

October 15, 2014

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

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

Re: Beaugard Parish Water District 3 Audit Report

Dear Mr. DiGiglia and Ms. Hall;

Enclosed is the Audit Report attached as Appendix A and the draft Action Plan attached as Appendix B. The Other Suggestions Report is still a work in progress. Please review and take appropriate action. 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. Conduct meeting 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
 - JW Hellums, 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.

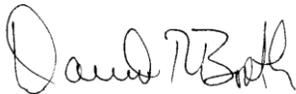
SUMMARY of AUDIT FINDINGS: This audit has been performed as described above. This audit has addressed the approved checklist items as agreed upon by both Settling Parties prior to the beginning of the audit. In this section of the report, the detailed findings are summarized for each scope item as contained 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 report is attached as Appendix A and the Draft Action Plan is attached as Appendix B for your review and development of a formal response as described in the SA. We are still working on the Other Suggestions Report at this time.

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,



David R. Booth QEP, CHMM
Principal Environmental Scientist

APPENDIX A
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

Draft Action Plan

DRAFT ACTION PLAN

INTRODUCTION: This Draft 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. These options are all listed below 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.

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 report. 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 report.

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 report. 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 report. 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 report. 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 this report. If approvals are to be sought, the request for approvals should be submitted no later than 14 days following the issuance of this report.

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 this report is reasonable.

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 this report.

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 this report.

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 this report. Procedures for corrective action should be issued as soon as possible but no later than 30 days following the issuance of this report. Evaluations for automated systems, if desired, should be completed within 12 months following the issuance of this report 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 this report. Procedures for corrective action should be issued as soon as possible but no later than 30 days following the issuance of this report. Evaluations for automated systems, if desired, should be completed within 12 months following the

issuance of this report 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 upon the next monthly sampling for coliform following the issuance of this report and no longer than 30 days following the issuance of this report.

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 this report.