on each sample, which is far beyond the regulatory requirements. Further, the District would have to pass these additional costs on to each customer. Obviously, this is not logistically or economically feasible. The District is not willing to perform sampling that would identify the specific water quality information unique to every single water tap.

It has also been suggested by RESTORE that they would like to see a recommendation from the Auditor that "separate CCRs be provided by water plant/distribution zone so that someone receiving water from the Longacre well will know their water chemistry and someone with different water chemistry from the Ragley well will know theirs." However, it is the District's interpretation that 40 CFR 141.153(a) requires that the CCR represent the entire water system and not multiple zones of the water system. Further, as discussed above, the proportion of water from each well that reaches a given water tap can vary from one day to the next. The LDHH conducts a significant amount of sampling and analyses for each water system. The District believes that the LDHH would not be willing to perform that same amount of sampling and analyses for each of the District's six wells or for multiple zones of the distribution system. Further, the LDHH provides each water district with a baseline CCR each year and the water districts are required to utilize that information in their CCR. The District believes that the LDHH would not be willing to provide a separate baseline CCR for each of the District's six wells or multiple zones of the distribution system. Thus, the District is not willing to provide more than one annual CCR for its water system.

Action Item Timing: None.

If you should have any questions regarding the forgoing, please do not hesitate to call.

Sincerely,



J. Mike DiGiglia

JMD/fml

cc: Ms. Michelle Hall, Staff Attorney
Beauregard Parish Water Works District No. 3