



INSPECTION REPORT

OF THE

LARCHMONT ESTATES SUBDIVISION

SAVANNAH, GEORGIA

By

U.S. ENVIRONMENTAL PROTECTION AGENCY

REGION 4

ENFORCEMENT & COMPLIANCE ASSURANCE DIVISION

WATER ENFORCEMENT BRANCH

DRINKING WATER ENFORCEMENT SECTION

March 17, 2022

Introduction

A Drinking Water Inspection to evaluate the compliance with the Safe Drinking Water Act (SDWA) was performed at Larchmont States Subdivision in Savannah, Georgia. The inspection was conducted under the authority of Section 1445(b)(1) of the SDWA.

An entrance briefing was held on the morning of February 17, 2022, where U.S. Environmental Protection Agency inspectors presented their credentials and discussed the purpose of the onsite inspection. David Lyle and Michelle Dennis of the Georgia Department of Environmental Protection, (GADEP) inspectors, joined the EPA inspection team. During the inspection, the EPA reviewed records, visited wells, treatment plants and storage tanks.

On the afternoon of February 17, 2022, EPA and GADEP held a closing conference with the public water system operator Kim Abbot to discuss observations, findings, and recommendations.

Purpose

In FY20, the EPA began a National Compliance Initiative (NCI) with the goal of reducing noncompliance with drinking water standards at community water systems. One of the goals of the NCI is to support the Agency's Strategic Plan, which calls for a 25 percent reduction in the number of community water systems that are out of compliance with health-based standards by the end of FY 2022.

As part of the NCI, our Region has worked with each State Primacy Agency to identify, prioritize, and address a subset of community water systems with known, ongoing noncompliance with the federal SDWA.

Larchmont States Subdivision had several consecutive Sanitary Survey's performed by the GAEPD where deficiencies were found. As a result of these deficiencies, Larchmont States Subdivision was targeted for inspection.

Participants

Larchmont States Subdivision:

Kimm Abbott- Water & Wastewater Board Member
Fé Farner- Consolidated Utilities Inc.

GAEPD:

David Lyle - Program Manager
Michelle Dennis – Environmental Specialist

EPA:

Arturo Arzon - Enforcement Officer
Pamela Riley - Enforcement Officer

Public Water System Description

Larchmont States Subdivision is a ground water system located in Savannah, Georgia. The System is a private system owned by Consolidated Utilities Inc. The System consists of nine wells, chlorine disinfection, four 4,000 gallons hydropneumatic storage tanks and one 250,000 gallon storage tank. Three wells withdraw water from the Upper Floridan Aquifer, two from the Lower Floridan Aquifer and four from the Miocene Aquifer. Larchmont States Subdivision serves a population of approximately 11,780 and has 5,023 service connections.

Disinfection is achieved through the addition of chlorine. The chlorine injection rooms are adjacent to each well station. The chlorine rooms are equipped with 2 chlorine cylinders, scales, force air ventilation and an ammonia bottle to detect chlorine leaks. Chlorine is the only chemical added in the treatment process.

The System is equipped with Supervisory Control and Data Acquisition software. The software allows remote control of wells and treatment plants as well as monitors the distribution system and checks the levels of the tanks.

During the inspection, the EPA inspection team inspected the following locations of the distribution system (**Table 1**)

Table 1: Distribution System Locations Visited by the EPA Inspection Team

Name of the Location	Operational Status
Well 109/ Hydropneumatic Tank	Active
Well 106/ Hydropneumatic Tank	Active
Well 104	Active
Well 5	Active
Well 8	Active
Well 10	Active
Well 2/ Hydropneumatic Tank	Active
Well 3	Active
Well 101/ Hydropneumatic Tank	Active
Elevated Storage Tank	Active

Personnel

At the time of the inspection, Larchmont States subdivision had one Class 1 operator and two Class 3 operators.

Documentation reviewed

Prior to the inspection, EPA inspectors reviewed the following documentation:

- Last two Sanitary Surveys Performed by GADEP
- Violation History
- Sampling Schedules
- Georgia Drinking Water Watch

While on site, EPA inspectors reviewed the following documentation:

- Operator License Documentation
- Bacteriological Data
- Monthly Well Reports
- Monthly Operational Reports
- Monthly Monitoring and Sampling Reports
- Tank Inspections Reports
- Lead and Copper Sampling Plan
- Stage 2 Disinfection Byproduct Rule Sampling Plan

Comments

The staff was helpful and welcoming. During the inspection, Larchmont States Subdivision was undergoing a Radionuclides Rule monitoring and reporting violation. The violation was due to failure to monitor. The System is working with GADEP to return to compliance.

Findings

1. **Findings:** On occasion, bacteriological (Bacti) sampling sites are changed. During the opening conference, the EPA inspectors asked the System operator if standard operating procedures were followed when samples could not be collected on the approved sampling site plan location. The System operator stated that they collected the sample at another location that is representative of the distribution system. However, GADEP was not notified about the change.

Comments: Pursuant to 40 C.F.R. § 141.853 (General Monitoring Requirements for all Public Water Systems). *“Systems must develop a written sample siting plan that identifies sampling sites and a sample collection schedule that are representative of water throughout the distribution system not later than March 31, 2016. These plans are subject to State review and revision. Systems must collect total coliform samples according to the written sample siting plan”*. Sampling points listed on approved sampling plans cannot be changed unless the new sampling point has been approved by GADEP.

2. **Findings:** The Bacti sampling plan provided by the system was incomplete. The sampling plan did not include sampling locations.

Comments: Pursuant to 40 C.F.R. § 141.853 (General Monitoring Requirements for all Public Water Systems). *“Systems must develop a written sample siting plan that identifies sampling sites and a sample collection schedule that are representative of water throughout the distribution system not later than March 31, 2016. These plans are subject to State review and revision. Systems must collect total coliform samples according to the written sample siting plan”*. The System must develop a sampling plan and submit to GADEP for review.

3. **Findings:** On occasion, Stage 2 Disinfection Byproduct (DBP) sampling sites are changed. During the opening conference, the EPA inspectors asked The System operator the standard operating procedures followed when samples could not be collected on the approved sampling site plan. The System stated that they collected the sample at another location that is representative of the distribution system. However, GADEP was not notified about the change.

Comments: Pursuant to 40 C.F.R. § 141.622 Subpart V (Monitoring Plan). *“You must develop and implement a monitoring plan to be kept on file for State and public review”*. Sampling points listed on approved sampling plans cannot be changed unless the new sampling point has been approved by GADEP.

4. **Findings:** The DBP sampling plan was incomplete. The DBP sampling plan provided by the System did not include all the elements required by the regulation.

Comments: Pursuant to 40 C.F.R. § 141.622 Subpart V (Monitoring Plan). *“The monitoring plan must contain the elements in paragraphs (a)(1)(i) through (a)(1)(iv) of this section and be complete no later than the date you conduct your initial monitoring under this subpart. (i) Monitoring locations; (ii) Monitoring dates; (iii) Compliance calculation procedures; and (iv) Monitoring plans for any other systems in the combined distribution system if the State has reduced monitoring requirements under the State authority in § 142.16(m).”* The System must include the necessary elements and submit to GADEP for review.

5. **Findings:** During the inspection, EPA inspectors became aware that the elevated storage tank has not been fully inspected in over five years.

Comments: Pursuant to 40 C.F.R. § 141.63 (Maximum contaminant levels for microbiological contaminants), as well as 40 C.F.R § 141.723 (Requirements to respond to significant deficiencies identified in sanitary surveys performed by EPA). *“A significant deficiency includes a defect in design, operation, or maintenance, or a failure or malfunction of the sources, treatment, storage, or distribution system that EPA determines to be causing, or has the potential for causing the introduction of contamination into the water delivered to consumers”.* According to The American Water Works Association (AWWA) standard D101-53(79): AWWA Standard For Inspecting And Repairing Steel Water Tanks, Standpipes, Reservoirs, And Elevated Tanks For Water Storage. *“Water storage tanks should be thoroughly inspected every five years”.* The system must inspect the storage tank.

6. **Findings:** In Well Number 109 the EPA inspector observed openings in the casing of the well pump and in the well the pad. (Refer to Appendix A, Image 1 & 2)

Comments: Pursuant to 40 C.F.R. § 141.723 (Requirements to respond to significant deficiencies identified in sanitary surveys performed by EPA). *“A significant deficiency includes a defect in design, operation, or maintenance, or a failure or malfunction of the sources, treatment, storage, or distribution system that EPA determines to be causing, or has the potential for causing the introduction of contamination into the water delivered to consumers”*. Unprotected access points to the water source provide a pathway for contaminants to enter the water source and pose a risk to public health. The system must seal the openings.

7. **Findings:** The EPA inspection team observed several treatment rooms where the force air ventilation equipment was not working or had not been installed in the following locations: Well Number 109, Well Number 104, Well Number 2, Well Number 101. These Findings were also noted on GADEP 2020 Sanitary Survey.

Comments: Pursuant to Georgia Rules For Safe Drinking Water [391-3-5-.09(1)(f) (4)] (Water Treatment Facilities) *“Forced air ventilation, placed near floor level and near the cylinders, must be provided to exhaust any leaking chlorine gas from a confined room or facility. Exhaust fumes must be directed away from the entrance to the room or facility. The fan must be activated by an outside switch or start automatically when the door is opened”*. The system must repair or install the equipment.

8. **Findings:** Well Number 8 had no back up chlorination.

Comments: Pursuant to 40 CFR § 141.63 Maximum contaminant levels (MCLs) for microbiological contaminants 141.72 (Disinfection) *“The disinfection system must have either (i) redundant components, including an auxiliary power supply with automatic start-up and alarm to ensure that disinfectant application is maintained continuously while water is being delivered to the distribution system, or (ii) automatic shut-off of delivery of water to the distribution system whenever there is less than 0.2 mg/l of residual disinfectant concentration in the water. If the State determines that automatic shut-off would cause unreasonable risk to health or interfere with fire protection, the system must comply with paragraph (a)(2)(i) of this section”*. The system must install back up chlorination.

9. **Findings:** The EPA inspection team observed threaded samplings taps in the following wells: Well 109, Well 106, Well 104, Well 5, Well 8, Well 10, Well 2, Well 3, Well 101. (Refer to Appendix A, Image 3)

Comments: Pursuant to Georgia Rules For Safe Drinking Water 391-3-5-.13. Cross Connections “No person shall construct, maintain or operate a physical arrangement whereby a public water system is or may be connected directly or indirectly with a non-potable water system or non-permitted water system, sewer, drain, conduit, pool, storage reservoir, plumbing fixture, or other device which contains or may contain contaminated water, liquid, gasses, sewage or other waste of unknown or unsafe quality, which may be capable of imparting contamination to the public water system as the results of backflow, bypass arrangements, jumper connections, removable sections, swivel or changeover devices, or other temporary, permanent or potential connections through which or because of which back-flow or back-siphonage could or would occur”. The System must install a back-flow protection device or remove the threading from the taps.

10. **Findings:** The EPA Inspection Team observed a tap on a raw water line to which a hose was connected. The tap lacked a backflow protection.

Comments: Pursuant to Georgia Rules For Safe Drinking Water 391-3-5-.13. Cross Connections “No person shall construct, maintain or operate a physical arrangement whereby a public water system is or may be connected directly or indirectly with a non-potable water system or non-permitted water system, sewer, drain, conduit, pool, storage reservoir, plumbing fixture, or other device which contains or may contain contaminated water, liquid, gasses, sewage or other waste of unknown or unsafe quality, which may be capable of imparting contamination to the public water system as the results of backflow, bypass arrangements, jumper connections, removable sections, swivel or changeover devices, or other temporary, permanent or potential connections through which or because of which back-flow or back-siphonage could or would occur”. The system must disconnect the hose and remove the threading from the tap or install a backflow protection device.

11. **Findings:** System has not developed an Emergency Response Plan (ERP) as required by the America’s Water Infrastructure Act of 2018 (AWIA). The AWIA certification deadline for the Emergency Response Plan was December 31, 2021.

Comments: The System must develop an ERP.

Observations

Observation: In Well 104, the EPA Inspection Team observed a phosphate tank connected to the well. The tank was almost empty, and it was not in use.

Comments: Wells should be protected from any cross-connection risk and chemicals added to the treatment must be approved first by GADEP. The system must disconnect the phosphate tank and remove, close or seal connection points between the tank and the well.

Observation: The EPA inspection team observed air vents without 24-mesh in the following locations: Well 109, Well 106, Well 104, Well 5, Well 8, Well 10, Well 2, Well 3, Well 101, Elevated storage tank and all Hydropneumatic Tank. (Refer to Appendix A, Photographs 4-6)

Comments: Air vents & overflows must be screened with 24- mesh to prevent the entry of contaminants.

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APENDIX A
PHOTOGRAPHIC LOG

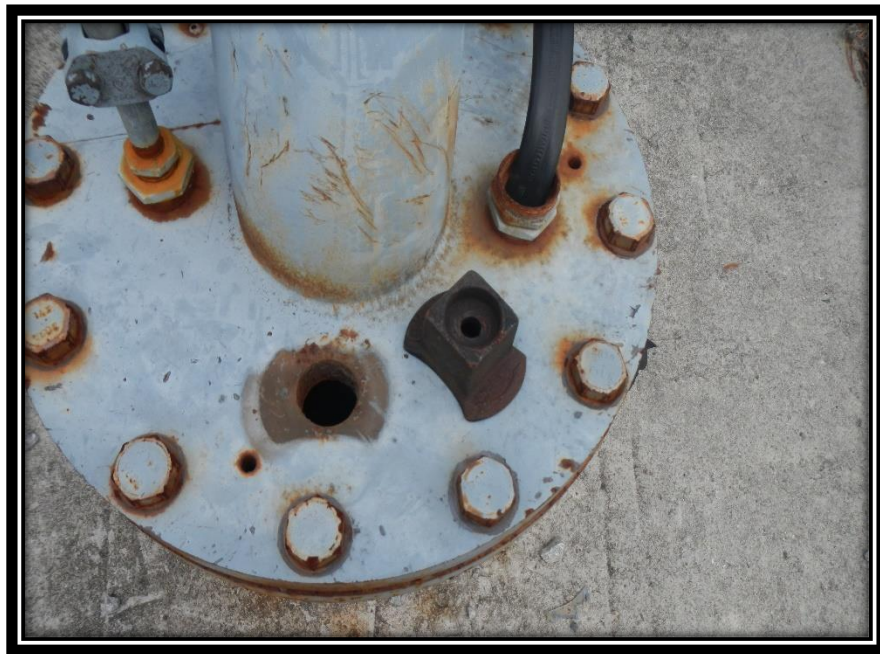


Image 1 Opening in the casing of the well pump



Image 2 Opening in the well pad



Image 3 Threaded sampling taps



Image 4 Well air vent



Image 5 Well air vent



Image 6 Storage tank overflow