EPA United States Environmental Protection Agency

Region 6 - Enforcement & Compliance Assurance Division

INSPECTION REPORT

Inspection Date(s):	06/26/2023	
Media Program:	Water	
Regulatory Program(s)	AWIA/SDWA	
Facility Name:	**Liberty Utilities Company (Pine Bluff)**	
Facility Physical Location:	1100 S State St	
(city, state, zip code)	Pine Bluff, AR 71601	
Mailing address:	Liberty Utilities P.O. Box 6070	
(city, state, zip code)	Pine Bluff, AR 71611	
County/Parish:	Jefferson County	
Facility Phone Number	417-291-1412	
Facility Contact:	Roman Diaz	Liberty Operations Manager
	roman.diaz@libertyutilities.com	
FRS Number:	N/A	
Identification/Permit Number:	AR0000272	
Media Identifier Number:	N/A	
NAICS:	N/A	
SIC:	N/A	

Personnel participating in inspection:		
Roman Diaz	Liberty Utilities Company	Operations Manager
Philip Garrick	Liberty Utilities Company	Operator
Tom Rosetti	Liberty Utilities Company	System Engineer
Jake Okun	PG Environmental	EPA Contract Inspector
Mike McFadden	ERG	EPA Contract Inspector
Devin Moon	Arkansas Department of Health	District Engineer

EPA Lead Inspector: Jake Okun Signature/Date		8/17/2023
	Jake Okun (PG Environmental)	Date

Section I – INTRODUCTION

PURPOSE OF THE INSPECTION

On June 26, 2023, U.S Environmental Protection Agency (EPA) Region 6 contract inspectors from PG Environmental and Eastern Research Group (ERG) (hereinafter, the EPA Inspection Team) conducted an announced American Water Infrastructure Act (AWIA) Risk and Resiliency Assessment (RRA) and Emergency Response Plan (ERP) program/document inspection of the Liberty Utilities Company (System), ID No. AR0000272. The inspection process began at approximately 8:00 a.m. on June 26, 2023, and finished at approximately 3:45 p.m. Devin Moon, a District Engineer from the Arkansas Department of Health (ADH), was also present for the inspection.

Jake Okun of PG Environmental presented his SDWA inspector credential to the System representative upon arrival. He informed him that this was an inspection to observe compliance with the Safe Drinking Water Act (SDWA) Section 1433(a) and (b), which requires community water systems that serve more than 3,300 people to complete a RRA and develop an ERP. To facilitate the inspection process, a checklist outlining the requirements of SDWA Section 1433(a) and (b) was used during the document review (refer to Appendix 1, Safe Drinking Water Act (SDWA) Sections 1433(a) and (b) Checklist). The EPA Inspection Team met with Roman Diaz, the Operations Manager, Philip Garrick, an operator, and Tom Rosetti, the System Engineer for the opening conference.

As a component of the RRA and ERP document review, the following field assets were also observed:

Groundwater Wells

- WTP #1 Well No. 20
- WTP #1 Well No. 18 (inactive)
- WTP #1 Well No. 17
- White Hall Well No. 28 (inactive)

Water Treatment Plants

- Water Treatment Plant #1

Finished Water Storage Tanks:

- White Hall Tank #1 (50,000 gallons, formally decommissioned)
- White Hall Tank #3 (750,000 gallons)

SYSTEM DESCRIPTION

The Liberty Utilities (Pine Bluff) System is a groundwater treatment system that maintains and operates 14 wells, with an additional two wells being inactive at the time of the inspection. The wells pump to four water treatment plants (WTPs), including WTP #1, WTP #2, Industrial Area WTP #3, and White Hall WTP #4. The general treatment process at the four plants includes pumping raw water from the wells, aeration, sodium hypochlorite chlorination, filtration (using multi-media or pressure filters), phosphate and fluoride injection, and storage in onsite clear wells to achieve contact time prior to pumping into the distribution system. The System reportedly serves a population of approximately 39,000 people; however, System representatives stated that number was potentially an overestimate due to an actively shrinking population in the area.

There are three consecutive systems associated with Liberty Utilities, including Hardin Water, Watson Chapel, and Ladd. System representatives stated that Hardin Water was a primary connection that purchases water daily, while Watson Chapel and Ladd were emergency connections. Three operators maintain the system on a rotating schedule in addition to the Operations Manager. One operator runs daily activities at the WTPs, one operator conducts field maintenance, and a third operator is off. During the evening hours when operators are not onsite, an auto-dialer is used to notify the operators of any alarms in the WTPs or the distribution system.

ASSET WALKTHROUGH

WTP #1 and Associated Groundwater Wells

As a component of the RRA and ERP document review, several assets were observed in order to cross-reference the information listed in the documents with what was actually being implemented in the field. Multiple wells were observed, including two active wells and two inactive wells. The inactive wells had not been formally decommissioned at the time of the inspection, but they were not in service due to mechanical failures or proximity to unsafe water sources. Three of the wells (Nos. 18, 20, and 17) service WTP #1 while Well No. 28 services White Hall WTP #4.

During the first stage of the inspection, the wells that service WTP #1 were observed followed by a walkthrough of WTP #1. Well No. 20 was observed first. The well was located onsite at WTP #1 (refer to Appendix 2, Photograph 1). The well was running during the inspection, and System representatives stated that the well pumped based on the level in the clear wells, and that wells were checked daily for oil levels, pressure, run hours, and flow rate. The Operations Manager stated that food-grade oil was used as lubricant for the wells. The pump line for the well was sagging slightly, and it appeared that metal bars had been welded to the sides of the line for reinforcement (refer to Appendix 2, Photographs 2 and 3). A pump to waste line extended off of the pump line, and the opening was not covered by a mesh screen (refer to Appendix 2, Photograph 4).

Well No. 18 was observed next. The well was surrounded by a locked perimeter fence with barbed wire, and a sign was posted on the fence containing critical System information including the System name and a number to call in case of an emergency (refer to Appendix 2, Photographs 7 and 8). Well No. 18 was not in service at the time of the inspection, and the well pump had been removed (refer to Appendix 2, Photograph 9). The unattached electrical wiring to the pump was sitting on the ground next to the empty pad. A ripped burlap sack was placed over the end of the pump line where the pump had been connected (refer to Appendix 2, Photograph 10). System representatives stated that the well had been taken out of service within the past year because there was a hole in the pipe below grade causing sand to be pumped into the treatment system. The System was in the process of assessing the financial implications of repairing the well or formally decommissioning it permanently. At the time of the inspection, the well had not been formally decommissioned and was still connected to the treatment system. A valve on the pump line leading to the treatment system was closed, and a chain was positioned next to the valve (refer to Appendix 2, Photograph 11). An operator stated that the chain was supposed to be threaded through the valve handle to prevent it from being opened.

Following Well No. 18, Well No. 17 was observed (refer to Appendix 2, Photograph 12). The well was surrounded by a locked perimeter fence with barbed wire and razor wire, and a sign was posted on the fence containing critical System information including the System name and a number to call in case of

an emergency (refer to Appendix 2, Photographs 13 and 14). [redacted] Well No. 17 was fully functional. The openings to air relief pipes were covered by screens. A pump to waste line extended off of the pump line and the opening was not covered by a mesh screen (refer to Appendix 2, Photograph 16). A chain was threaded through the closed valve handle to the pump to waste line to prevent it from being opened accidentally while the valve to the treatment system was opened (refer to Appendix 2, Photograph 17). The Operations Manager explained that a portable generator could be easily wired to the well's electrical box in the event of a power outage and showed the EPA Inspection Team the generator connections (refer to Appendix 2, Photograph 19).

After Well Nos. 17, 18, and 20 were observed, the EPA Inspection Team conducted a walkthrough of WTP #1. There were two generators onsite at the WTP, with one being permanently mounted and the other being a trailer generator (refer to Appendix 2, Photograph 20). System representatives stated that a power outage had occurred overnight prior to the inspection, and the portable generator had kicked on automatically to provide power to the entire WTP. When the power went out, the on-call operator got an automated call from the auto-dialer system associated with the System supervisory control and data acquisition (SCADA) system. The operator conducted the necessary steps to respond to a power outage at the treatment plant, but System representatives stated that these steps were not formally written down in the form of a standard operating procedure (SOP). The portable generator was wired into the mounted generator's switch gear so that it would turn on automatically in the event of an outage (refer to Appendix 2, Photograph 21). The Operations Manager stated that a component of the mounted generator had failed, and the portable generator was in use until the component could be repaired. System representatives stated that the power came back on between 4:00 a.m. and 5:00 a.m. on the morning of the inspection, and the generators had turned off.

There were four aerators and four filters at the treatment plant, and each aerator was paired with a mixed media filter (sand and anthracite). Two of the filters were in round tanks and were original to the plant (Filter Nos. 1 and 2), while the other two were newer (Filter Nos. 3 and 4). System representatives explained that water is pumped from the wells into the aerators, where it cascades down to the filters (refer to Appendix 2, Photograph 22). Chlorine is injected prior to filtration to achieve an even mix with the aerated water.

The flow of water into Filter No. 2 was low enough that the water level was below the filter media. Water was only being filtered in one location, away from the chlorine injection line. Therefore, the chlorine being injected was not contacting the water being sent into the filter (refer to Appendix 2, Photograph 23). In Filter Nos. 3 and 4, the water appeared to be approximately five feet above the filter media, creating even filtration. Unlike Filter No. 2, the chlorine being injected into Filter No. 4 appeared to be mixing with the raw water prior to filtration (refer to Appendix 2, Photograph 24). System representatives stated that the filters were backwashed once per day. Following filtration, water flows by gravity to one of the two 1.5 million gallon clear wells prior to being pumped into the distribution system (refer to Appendix 2, Photograph 25). Phosphate and fluoride are injected into the water prior to reaching the clear wells.

The pipe gallery at WTP #1 was observed. System representatives explained how raw water entered the aeration tanks and showed where filtered and chlorinated water flowed following treatment (refer to Appendix 2, Photograph 26). The Operations Manager stated that there were actuators on the valves used to regulate the amount of raw water flowing through Aeration Tank Nos. 1 and 2. He stated that the SCADA system could be used to regulate the amount of raw water sent into the treatment system,

but that the communication had failed. Therefore, the operators had manually opened the valves to 30 percent. During low flow conditions (as was occurring during the inspection), not enough water is able to flow through the aerators and filters to ensure that the water level is higher than the filter media. It was unknown when the communication failure would be repaired to allow the valves to open and close automatically again.

The way the pipes were set up, it appeared that the System had the ability to send raw water into the distribution system. The two potable water lines that extended off of Filter Tank Nos. 1 and 2 converged and flowed through a common line to the clear wells (refer to Appendix 2, Photograph 27). There was one closed valve that separated the incoming raw water line from the potable water line (refer to Appendix 2, Photograph 28). The valve was not marked or locked. If that valve was opened, raw water would be sent to the clear wells. It was unclear why the pipes were designed to be able to bypass the filters and send raw water into the distribution system.

After the pipe gallery, the chlorine chemical storage and injection room was observed. There were two large bulk storage tanks and one smaller day tank (refer to Appendix 2, Photographs 32 and 33). The bulk storage tanks were not labeled. Potable water was being used as carry water to facilitate chlorine injection, but there was no backflow prevention on the carry water line that extended off of the finished water line (refer to Appendix 2, Photographs 34 and 35). The pit containing the finished water line was flooded during the inspection. Chlorine pump lines were on the floor, creating a potential tripping hazard, which could ultimately cause a chlorine leak (refer to Appendix 2, Photographs 36 and 37).

White Hall Groundwater Well and Storage Tanks

The White Hall groundwater Well No. 28 and multiple White Hall finished water storage tanks were enclosed within the same perimeter fence which contained barbed wire. WTP #4 was also present on the property, but it was not observed due to time constraints. [redacted]

Inside fence line, Well No. 28 was observed (refer to Appendix 2, Photograph 39). System representatives stated that the well had not been in use for several years due to its proximity to a bathroom (refer to Appendix 2, Photograph 40). Although the well was not in use, the Operations Manager stated that the well had not been formally abandoned (i.e., cut and capped).

Next, the 50,000 gallon, elevated White Hall Water Tank #1 was observed (refer to Appendix 2, Photograph 42). System representatives stated that the tank had been formally decommissioned and the line leading to the distribution system had been cut and capped. The trench that was dug to cap the line was observed, but the capped line was not visible (refer to Appendix 2, Photograph 43). The bottom rungs of the tank ladder were removed [redacted]

Lastly, the 750,000 gallon White Hall Water Tank #3 was observed (refer to Appendix 2, Photograph 47). This storage tank was in use. The overflow pipe extended to a concrete manhole that was covered by a rectangular grate (refer to Appendix 2, Photograph 48). The opening of the overflow was covered by a

screen. A second line extended from the tank and also emptied into the manhole. The line was valved shut. The tank's ladder extended to the ground and there was no ladder shield over the lower rungs (refer to Appendix 2, Photograph 49).

SYSTEM SECURITY AND MONITORING

The System utilizes a SCADA system to monitor tank levels, alerts, and other activity in the distribution system. An auto-dialer system is programmed to call operators during off hours in the event of an alert on the SCADA system. Alerts include tank level alarms, chemistry level alarms, and pressure alarms. Only select personnel have access to the SCADA system [redacted] Multi-factor authentication is used to ensure secure access to the SCADA system. The Operations Manager stated that pumps could be turned on and off through SCADA, but that chemical dosage rates needed to be manipulated manually. During the inspection, one SCADA screen was being used for WTP #1 and #2, and a separate screen was being used for WTP #3 and #4. The Operations Manager stated that they were in the process of converting to an updated SCADA system which is why WTP #1 and #2 were on a newer SCADA system.

In terms of physical security, WTP #1 and its associated assets were surrounded by locked perimeter fences with barbed wire. [redacted] Some of the perimeter fences contain System information and a number to call in case of an emergency while others did not. System representatives stated that all plants and assets in the distribution system were visited daily, and that operators had daily rounds sheets that they filled out during site visits. The System also maintains a Microsoft Excel document that details the physical security surrounding all of their assets.

RRA AND ERP GENERATION

The System contracted an engineering company, GHD, to generate their RRA document. The document was designed to comply with SDWA 1433(a) and (b). The ERP document was generated by the System and addressed specific components of SDWA 1433(b).

RISK AND EMERGENCY RESPONSE EXAMPLES

As a component of the RRA and ERP document review, and to provide an example of emergency response and risk assessment, the EPA Inspection Team asked System representatives to describe their response to three specific challenges that many/all of the systems in Arkansas have faced within the last few years:

The "deep freeze" event of February, 2021 which impacted much of the American southern region. During this event, temperatures were below freezing for a prolonged period of time causing water related infrastructure to freeze. System representatives at Liberty Utilities stated that they were impacted by the deep freeze. They stated that it caused substantial pipe breakage in the distribution system, causing pressures in some areas to go below 20 psi. To respond to this, non-vital customers were isolated to allow service to be continued to vital customers (i.e., hospitals, nursing homes, etc.). Liberty Utilities crews came from all over the country to identify where the leaks were and work to repair the leaks.

Tornados, which are a common occurrence in Arkansas. The System's RRA and ERP documents outlined specific responses to tornado-related threats to their system, which included steps that needed to be taken in response to a power outage and a chain of command to be called to respond to the disaster. The documents also outlined coordination with local police, and identified an Emergency Operations Center that could be utilized to plan a response if the WTPs became compromised.

The transfer of knowledge from experienced System representatives to new staff members after experienced staff members are no longer employed by the System. The Operations Manager stated that he was in the process of generating SOPs to be used by the operators to respond to unusual events at the WTPs and in the distribution system. The EPA Inspection Team observed an example of one of the new SOPs. The Operations Manager also stated that he was initiating training sessions so that all of the operators knew how to conduct all of the different roles at the WTPs.

Section II - OBSERVATIONS

The following observations pertain to the SDWA Section 1433(a), Risk and Resilience Assessments.

The Safe Drinking Water Act, Section 1433(a)(1)(A)(i), states that "Risk and resilience assessments shall include an assessment of the risk to the system from malevolent acts and natural hazards."

Observation 1. The RRA document lists some of the System's assets categorically, but the list is incomplete. For the assets that are listed in the document, the potential threats are listed (e.g., tornados, ice storms, flooding), but the risk level for each asset is not described. Additionally, the various assets listed in the RRA document are not broken out based on criticality. While some assets in the document may be more critical than others or have a higher risk factor than others based on criticality, this is not reflected in the RRA.

The Safe Drinking Water Act, Section 1433(a)(1)(A)(ii), states that "Risk and resilience assessments shall include the resilience of the pipes and constructed conveyances, physical barriers, source water, water collection and intake, pretreatment, treatment, storage and distribution facilities, electronic, computer, or other automated systems (including the security of such systems) which are utilized by the system."

Observation 2. The resilience of the pipes, conveyances, barriers, etc. was not fully developed in the RRA document, but certain aspects are included. For example, the document walked through some of the System's production assets, including water storage tanks and water treatment plants and assessed the individual security measures taken at each site. However, the resilience of assets in the distribution system (pipes, conveyances, other distribution facilities, etc.) were not included.

The Safe Drinking Water Act, Section 1433(a)(1)(A)(iii), states that "Risk and resilience assessments shall include an assessment of the monitoring practices of the system."

Observation 3. The RRA document outlines the System's specific monitoring practices, primarily involving their SCADA system. The document states that the System monitors asset performance remotely, and System representatives stated that their SCADA system had alarms in place to alert them of unusual activity (for example, high or low pressures or chemical readings) at any time of the day. The Operations Manager stated that at least one of three operators was on call 24/7, and that an auto-dialer connected

to the SCADA system would call them during off hours if there was an alarm in the treatment or distribution system.

The Safe Drinking Water Act, Section 1433(a)(1)(A)(iv), states that "Risk and resilience assessments shall include an assessment of the financial infrastructure of the system."

Observation 4. An assessment of the financial infrastructure of the system was not outlined in the RRA document. [redacted]

The Safe Drinking Water Act, Section 1433(a)(1)(A)(v), states that "Risk and resilience assessments shall include an assessment of the use, storage, or handling of various chemicals by the system."

Observation 5. An assessment of the use, storage, or handling of various chemicals by the system was not outlined in the RRA document, but the Operations Manager stated that their chemicals were stored in secure, covered facilities. He also stated that each tank was double walled for added protection.

The Safe Drinking Water Act, Section 1433(a)(1)(A)(vi), states that "Risk and resilience assessments shall include an assessment of the operation and maintenance of the system."

Observation 6. While an assessment of operation and maintenance of the system was not directly included in the System's RRA document, the System's Senior Engineer provided a comprehensive and up-to-date operations and maintenance (O&M) manual that was generated specifically for the System. The O&M manual includes different operating procedures for emergency response such as a malevolent act or natural hazard. The EPA Inspection Team discussed with System representatives that the RRA document should include a reference to the O&M manual.

The Operations Manager stated that he was in the process of generating a list of SOPs to respond to events such as natural hazards or system malfunctions. For example, during the power outage that occurred the evening prior to the inspection, the on-call operator knew what steps to conduct in response to the outage, but the steps were not formally written down in the form of an SOP. The purpose of the SOPs is to convert the operational knowledge from the operators into written, standardized procedures that can be replicated by any employee. An example of one of the SOPs that is in progress was observed by the EPA Inspection Team.

The following observations pertain to the SDWA Section 1433(b), Emergency Response Plan.

The Safe Drinking Water Act, Section 1433(b)(4), states that "The emergency response plan shall include strategies that can be used to aid in the detection of malevolent acts or natural hazards that threaten the security or resilience of the system."

Observation 7. Detection strategies are specifically outlined in the ERP document. Strategies listed in the document include SCADA alarms and specific responses to cybersecurity threats. The document also contains a section on "Hazard Identification," as well as "After

Action Reporting," which was a checklist used to respond to a malevolent act or natural hazard after detection.

The Safe Drinking Water Act, Section 1433(b)(3), states that "The emergency response plan shall include actions, procedures, and equipment which can obviate or significantly lessen the impact of a malevolent act or natural hazard on the public health and the safety and supply of drinking water provided to communities and individuals, including the development of alternative source water options, relocation of water intakes, and construction of flood protection barriers."

Observation 8. The ERP document outlines training drills and exercises which can be used to mitigate the impact of a malevolent act or natural hazard after it has occurred. However, the section which addresses the development of alternative source water options was blank in the ERP document. System representatives explained that they had a procedure for delivering drinking water via trucks since they do not have access to an alternative water source. They explained that this process involved multiple steps, and that this information was included as an appendix in the ERP. They stated that the information would be added to the appropriate section of the ERP document for clarity.

The Safe Drinking Water Act, Section 1433(b)(2), states that "The emergency response plan shall include plans and procedures that can be implemented, and identification of equipment that can be utilized, in the event of a malevolent act or natural hazard that threatens the ability of the community water system to deliver safe drinking water."

Observation 9. The ERP document outlined an Incident Command System (ICS), which involved the chain of command in response to a malevolent act or natural hazard. It also provided specific information regarding the personnel required to respond to the situation, as well as incident briefing and situation summary documents. The ERP document also included a section titled "Emergency Plans and Procedures in response to Imminent and Substantial Endangerment to the Public Health or Environment." This section directly addressed procedures developed in response to a hazard that threatens the ability of the System to deliver safe drinking water.

The Safe Drinking Water Act, Section 1433(c), Coordination, states that "Community water systems shall, to the extent possible, coordinate with existing local emergency planning committees established pursuant to the Emergency Planning and Community Right-To-Know Act of 1986 (42 U.S.C. 11001 et seq.) when preparing or revising an assessment or emergency response plan under this section."

Observation 10. Several emergency contacts were listed in the ERP, including the Jefferson County Judge, the Mayor of Pine Bluff, and the local police department. These contacts were listed as part of the ICS as responders for malevolent acts or natural hazards. An Emergency Operations Center (EOC) was identified as a place to coordinate emergency response if needed. A secondary location was also listed if the first location became compromised.

The Safe Drinking Water Act, Section 1433(b)(1), states that "The emergency response plan shall include strategies and resources to improve the resilience of the system, including the physical security and cybersecurity of the system."

Observation 11. Strategies to improve the cybersecurity of the system, as well as respond to a cybersecurity threat were outlined in the ERP in a step by step fashion. System representatives also discussed their cybersecurity measures with the EPA Inspection Team [redacted] Physical security measures were not outlined in the ERP, but the System Engineer provided a Microsoft Excel document which included a comprehensive list of the System assets along with the physical security that each asset had. The EPA Inspection Team discussed that this document could be integrated into the ERP document to meet the ERP requirement.

The following observations pertain to the field assets that were observed during the walkthrough component of the review.

Observation 12. The following observations pertain to Well No. 20, which pumps raw water to WTP #1, and is located on the property of WTP #1:

- The line extending from the pump was sagging toward the ground at the point where it met the pipe that extended below ground (refer to Appendix 2, Photograph 2). It appeared that a support stand was missing from beneath the line.
- Metal bars had been welded to the rebar that was being used to support the line extending from the pump (refer to Appendix 2, Photograph 3). An operator stated that the metal had been welded because the rebar was not long enough to extend the entire length of the pipe.
- The pump to waste line that extended off of the pump line was unscreened (refer to Appendix 2, Photograph 4).
- A threaded hose tap and pressure gauge without backflow prevention extended off of the top of the pump line (refer to Appendix 2, Photograph 5).
- An air relief valve extending off of the pump line was screened, but not downturned (refer to Appendix 2, Photograph 6).

Observation 13. The following observations pertain to Well No. 18, which (when in use) is designed to pump raw water to WTP #1, and is located adjacent to the property of WTP #1:

- System representatives stated that Well No. 18 was not in use because a hole in the pump line below grade had caused sand to be pumped into the treatment system. The well had been taken offline approximately a year prior to the inspection, but it was not formally decommissioned. System representatives stated that they were in the process of conducting a financial assessment to see if it would be more cost effective to repair the well and bring it back online or formally decommission it.
- The unattached electrical wiring that was originally connected to the pump at Well No. 18 was sitting on the ground, uncovered, at the time of the inspection (refer to Appendix 2, Photograph 9).
- A burlap sack had been placed over the end of the pump line where the pump used to be attached (refer to Appendix 2, Photograph 10). The sack had holes,

allowing openings into the pump line. Although there were openings to the pump line, the valve from the pump line to the treatment system was closed.

- A chain that was supposed to be threaded through the valve handle that opened the valve to send pumped raw water to the treatment system was sitting next to the valve handle when the EPA Inspection Team arrived (refer to Appendix 2, Photograph 11). The operator stated that the chain was supposed to ensure that the valve was not accidentally opened, and he positioned the chain correctly on the handle when he became aware that the chain was off.

Observation 14. The following observations pertain to Well No. 17, which pumps raw water to WTP #1, and is located adjacent to the property of WTP #1:

- [redacted]
- The pump to waste line that extended off of the pump line was unscreened (refer to Appendix 2, Photograph 16).
- An air relief valve extending off of the pump line was screened, but not downturned (refer to Appendix 2, Photograph 18). The mesh screen did not appear to be #24.

Observation 15. The following observations pertain to WTP #1:

- The actuators on the valves sending raw water to the aerators and Filter Nos. 1 and 2 had failed and were not communicating with SCADA during the inspection. Ordinarily the actuators open and close the valves automatically to regulate flow coming into the plant. Since the actuators were online, the operator stated that the valves had been manually opened to 30 percent to ensure that the filter basins did not overflow. Due to the fact that the valves were only opened to 30 percent, during periods of low flow the water going through Filter No. 2 was short circuiting the filter. The water level was below the filter media. As a result of the short circuiting, the chlorine that was being injected was not mixing with the raw water prior to filtration (refer to Appendix 2, Photograph 23). It was unclear if the chlorine was mixing with the raw water at all.
- In the pipe gallery beneath the filters, the EPA Inspection Team observed that the system was capable of sending raw water into the distribution system if one valve was opened (refer to Appendix 2, Photographs 27 and 28). The influent raw water line was connected to the potable water line which sends finished water to the distribution system after filtration. The closed valve on the connecting line was not marked or locked off. Additionally, there was rust/staining on either side of the valve indicating that the valve had leaked in the past (refer to Appendix 2, Photograph 29).
- Threaded hose taps without backflow prevention were present on the influent raw water line (refer to Appendix 2, Photographs 30 and 31).
- The bulk chlorine tanks were not labeled (refer to Appendix 2, Photograph 32).
- There was no backflow prevention on the chemical carry water line that extended off of the finished water line (refer to Appendix 2, Photographs 34 and 35).

- In the chemical injection room, chlorine lines were scattered on the floor (refer to Appendix 2, Photographs 36 and 37). This created a potential tripping hazard, as well as a chemical leak hazard if someone tripped and a line was pulled.

Observation 16. The following observations pertain to the general security at the White Hall property:

- [redacted]
- [redacted]
- Powdered fluoride bags were sitting on the floor inside of a shed at the White Hall property. System representatives stated that there were no plans to use the bags. The bags were in poor condition and appeared to be deteriorating.

Observation 17. The following observations pertain to Well No. 28, which (when in use) is designed to pump raw water to WTP #4 and is located at the White Hall property adjacent to WTP #4:

- System representatives stated that Well No. 28 was taken offline several years prior to the inspection due to its proximity to a restroom at the White Hall WTP #4 (refer to Appendix 2, Photograph 40). The well had not been formally decommissioned, and System representatives stated that there were no plans to ever bring the well back online again.
- A threaded hose tap without backflow prevention extended off of the pump line (refer to Appendix 2, Photograph 41).

Observation 18. The following observations pertain to the water storage tanks that were present inside fence line at the White Hall property:

- [redacted] System representatives stated that the tank had been formally decommissioned.
- [redacted]

Section IV – CLOSING CONFERENCE

On June 26, 2023, the EPA Inspection Team met with the Operations Manager, an operator, and the System Engineer for a closing conference at approximately 3:30 p.m. Jake Okun and Mike McFadden reviewed observations with the System representative and explained that all observations were preliminary and did not constitute any formal compliance determination.

Section V – FOLLOW UP

No additional information was received by EPA after exiting the Facility on June 26, 2023.

Section VI – LIST OF APPENDICES

Appendix 1 – Safe Drinking Water Act (SDWA) Sections 1433(a) and (b) Checklist
Appendix 2 – Photograph Log

Appendix 2

Photograph Log

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 1

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

Photograph 1. Well No. 20 View of Well No. 20 that was inside fence line at the WTP #1 property. The well was functional at the time of the inspection and sending water to WTP#1 for treatment.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 2

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

Photograph 2. Well No. 20 View of the pump line of Well No. 20. The line was sagging, and it appeared that a support stand was missing under the line.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 3

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

Photograph 3. Well No. 20 View of the pump line at Well No. 20. Metal bars had been welded to the support rebar. System representatives stated that the metal bars had been used because the rebar was not long enough.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 4

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

Photograph 4. Well No. 20 View of the pump to waste line at Well No. 20. The line was valved off from the line into the treatment system, but the end of the line was uncovered.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 5

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

Photograph 5. Well No. 20 View of a threaded hose tap and pressure gauge extending off of the Well No. 20 pump line. The hose tap did not have backflow prevention.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 6

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

Photograph 6. Well No. 20 View of an air relief valve extending off of the pump line at Well No. 20. The opening was screened but the valve was not downturned.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 7

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

Photograph 7. Perimeter Fence, Well No. 18 View of the perimeter fence that surrounded Well No. 18. The fence was locked when the EPA Inspection Team arrived, and there was barbed wire.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 8

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

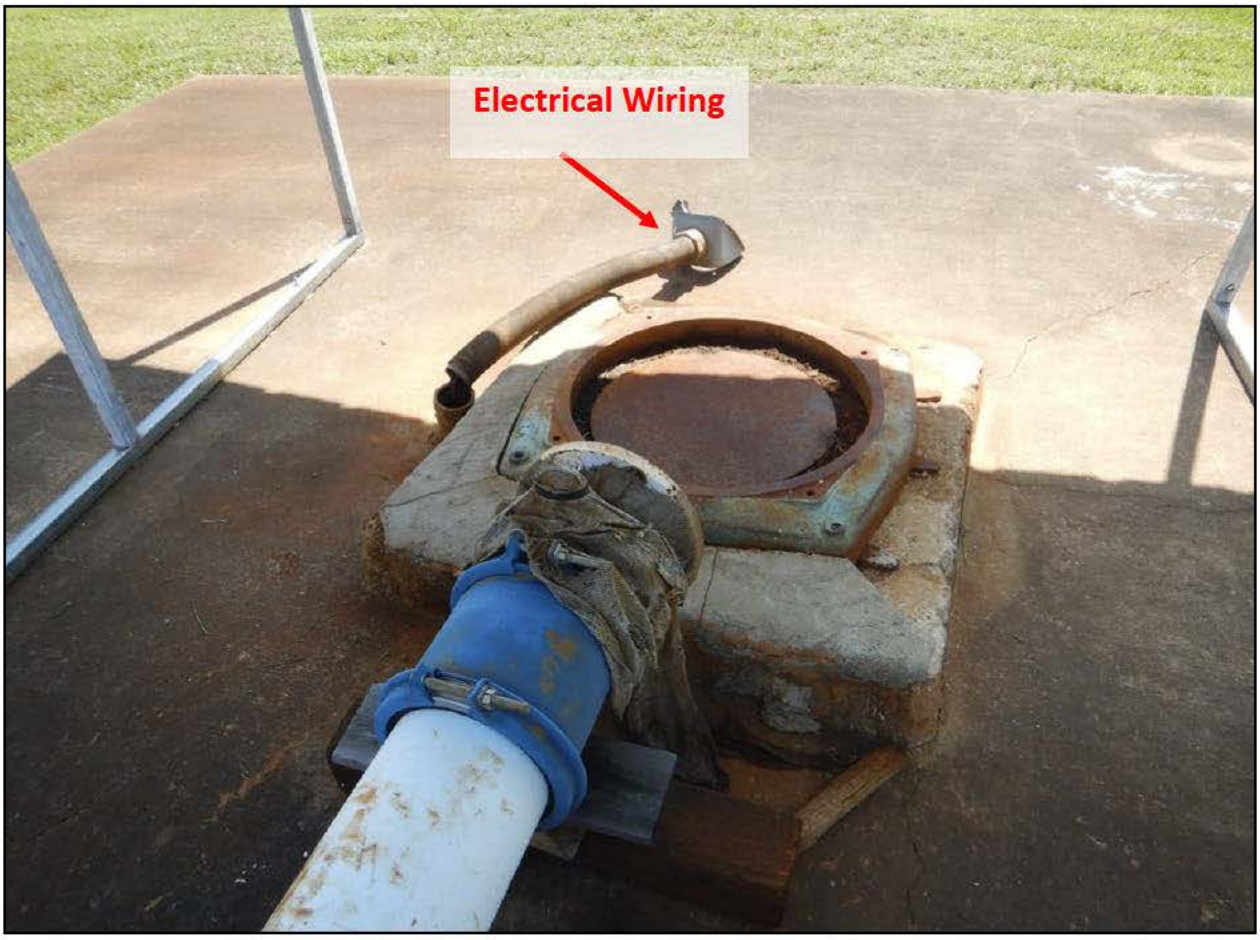
Photograph 8. Perimeter Fence, Well No. 18 View of a sign posted on the perimeter fence of Well No. 18 containing critical information about the System, including the System name and a number to call in case of an emergency.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 9

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas



Photograph 9. Well No. 18 View of the pad at Well No. 18 where the pump had sat prior to the well being taken offline. The well had not been formally decommissioned but had been offline for approximately a year because it was pumping sand into the treatment system. The unattached electrical wiring for the pump was laying, uncovered, next to the pump pad.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 10

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

Photograph 10. Well No. 18 View of the end of the pump line that was attached to the pump at Well No. 18 prior to its removal. The end of the line was covered with a burlap sack. The sack was ripped in multiple places creating openings to the pump line.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 11

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

Photograph 11. Well No. 18 View of the pump line and valves at Well No. 18. There was a chain sitting next to the valve handle that closed off flow to the treatment system. An operator stated that the chain was supposed to be threaded through the valve handle to prevent it from accidentally being opened.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 12

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

Photograph 12. Well No. 17 View of Well No. 17. The well was fully functional. The well is used to pump raw water to WTP #1.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 13

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

Photograph 13. Perimeter Fence, Well No. 17 View of the perimeter fence surrounding Well No. 17. The fence was locked and had razor wire.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 14

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

Photograph 14. Perimeter Fence, Well No. 17 View of a sign posted on the perimeter fence of Well No. 17 containing critical information about the System, including the System name and a number to call in case of an emergency.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 15

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 16

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

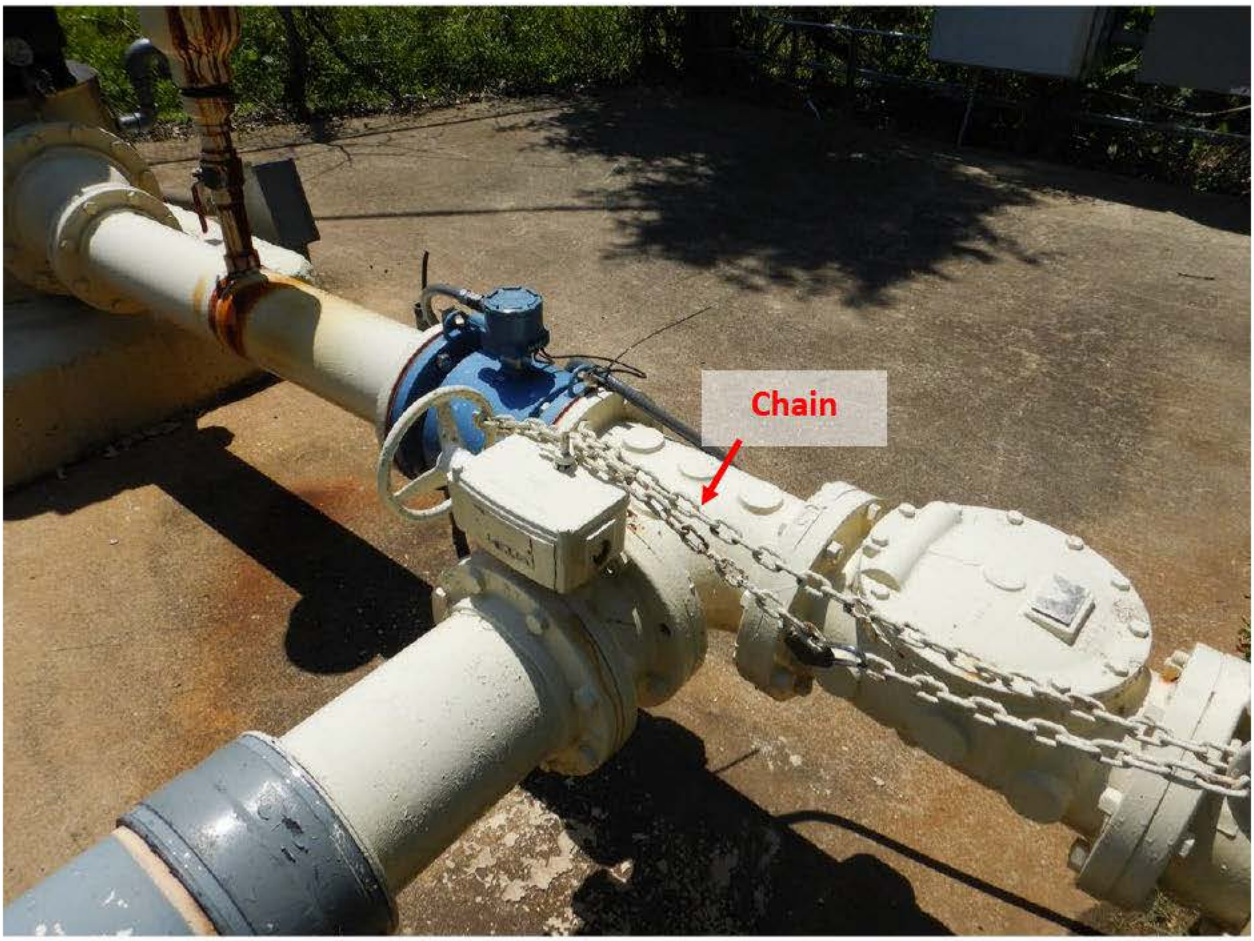
Photograph 16. Well No. 17 View of the pump to waste line at Well No. 17. The line was valved off from the line into the treatment system, but the end of the line was uncovered.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 17

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas



Photograph 17. Well No. 17 View of a chain that was threaded through the valve handle that was used to close the valve leading to the treatment system, as well as the handle to close the pump to waste line valve. The chain was in place to make sure the pump to waste valve did not get opened by mistake.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 18

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

Photograph 18. Well No. 17 View of an air relief valve that extended off of the Well No. 17 pump line. The valve opening was screened but not downturned.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 19

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

Photograph 19. Generator Connection, Well No. 17 View of the generator connection box at Well No. 17. The Operations Manager stated that this box enabled easy connection to the portable generators.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 20

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

Photograph 20. Generators, WTP #1 View of the mounted backup generator and portable backup generator that were positioned at WTP #1. The mounted generator was out of service, so the portable generator had been brought in and wired through the mounted generator's switch gear. The trailer generator had turned on automatically and ran the treatment plant on the night prior to the inspection.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 21

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

Photograph 21. Generators, WTP #1 View of the wiring between the trailer backup generator and the mounted generator at WTP #1. The trailer generator was wired through the mounted generator's switch gear so that it would turn on automatically in the event of a power outage.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 22

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

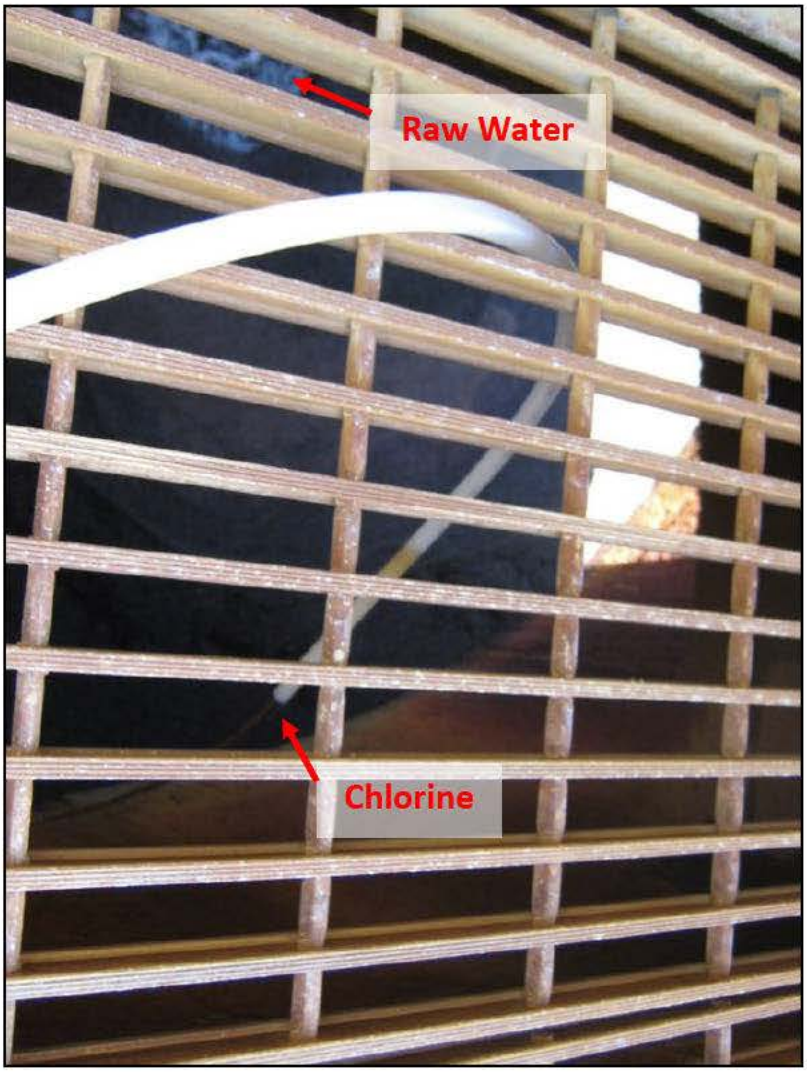
Photograph 22. Aerator No. 2, WTP #1 View of the aerator that was associated with Filter No. 2 at WTP #1. Raw water is pumped into the plant, and it cascades through the aerators prior to being filtered.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 23

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas



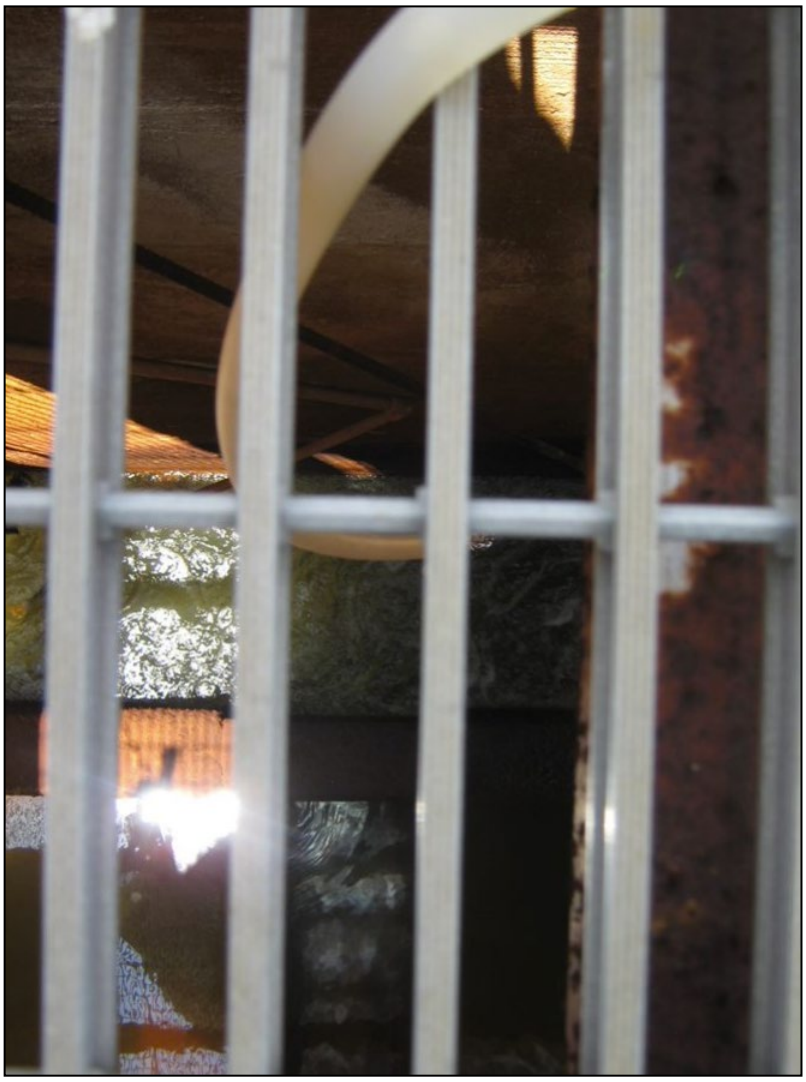
Photograph 23. Filter No. 2 Chlorine Injection Tube, WTP #1 View of the chlorine injection tube that was sending chlorine against the wall of the Filter No. 2 basin. Since the water was below the filter media in the basin, the chlorine was not mixing with the raw water prior to filtration.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 24

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas



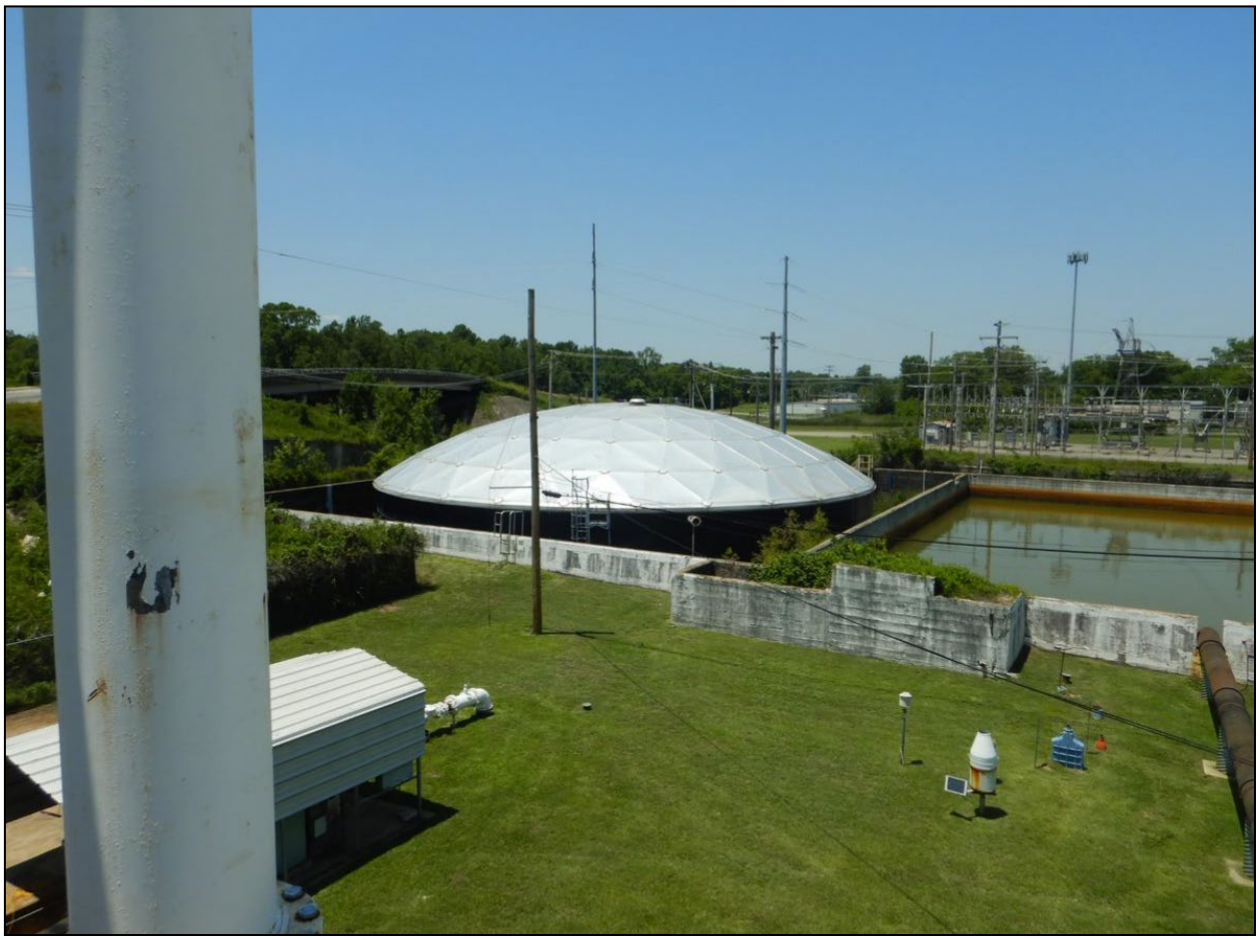
Photograph 24. Filter No. 4 Chlorine Injection Tube, WTP #1 View of the chlorine injection tube that was sending chlorine into the raw water at Filter No. 4 to mix prior to being filtered.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 25

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas



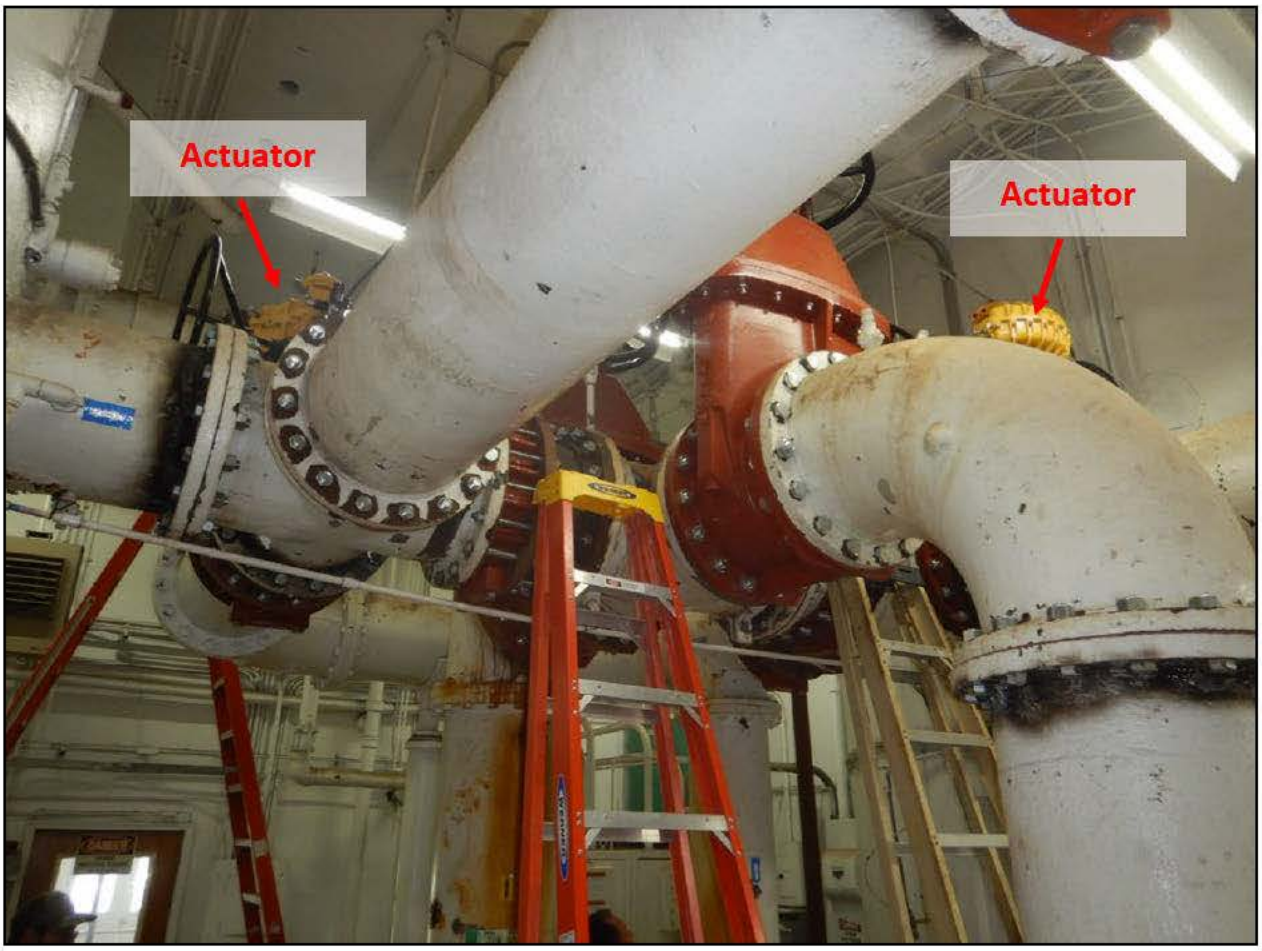
Photograph 25. Clearwell, WTP #1 View of one of the two, 1.5 million gallon onsite clear wells at WTP #1 where treated water is sent prior to being pumped into the distribution system.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 26

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas



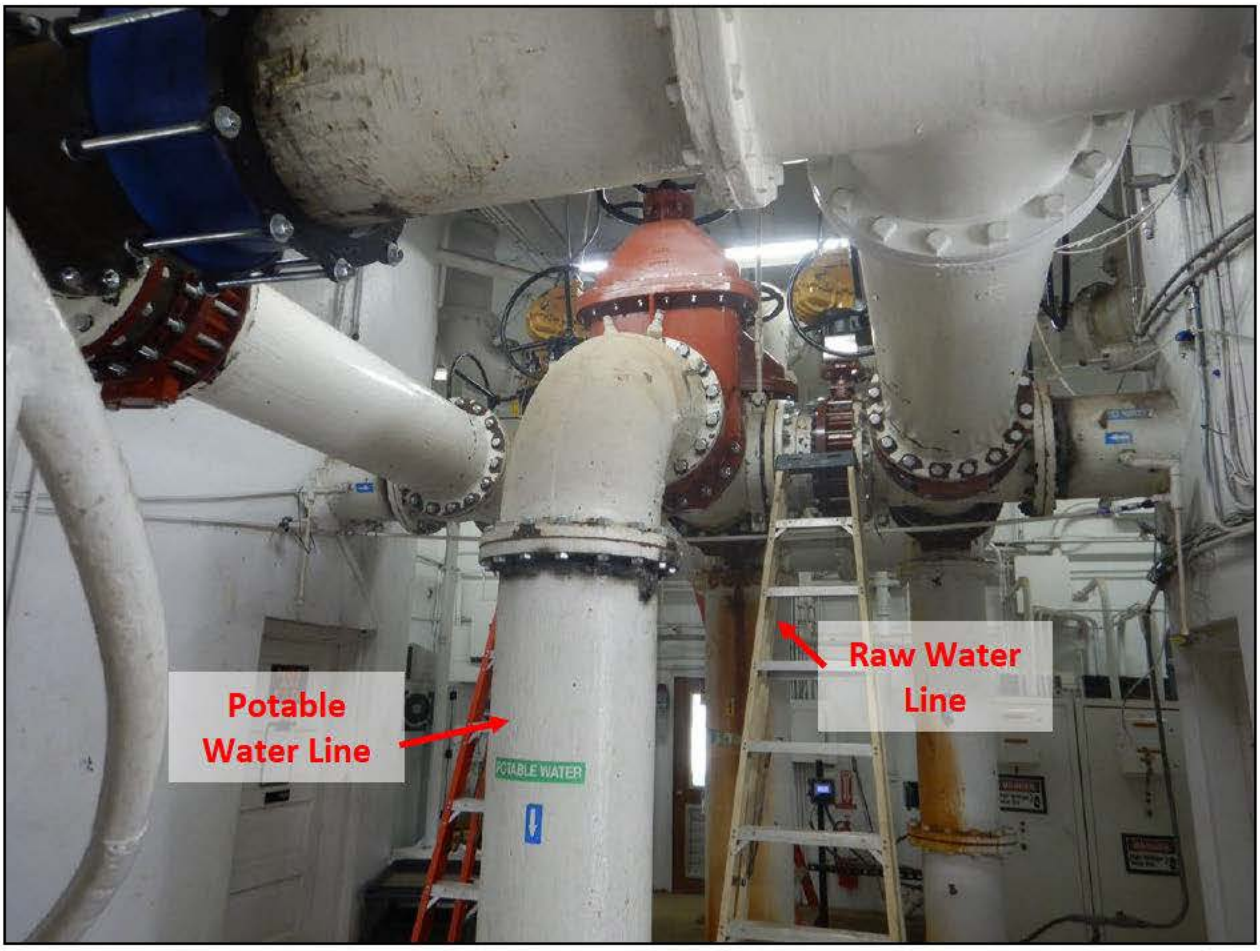
Photograph 26. Pipe Gallery, WTP #1 View of the pipe gallery beneath the filter basins for Filter Nos. 1 and 2 at WTP #1. The actuators on the raw water lines leading to the aerators and filters were not communicating with SCADA and therefore were unable to automatically regulate the flow coming into the filters.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 27

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas



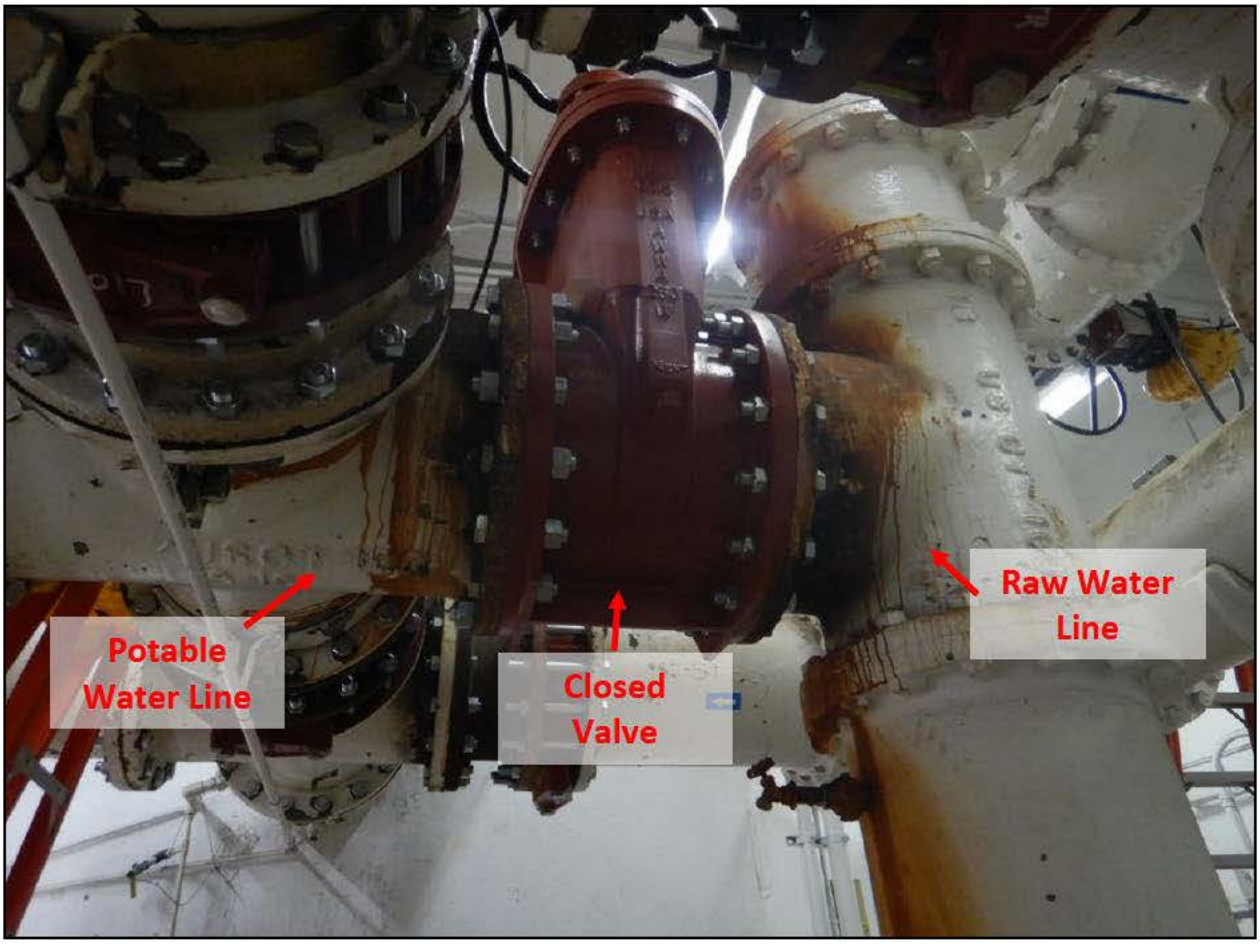
Photograph 27. Pipe Gallery, WTP #1 Alternate view of the pipe gallery beneath the filter basins for Filter Nos. 1 and 2 at WTP #1. Visible in this image is the potable water line which sends treated water to the distribution system, as well as the raw water line that sends water to the filters. The lines are separated by one closed valve.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 28

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas



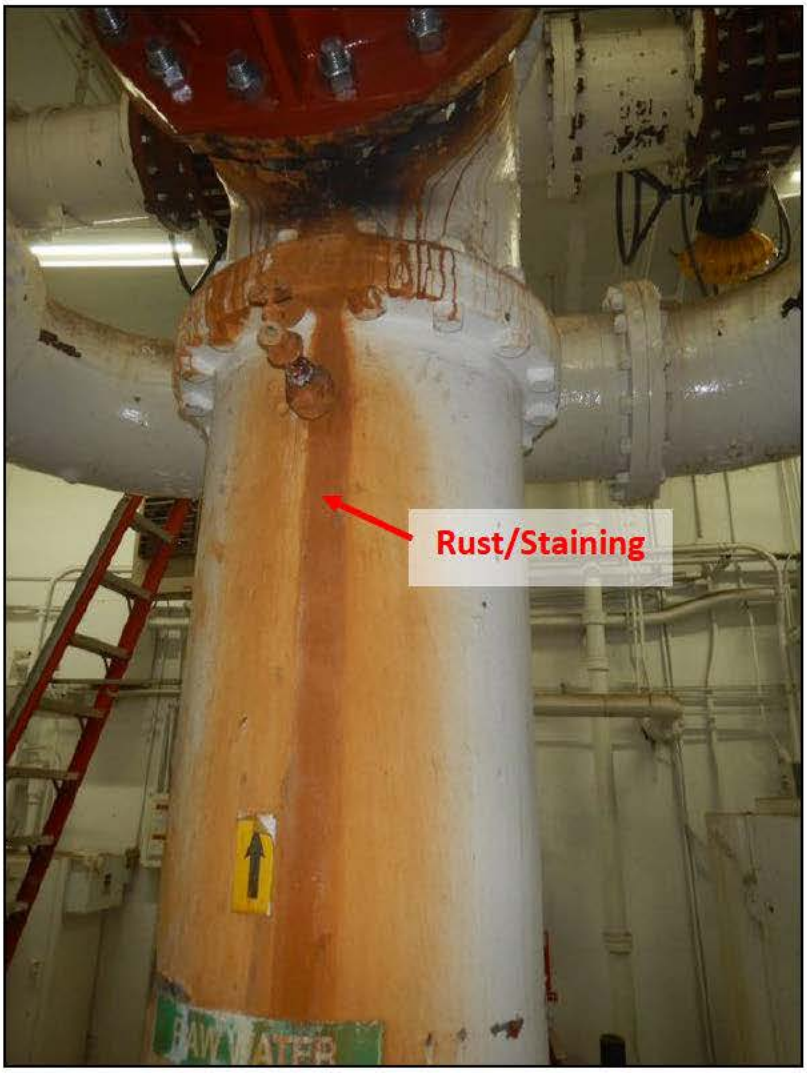
Photograph 28. Pipe Gallery, WTP #1 View of the one closed valve separating the influent raw water and the potable water line that sends finished water to the distribution system. The valve was not locked or marked to prevent it from being accidentally opened.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 29

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas



Photograph 29. Raw Water Line, WTP #1 View the influent raw water line in the pipe gallery at WTP #1. There was rust/staining on the line, and it appeared that the rust had come from a valve leak. The leaking valve was the only valve separating raw influent water from being sent into the distribution system.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 30

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

Photograph 30. Raw Water Line, WTP #1 View of a threaded hose tap that extended off of the raw water line at WTP #1. The hose tap did not have backflow prevention.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 31

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

Photograph 31. Raw Water Line, WTP #1 View of a second threaded hose tap that extended off of the raw water line at WTP #1. The hose tap did not have backflow prevention.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 32

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

Photograph 32. Chemical Storage/Injection Room, WTP #1 View of the two sodium hypochlorite bulk storage tanks inside of the chemical storage room at WTP #1. The tanks were not labeled.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 33

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

Photograph 33. Chemical Storage/Injection Room, WTP #1 View of the sodium hypochlorite day tank inside the chlorine storage room at WTP #1. The tank had a label sitting on top of it.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 34

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

Photograph 34. Carry Water Injection Point, WTP #1 View of the point where carry water is injected to facilitate sodium hypochlorite injection. There was no backflow prevention on the carry water line.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 35

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

Photograph 35. Carry Water Line, WTP #1 View of the carry water line that extended off of the finished water line. There was no backflow prevention on the line.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 36

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

Photograph 36. Chlorine Lines, WTP #1 View of the chlorine pump lines on the floor in the chemical injection room at WTP #1. The lines presented a tripping hazard.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 37

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

Photograph 37. Chlorine Lines, WTP #1 Alternate view of the chlorine pump lines on the floor in the chemical injection room at WTP #1. The lines presented a tripping hazard.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 38

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 39

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

Photograph 39. Well No. 28 View of Well No. 28 at the White Hall property. System representatives stated that the well had been out of service for several years due to its proximity to a bathroom. If the well was in service, it would pump raw water to White Hall WTP #4.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 40

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

Photograph 40. Well No. 28 View of Well No. 28 and its proximity to a bathroom at White Hall WTP #4.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 41

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

Photograph 41. Well No. 28 View of a threaded hose tap without backflow prevention that extended off of the pump line at Well No. 28.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 42

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

Photograph 42. White Hall Tank #1 View of the formally decommissioned, 50,000 gallon elevated White Hall Water Tank #1.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 43

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

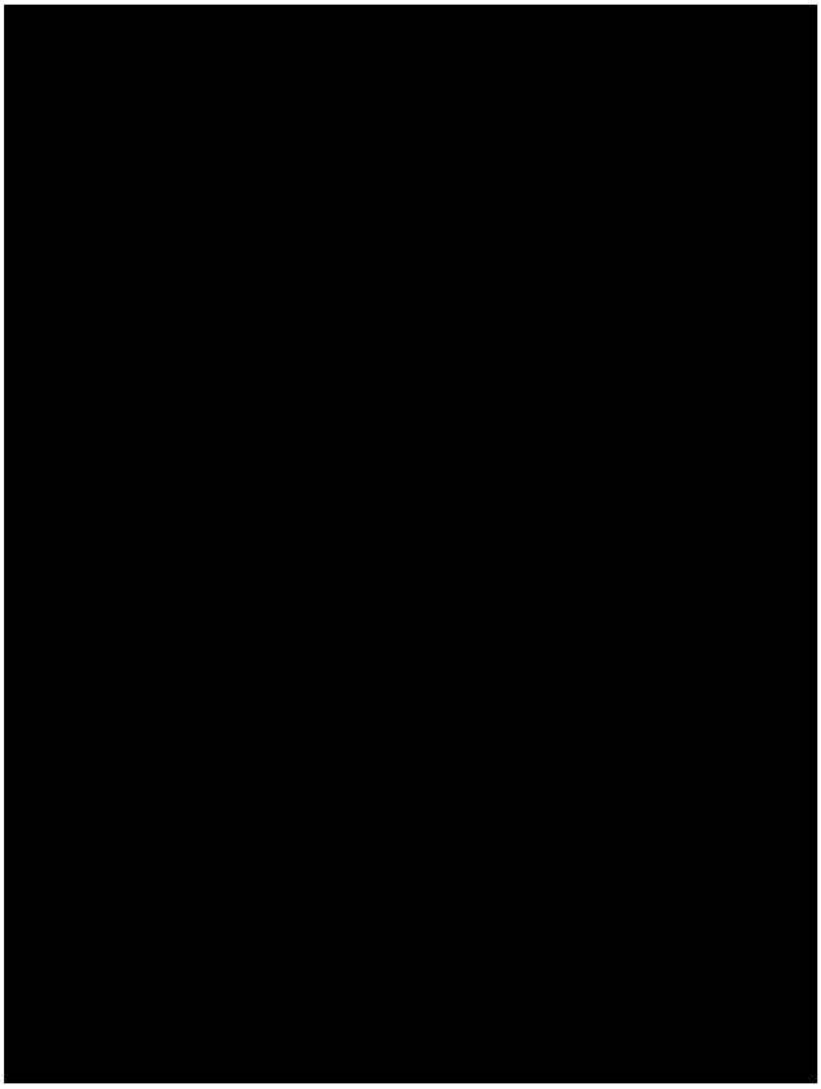
Photograph 43. Trench, White Hall Tank #1 View of the trench that was dug to formally cut and cap White Hall Tank #1 when it was formally decommissioned. The capped line was not visible.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 44

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas



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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 45

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 46

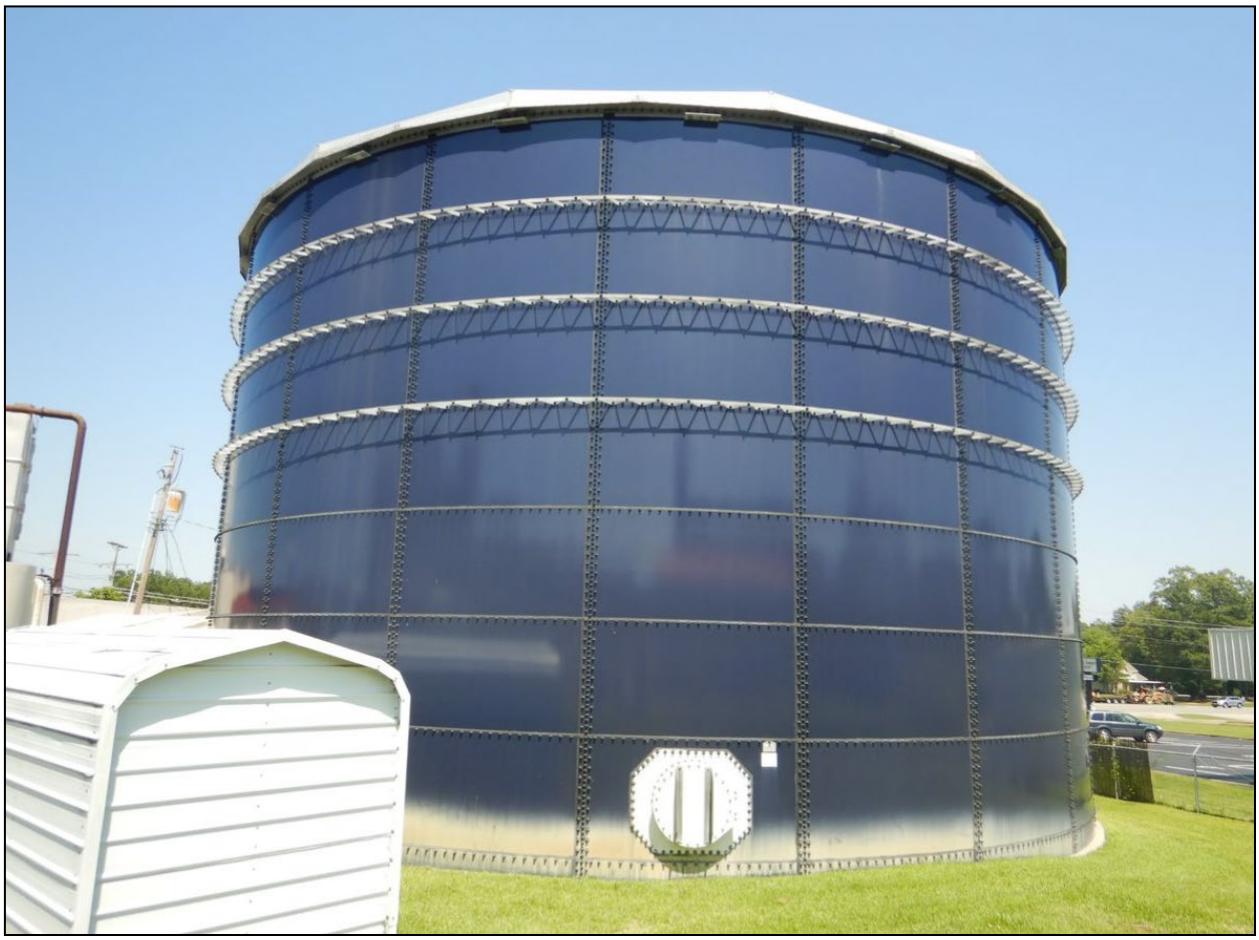
Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 47

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas



Photograph 47. White Hall Water Tank #3 View of the 750,000 gallon White Hall Water Tank. The tank was in use at the time of the inspection.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 48

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas

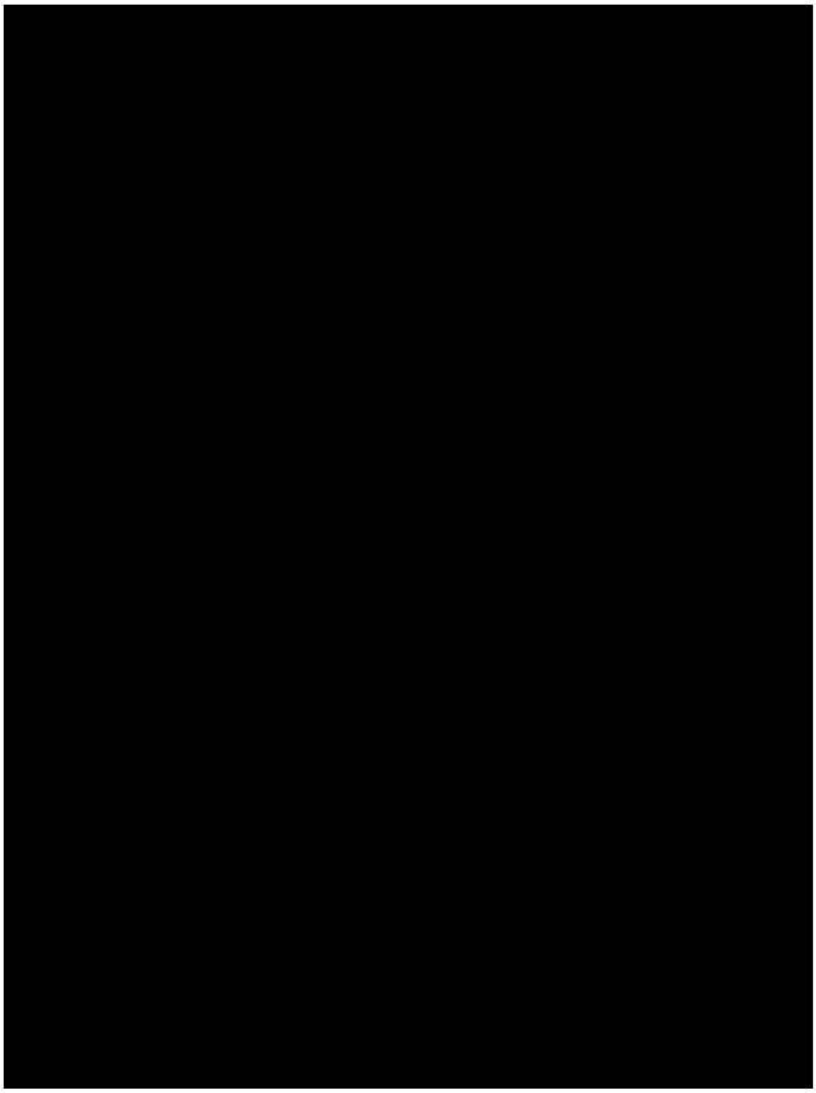
Photograph 48. Overflow Pipe, White Hall Tank #3 View of the terminus of the White Hall Tank #3 overflow pipe. The pipe was downturned, screened, and it terminated above a rectangular grate. Also visible in this image is a valved line that can be used to empty the tank.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 49

Location: Liberty Utilities Company (Pine Bluff)		
City: Pine Bluff	County/Parish: Jefferson County	State: Arkansas



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