



REGION 4

ATLANTA, GA 30303

ELECTRONIC MAIL

CONFIRMATION OF RECEIPT EMAIL REQUESTED

Wes Byne
Utilities Director
City of Augusta
452 Walker Street, Suite 200
Augusta, Georgia 30901
wbyne@augustaga.gov

Dear Wes Byne:

The U.S. Environmental Protection Agency, Region 4 conducted a Compliance Evaluation Inspection (CEI) on the City of Augusta's James B. Messerly Water Pollution Control Plant (WPCP) on July 9, 2024. The objective of the inspection was to assess the City of Augusta's (Augusta) compliance with the Clean Water Act and the National Pollutant Discharge Elimination System permit, and to evaluate the general condition of the WPCP. The inspection results have been summarized in the enclosed CEI Report.

The EPA appreciates Augusta's and ESG Operations Incorporated cooperation and courtesy during the inspection. If you have specific questions about the inspection report, please contact Mr. Andrew Gunderson at Gunderson.Andrew@EPA.gov. Please verify receipt of this letter and report by emailing Mr. Gunderson at the email address provided.

Sincerely,

**JAIRO
CASTILLO**

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Jairo Castillo, P.E., Chief
Wastewater Enforcement Section
Water Enforcement Branch

ENCLOSURES

City of Augusta James B. Messerly WPCP Report

cc: Johanna D. Smith P.E.

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United States Environmental Protection Agency Region 4
Enforcement and Compliance Assurance Division
Water Enforcement Branch
61 Forsyth Street, SW
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Compliance Evaluation Inspection Report

City of Augusta's James B. Messerly WPCP
1820 Barnard Parkway,
Augusta, GA 30906
NPDES Permit Number: GA0037621

Project No. CV-GA0037621-070924

Date of Inspection:

July 9, 2024

Inspectors:

Andrew Gunderson, EPA Region 4
William Joyner, EPA Region 4
Edwina Basilio, GA EPD

Inspection Report Prepared by:

Andrew Gunderson

Title and Approval Sheet

Title: City of Augusta's James B. Messerly WPCP Compliance Evaluation Inspection Report
Project No. CV-GA0037621-070924

Approving Official:

**JAIRO
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Enforcement Officer:

**ANDREW
GUNDERSON**

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COMPLIANCE EVALUATION INSPECTION REPORT
City of Augusta's James B. Messerly WPCP Compliance Evaluation Inspection Report
Project # CV-GA0037621-070924

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COMPLIANCE EVALUATION INSPECTION REPORT
City of Augusta's James B. Messerly WPCP Compliance Evaluation Inspection Report
Project # CV-GA0037621-070924

1. Introduction

On July 9, 2024, representatives of the United States Environmental Protection Agency, Region 4 and the Georgia Department of Natural Resources, Environmental Protection Division (GA EPD) conducted a Compliance Evaluation Inspection (CEI) on the James B. Messerly Water Pollution Control Plant (WPCP), owned and operated by the City of Augusta, Georgia (Augusta/The City). The inspection was conducted under the authority of Section 308 of the Clean Water Act (CWA), as amended. This report provides a summary of the inspection.

2. Participants

Name	Organization	Contact Information
Andrew Gunderson	EPA Region 4 (Lead)	Gunderson.Andrew@epa.gov
William Joyner	EPA Region 4	Joyner.William@epa.gov
Edwina Basilio	GA EPD	Edwina.Basilio@dnr.ga.gov
Ricky Adams	ESG Operations (Project Manager)	Not supplied
Joseph Molock	ESG Operations (Operations Manager)	Not supplied
Percy Nolan	ESG Operations (Plant Manager/Regional Manager)	percy.nolan@inframark.com
Matt Erickson	ESG Operations (Lab/IPP Supervisor)	merickson@esginc.net

3. Facility Description

The City of Augusta's James B. Messerly Plant is an activated sludge wastewater treatment plant that is combined with a constructed wetland area. The WPCP consists of an influent pump station with two JWC fine screens, grit/grease removal system, equalization basin, 8 primary clarifiers (one operating at the time of inspection), secondary aeration with anoxic zones, 4 secondary clarifiers, return activated sludge pumps, chlorine disinfection, 6 aerobic sludge digesters, sludge belt filter presses, and constructed wetland with 12 cells. Facility personnel stated that dechlorination takes place within the constructed wetlands via evaporation. No chemical dechlorination is utilized onsite. The grit/grease removal system was observed offline during the inspection due to the pumps being nonoperational. A bypass pump has been placed within this section of the facility to divert high flows to the constructed wetlands.

The facility is located at 1820 Doug Barnard Parkway, Augusta GA, 30906. The facility is currently permitted under NPDES permit number GA0037621 to discharge 46.1 million gallons per day (MGD) from outfall 001 to Butler Creek. Butler Creek is located within the Savannah River Basin. The facility was constructed in 1968 and is owned by the City of Augusta, with the City contracting out facility, and laboratory operations to ESG Operations, Inc. ESG Operations, Inc.

has been contracted at the facility since 2010. ESG Operations also manages the pre-treatment program for the City.

Adjacent to the facility’s Doug Barnard Parkway location is Phinizy Swamp Nature Park, which houses the constructed wetlands for the facility. These wetlands are open to the public and consist of 12 wetland cells over a 30-acre area. A final aeration pond is located at the end of the wetlands prior to discharge to Butler Creek (photo #10). The facility’s composite sampler is located at a dock over the outfall of the creek.

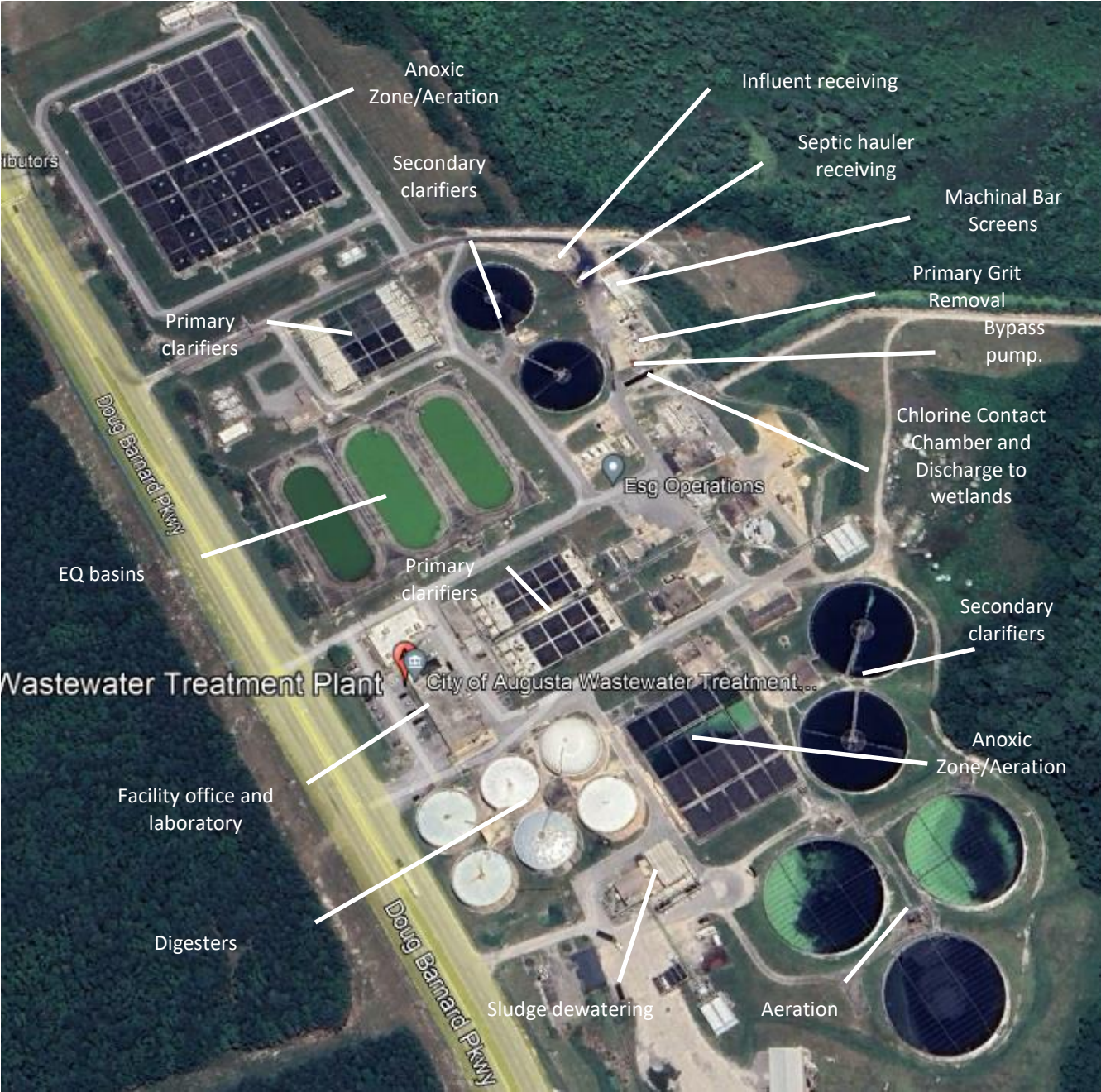


Figure 1: Aerial View of the James B. Messerly Water Pollution Control Plant

COMPLIANCE EVALUATION INSPECTION REPORT

City of Augusta's James B. Messerly WPCP Compliance Evaluation Inspection Report
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Figure 2: Aerial View of the James B. Messerly Water Pollution Control Plant's wetland treatment

The facility accepts septic system waste as well as grease hauled from area restaurants. Septic system waste is directly discharge into a containment area located near the headworks (photo #3). Three main lines enter the facility at the headworks. An 84-inch line from the downtown Augusta area, an additional line from a local industrial complex, and a line from the Spirit Creek Wastewater Treatment Plant. The Spirit Creek facility is located at 1101 Bennock Mill Rd, Augusta, GA 30906, and operates under a Georgia NPDES permit GA0047147 with no discharge. All flow from the Spirit Creek facility is treated within the James B. Messerly Plant.

The facility's current wastewater plant operational staff are as follows:

- Five - Georgia Wastewater Treatment Class 1 Operator
- Two - Georgia Wastewater Treatment Class 2 Operators
- Three - Georgia Wastewater Treatment Class 3 Operators
- Five - Laboratory Technicians

4. Inspection Procedures.

The overall objective of this CEI was to evaluate the condition and operational performance of the WPCP and Augusta's self-monitoring program and to offer compliance assistance as needed. Specific tasks included conducting an opening conference, interviewing WPCP staff, reviewing WPCP laboratory records, conducting a site visit throughout the existing WPCP, and a closing conference.

5. Findings & Conclusions

A. Permit Review

City of Augusta's NPDES permit for the WPCP has an effective date of June 1, 2019, and expired on May 31, 2024. The NPDES permit lists and describes the outfall as Outfall 001 to Butler Creek. The NPDES permit contains Effluent Limitations and Monitoring Requirements table for Outfall 001 at the WPCP's current capacity of 46.1 MGD. The facility was operating under the administrative continued permit until a new permit is issued by the State of Georgia.

B. Records and Reports

The EPA's Enforcement Compliance History Online (ECHO) shows that the STP was in Non-Compliance (NC) or Significant Non-Compliance (SNC) for effluent limit exceedances as listed:

- Flow – exceeded February 2023
- Dissolved Oxygen (DO) – exceeded April 2022,
- SNC for Nitrogen Ammonia Total – exceeded July 2021, April 2022, January 2023, and February 2023.
- SNC for Carbonaceous Biochemical Oxygen Demand 5-day (CBOD₅) - exceeded April 2022, and July 2022.

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Recent Discharge Monitoring Reports (DMRs) were reviewed onsite. All reviewed paperwork, including the analytical results for the May 2024 Discharge Monitoring Report (DMR) met permit required retention times and was well organized.

C. Flow Measurement

Upon entry to the facility's online operations system, the plant's influent flow reading was 35.5 mgd and the effluent flow showed 0 mgd. System programmers were onsite attempting to update the digital operation system. The influent flow and effluent flow meters appeared in good condition. The effluent flow meter was displaying a flow rate of 40.3 MGD at 12:00pm (photo #8). The City of Augusta contracts with Macktec Incorporated for calibration of influent and effluent ultrasonic flow meters. The effluent flow meter was noted to have a sticker which had faded and illegible calibration date. The City subsequently supplied documentation showing a recent effluent flow meter calibration had been completed by Macktec Incorporated on 6/3/24.

The facility appears to be heavily influenced by inflow and infiltration as overflows at the facility's headworks (photo #1) have been reported. In 2023 the following overflows at the facility's headworks were reported to the State of Georgia:

June 23, 2023	538,589 gallons
July 10, 2023	69,453 gallons
August 30, 2023	6,663,720 gallons
December 17, 2023	313,005 gallons

No influent overflows at the facility's headworks have been reported to GA EPD for 2024. Additionally, a bypass pump has been installed within the primary grit removal area to bypass high flows directly to the constructed wetlands area (photo #11). The City of Augusta manages collect system maintenance separately from the ESG Operations, Inc. contracted services.

D. Sampling/Laboratory

The laboratory at this facility analyzes samples for the following parameters: Flow, pH, Carbonaceous Biochemical Oxygen Demand 5-day (CBOD₅), Dissolved Oxygen (DO), Total Suspended Solids (TSS), Chlorine Total Residual (TCR), Ammonia Total, and Fecal Coliform Bacteria. All Permit parameters are sampled at outfall 001, at the end of the constructed wetlands, except Fecal Coliform. Fecal Coliform samples are collected prior to the facility's discharge into the constructed wetlands.

The facility contracts with CSRA Analytical Laboratories Inc. to analyze Total Nitrogen, Total Phosphorus, and metals. The facility also contracts with Eurofins Laboratory for additional services when needed. The following observations were made in the laboratory:

- Two containers of 10 pH buffers were noted to be out of date. These buffers were removed from storage and disposed of during the inspection (photos #16 & #17).
- Composite sampler was operational and set up to sample (photo #9).
- Effluent composite sampler showed temperature within acceptable range.
- Chlorine buffers were noted to be in date and were appropriate for wastewater sampling usage.
- All equipment and glassware appeared clean.
- Laboratory bench sheets and calibration records appeared appropriately documented and orderly.
- Operators log appeared detailed and orderly.
- The following laboratory/sampling equipment was observed:
 - YSI Pro 20i
 - EcoSense pH100A
 - Hach AS950 Composite Sampler

E. Site Visit (Operation and Maintenance)

A WPCP site visit started at the headworks and ended within the constructed wetlands area. Based on the configuration of the site the treatment areas were reviewed in a nonlinear manner. The following components were observed:

- Both JWC fine screens and mechanical bar screens appears clean and operating as designed (photo #2).
- Anoxic zones showed vegetative growth around mixers (photo #4).
- The chlorine building appeared clean and well maintained.
- High flows into the facility resulted in an 18-inch 14mgd pump to be installed into the primary grit removal area. During high flows This pump sends process water directly into the constructed wetlands, bypassing most mechanical treatment of the facility. The pump is triggered when the plant flow reaches approximately 70mgd (photo #11).
- Primary grit removal was non-operational (photo #12).
- Staff gauge appeared clean.
- Potable water leak was noted under slab of machinal building (photo #13).
- Only one primary clarifier appeared operational. The remaining 7 clarifiers were non-operational and appeared to have broken chains and bent paddles. Significant sludge accumulation and plant growth was noted within the non-operational clarifiers (photos #6 & #7).
- One septic truck was observed discharging into system.
- Solids from clarifier maintenance were noted to be left outside of containment area (photo #5).
- The sludge digesters had failing brick walls round the structures (photo #15).
- The roof of Digester #5 had caved inward (Photo #14).

F. Sludge Handling

ESG Operations mechanically dewater sludge onsite and contacts with Big Dog Disposal to haul the sludge to the Richmond County Landfill. In 2023 the facility reported 5,001.43 tons of

biosolids being removed and transported from the facility. All equipment within the sludge press area appeared operational and the space was maintained clean to prevent odor and vectors.

G. Effluent/Receiving Water

The effluent from Outfall 001 appeared to be clear and void of solids. The receiving waterbody (Butler Creek) was accessible via a dock positioned at the end of the constructed wetlands.

6. Discussion

The City of Augusta's WPCP is operations is stressed from Inflow and Infiltration resulting in exceedances in the permitted design of 46.1 MGD. This stress is evident from the installation of the bypass pump with the primary grit removal area, overflow at the facility headworks, and seven non-operational clarifiers due to major mechanical damage. Additionally, the digester units show signs of structural deterioration with large areas of missing brick and collapsed roof structure.

END OF REPORT



Photo 1: Headworks of facility



Photo 2: Mechanical bar screens.



Photo 3: Septic hauler receiving area.



Photo 4: Vegetation growth around mixer in Anoxic zones.



Photo 5: Solids from clarifier maintenance outside of containment.



Photo 6: Seven non-operational clarifiers were observed with solids buildup.



Photo 7: Damaged chain and paddle on primary clarifier.



Photo 8: Effluent flowmeter

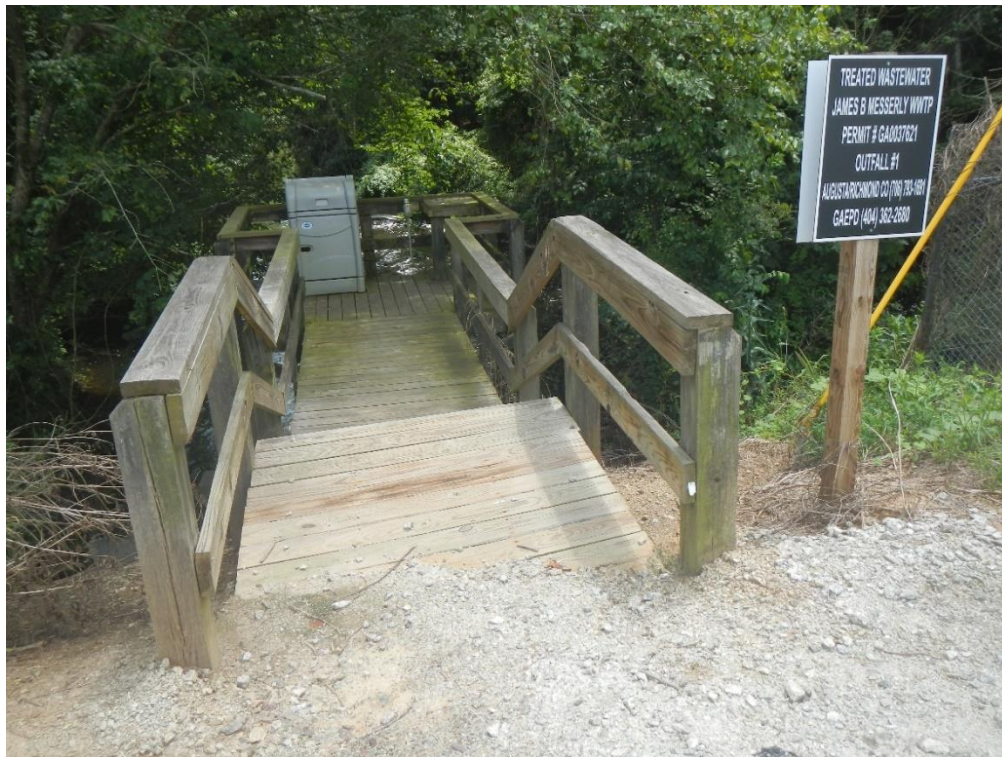


Photo 9: Outfall 001 dock with sign and sampler.



Photo 10: Constructed wetlands final aeration basin.



Photo 11: Bypass Pump at primary grit removal to divert flow to constructed wetlands.



Photo 12: Primary Grit removal was offline at the time of the inspection.



Photo 13: Location of drinking water leak under concrete slab

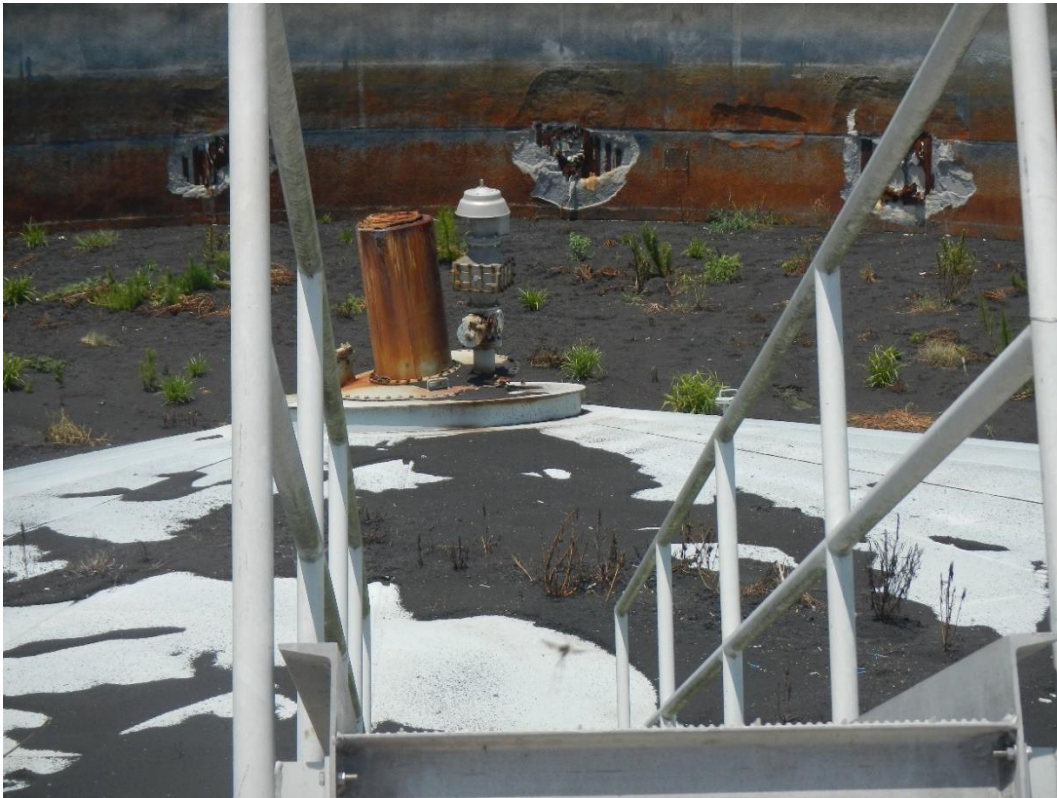


Photo 14: Digester #5 roof collapsed.

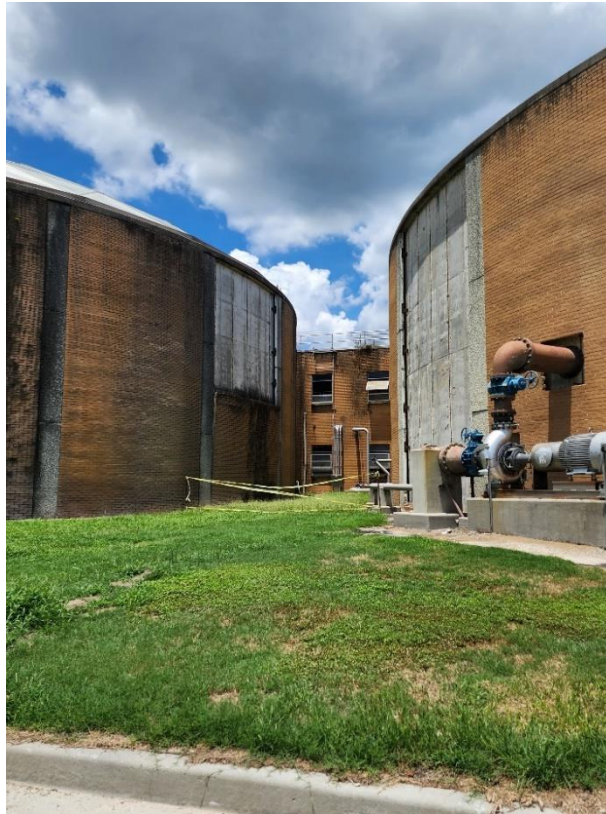


Photo 15: Digesters structures missing bricks.

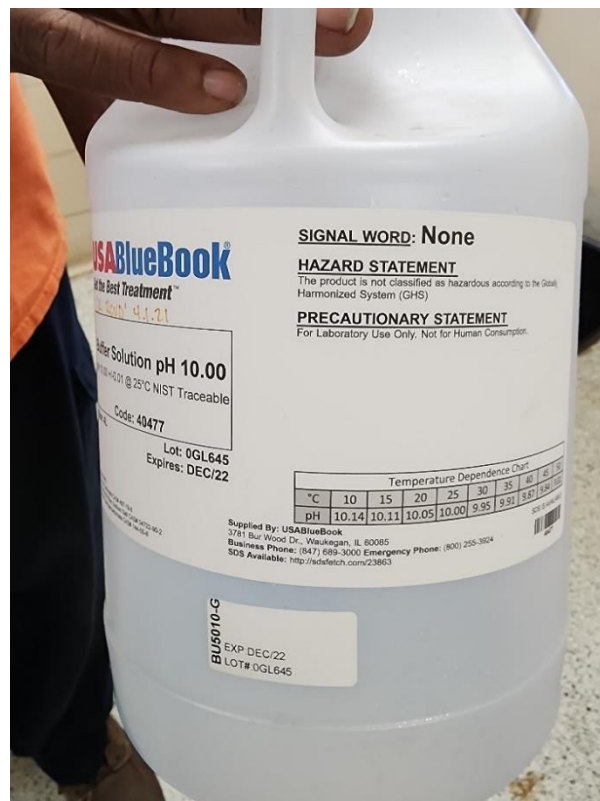


Photo 16: Expired pH buffer, expired on 12/2022.

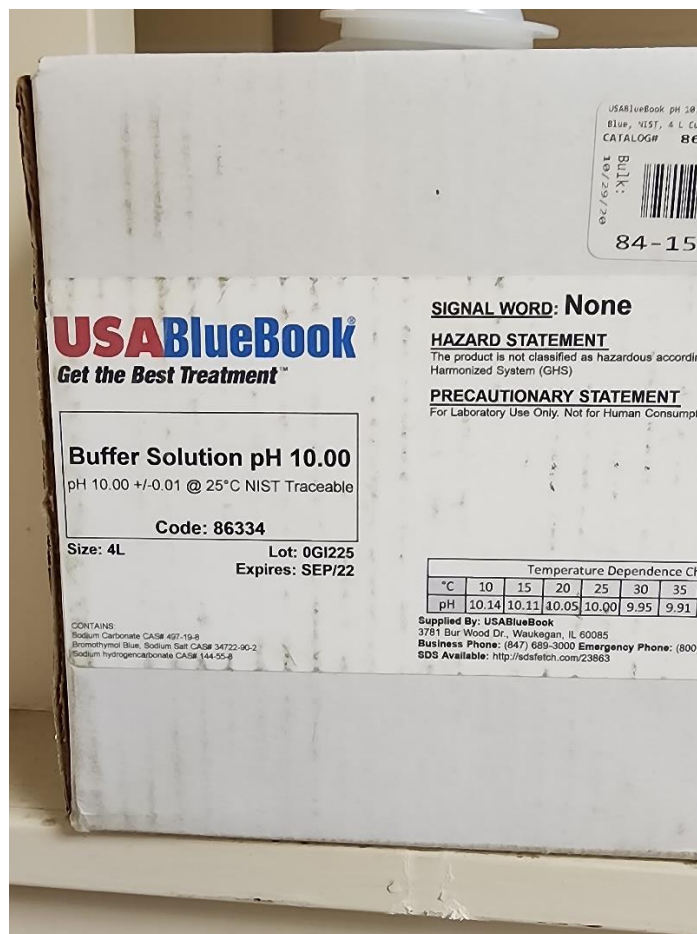


Photo 17: Expired pH buffer, expired on 09/2022.