REGION 4
ATLANTA, GA 30303

ELECTRONIC MAIL
CONFIRMATION OF EMAIL RECEIPT REQUESTED

The Honorable Brad George
Chairman, Board of County Commissioners
P.O. Box 5
805 South Walker
Burgaw, North Carolina 28425
bgeorge@pendercountync.gov

Re: Notice of Noncompliance and Concerns Pursuant to Section 1414(a)(1)(A) and Request for Information Pursuant to Section 1445(a)(1) of the Safe Drinking Water Act, 42 U.S.C. §§ 300g-3(a)(1)(A) and 300j-4(a)(1), Pender County Utilities in Burgaw, Pender, North Carolina. PWS ID Number: NC7071011. Docket Number: SDWA-04-2024-5011

Dear Chairman George:

The U.S. Environmental Protection Agency (EPA) is responsible for assuring public water systems (PWS) provide safe drinking water in accordance with the Safe Drinking Water Act (SDWA), 42 U.S.C. § 300f *et seq.*, and the regulations promulgated thereunder. According to the information in the EPA's Safe Drinking Water Information System, the Pender County Utilities Public Water System (System) serves a population of approximately 12,294, with 5,174 service connections. Pursuant to Section 1401(15) of the SDWA, 42 U.S.C. § 300f (15), it is therefore a community water system. A community water system is subject to the requirements of the National Primary Drinking Water Regulations, 40 C.F.R. Part 141; and North Carolina Primary Drinking Water Regulations, promulgated pursuant to the North Carolina Administrative Code, Title 15A, Subchapter 18C (15A NCAC 18C).

Pursuant to Section 1413 of the SDWA, 42 U.S.C. § 300g-2, the North Carolina Department of Environmental Quality (NCDEQ) Division of Water Resources is the primary agency responsible for implementing and enforcing the Public Water System Supervision Program for North Carolina. *See* 15A NCAC 18C.

On June 11-12, 2024, the EPA conducted a drinking water inspection (Inspection) of the System. The EPA subsequently sent an inspection report to the System on August 8, 2024 (Inspection Report).

The Inspection Report is based on information supplied to the EPA by System representatives through interviews and written statements, observations made by the EPA inspection team, and records and reports maintained by the System. A copy of the Inspection Report was also provided to the NCDEQ.

Notice of Noncompliance

As detailed in the Inspection Report, the EPA alleges that the System is in noncompliance with the SDWA, the National Primary Drinking Water Regulations, and the North Carolina Primary Drinking Water Regulations, as described below:

1. Pursuant to 40 C.F.R. § 141.64(b)(2), the System must comply with the maximum contaminant levels (MCLs) for total trihalomethanes (TTHM) and haloacetic acids (five) (HAA5), as shown in the table below, as a locational running annual average (LRAA) at each monitoring location. According to 40 C.F.R. § 141.620(c), the System was required to comply with the monitoring requirements by October 1, 2013.

Disinfection byproduct (DBP)	MCL (mg/L)
Total trihalomethanes (TTHM)	0.080
Haloacetic acids (five) (HAA5)	0.060

The System had seven consecutive quarters of noncompliance for DBP MCLs as LRAA exceedances from 2022 to 2024, as show in the table below.

Quarter, Year	Sample Point	LRAA Result (mg/L)
3rd Quarter, 2022	B03	TTHM: 0.082
4th Quarter, 2022	B03	TTHM: 0.083
1st Quarter, 2023	B03	TTHM: 0.082
2nd Quarter, 2023	B03	TTHM: 0.086
3rd Quarter, 2023	B03	TTHM: 0.088
4th Quarter, 2023	B03	TTHM: 0.094
1st Quarter, 2024	B03	TTHM: 0.099 HAA5: 0.061

The System exceeded both the TTHM MCL of 0.080 mg/L and the HAA5 MCL of 0.060 mg/L.

Therefore, the System is in noncompliance with 40 C.F.R. § 141.64(b)(2), for exceeding the DBP MCLs as LRAAs for seven consecutive quarters.

2. Operational Evaluation Level (OEL) monitoring is a requirement for all systems subject to Stage 2 DBP quarterly monitoring, under the Stage 2 DBP Requirements. Systems are subject to these requirements if they use a primary or residual disinfectant other than ultraviolet (UV) light or deliver water that has been treated with a primary or residual disinfectant other than UV light. The System utilizes sodium hypochlorite as the primary disinfectant and is therefore subject to the OEL monitoring requirements.

The OEL for a system is calculated pursuant to 40 C.F.R. § 141.626(a). Although the System does not calculate OELs for any of the sample sites, the EPA inspection team calculated six OEL exceedances since 3rd Quarter 2022, as shown below.

Quarter, Year	Sample Point	OEL Result (mg/L)
3rd Quarter, 2022	B03	TTHM: 0.097
4th Quarter, 2022	B03	TTHM: 0.082
1st Quarter, 2023	B03	TTHM: 0.082
3rd Quarter, 2023	B03	TTHM: 0.103
4th Quarter, 2023	B03	TTHM: 0.100
1st Quarter, 2024	B03	TTHM: 0.094 HAA5: 0.066

Pursuant to 40 C.F.R. § 141.626(b):

(1) If you exceed the [OEL], you must conduct an operational evaluation and submit a written report of the evaluation to the State no later than 90 days after being notified of the analytical result that causes you to exceed the operational evaluation level. The written report must be made available to the public upon request.

(2) Your operational evaluation must include an examination of system treatment and distribution operational practices, including storage tank operations, excess storage capacity, distribution system flushing, changes in sources or source water quality, and treatment changes or problems that may contribute to TTHM and HAA5 formation and what steps could be considered to minimize future exceedances.

(i) You may request and the State may allow you to limit the scope of your evaluation if you are able to identify the cause of the operational evaluation level exceedance.

(ii) Your request to limit the scope of the evaluation does not extend the schedule in paragraph (b)(1) of this section for submitting the written report. The State must approve this limited scope of evaluation in writing, and you must keep that approval with the completed report.

The System failed to calculate OELs for any of the sample sites under 40 C.F.R. § 141.626(a). Based on the provided analytical data, as shown in the table above, inspectors calculated six OEL exceedances since 3rd Quarter 2022. As required after OEL exceedances, the System has

provided quarterly summaries of actions to be taken to reduce OEL exceedances. However, the reports did not include an examination of the treatment and distribution operational practices.

The North Carolina Operational Evaluation Level Report Template provides the required information to be included in OEL reports. The inspectors were unable to confirm if or when the System was granted written approval from NCDEQ for a limited scope for the operational evaluation.

Therefore, the System is in noncompliance with 40 C.F.R. § 141.626(b), for failure to submit a complete operational evaluation that included an examination of the treatment and distribution operational practice on the North Carolina OEL Report Templates.

3. Pursuant to 15A NCAC 18C .0307(c)(5), the Water System Management Plan shall include, where applicable, policies regarding cross-connection control procedures.

   The System representatives stated they do not implement a cross-connection control program. At the time of the Inspection, only 13 devices were logged in the backflow prevention devices inventory, and over 60% of the customers were overdue for a cross-connection inspection.

   Therefore, the System is in noncompliance with 15A NCAC 18C .0307(c)(5), for failing to implement a cross-connection control program.

4. Pursuant to 15A NCAC 18C .0406(b), no person shall construct, maintain, or operate a physical arrangement whereby a public water system has a cross-connection without the use of proper backflow protection.

   Inspectors observed that the backflow prevention assembly on the water supply line used for mixing chemicals failed testing in 2023 and 2021. System representatives confirmed that repairs were not conducted following the failed tests. Inspectors also observed threaded hose taps within the treatment plant and distribution system that did not have vacuum breakers or other backflow prevention installed.

   Therefore, the System is in noncompliance with 15A NCAC 18C .0406(b), for utilizing a failing backflow prevention assembly at the chemical mixing line and failing to provide adequate backflow prevention devices at the hose bibs.

5. Pursuant to 15A NCAC 18C .0307(d), the Operation and Maintenance Plan shall include, at a minimum, a description of the location and routine operation and maintenance procedures for: (1) components of the treatment facility; (2) pumps, meters, valves, blowoffs, and hydrants; (3) backflow devices; (4) storage tanks; and (5) all other appurtenances requiring routine operation and maintenance.

Inspectors reviewed the Operation and Maintenance Plan prepared by CDM Smith in 2012 (the year the treatment plant was brought online). The plan covered the treatment plant but did not cover the distribution system. The System staff indicated that there is not a separate Operation and Maintenance Plan for the distribution system.

Therefore, the System is in noncompliance with 15A NCAC 18C .0307(d), for failure to include the distribution system in the Operation and Maintenance Plan.

6. Pursuant to 15A NCAC 18C .0404(c)(1), durable chemical feed machines designed for adjustable accurate control of feed rates shall be installed for application of all chemicals necessary for treatment of the water. Sufficient stand-by units to assure uninterrupted operation of the treatment processes shall be provided.

   The System did not have a stand-by chemical feed pump for the Annex well chemical feed systems. System representatives indicated that there are spare chemical feed pumps available; however, these feed pumps are not on standby to provide uninterrupted service. System representatives indicated that this well provides required capacity and cannot be taken offline for extended periods of time.

   Therefore, the System is in noncompliance with 15A NCAC 18C .0404(c)(1), for failing to have stand-by chemical feed pumps for the Annex well chemical feed system.

7. Pursuant to 15A NCAC 18C .0405(a)(4), the overflow pipes for finished water ground storage tanks or reservoirs shall not be connected directly to sewers or storm drains. Screens or other devices to prevent access by vermin, such as rodents and insects, shall be provided in the overflow pipe.

   At the time of the Inspection, the clearwell overflow screen was ripped and was a nonfunctional deterrent to rodents and insects.

   Therefore, the System is in noncompliance with 15A NCAC 18C .0405(a)(4), for failing to install and maintain an adequate screen, or other device, at the clearwell overflow.

8. Pursuant to 15A NCAC 18C .0405(a)(3), finished water ground storage tanks or reservoirs shall have vents with screened, downward directed openings. The vent and screen shall be made of corrosion resistant material.

   At the time of the Inspection, inspectors observed four vents on each clearwell, located on the tank roof, equally spaced and outward facing. The vents appeared to be installed with coarse, pinhole screens, but the inspection team could not visually verify if non-corrodible screen was installed on the interior of the vent. System staff indicated that they do not believe an additional screen was installed.

   Therefore, the System is in noncompliance with 15A NCAC 18C .0405(a)(3), for failing to provide verification of adequate screening on the clearwell vents.

Notice of Concerns

During the June 2024 Inspection, EPA inspectors identified several areas of concern. An area of concern may include a defect in design, operation, and/or maintenance; or a failure or malfunction of the sources, treatment, storage, and/or distribution system that is causing, or has the potential for causing, the introduction of contamination into the water delivered to consumers.

The following areas of concern were noted in the Inspection Report, which the EPA recommends the System take immediate action to address:

1. At the time of Inspection, inspectors observed system staff collect a free chlorine and total chlorine sample at site B03. The free chlorine reading was 0.11 milligrams per liter (mg/L). The total chlorine reading (taken approximately 30 minutes later) was 0.0 mg/L. System representatives indicated that they struggle to maintain a detectable chlorine residual in this section of the distribution system, which has the highest water age.

   It is recommended that the System optimize flushing patterns in areas with high water age to maintain a minimum free chlorine residual of 0.2 mg/L.

2. At the time of Inspection, the System did not have written Standard Operating Procedures (SOPs) for general operational activities at the treatment plant, including but not limited to granular activated carbon (GAC) filter backwashing, chemical feed adjustment, plant start up and shutdown, and process control monitoring. The treatment plant Operation and Maintenance Manual did not include specific SOPs for these operations. System representatives indicated that if the SCADA system were not operational, plant staff would not be able to operate the plant manually.

   It is recommended that the System develop comprehensive Standard Operating Procedures for both automatic and manual operations of the plant. System staff should be trained on both procedures in the event of an emergency.

3. At the time of Inspection, the System did not implement a comprehensive preventative maintenance plan at the treatment plant. The EPA inspection team observed the following:

   a. Filter media was not routinely inspected in any of the filters. Filters 1-3 had not had media changed in the last 12 years (since the plant was brought online). Filter 4 media had not been changed in the last five years (since it came online in 2019).

   b. There was vegetation growing in one of the flocculation basins, adjacent to the motor assembly. There was algae growing on the walls of the flocculation basins that appeared to have sloughed off into the basin and was visible in the floc.

   It is recommended that the System develop and implement a routine comprehensive maintenance plan.

4. At the time of Inspection, the Annex and Kiwanis Park wells did not have check valves on the wellhead assemblies. System representatives indicated that the pressure regulating valve provides backflow prevention, but this is not a failsafe backflow prevention device. Check valves provide failsafe backflow prevention for the well and protect the water quality of the aquifer.

   It is recommended that the System install check valves on the wellhead assemblies at the Annex and Kiwanis Park wells.

5. At the time of Inspection, the chemical storage day tanks did not have secondary containment. The EPA inspection team was unable to confirm tank specifications, but it appeared that the tanks were not double walled.

   It is recommended that the System provide secondary containment for the chemical storage day tanks.

6. At the time of Inspection, the sodium hypochlorite tank was actively leaking onto the chemical operations floor. The inspectors observed that the floor was wet with yellowish liquid.

   It is recommended the System repair the leak at the sodium hypochlorite tank to prevent further degradation.

7. At the time of Inspection, the Topsail tank did not have a #24 mesh, non-corrodible screen on the tank overflow inside of the flapper valve.

   It is recommended the System install a #24 mesh, non-corrodible screen within the flapper valve on the tank overflow.

8. At the time of Inspection, the grading around the Topsail tank overflow discharge point did not allow for drainage of water away from the discharge point. The inspectors observed clear water lines in the overflow drainage chamber, indicating periods of standing water.

   It is recommended that the System ensure proper drainage away from the tank overflow discharge point.

9. At the time of Inspection, the inspectors observed the control panel lights on the four anthracite/sand filters had burned out. It appeared the panels were still operational.

   It is recommended that the System repair the filter control panel lights.

10. At the time of Inspection, inspectors observed logbooks inside each wellhouse, but they were mostly blank. NCDEQ representatives indicated that this was a recent state requirement to keep written logs in the wellhouse.

It is recommended that the System maintain accurate records of work completed at each wellhouse.

11. At the time of Inspection, inspectors observed that GAC pressure relief valves were overflowing, which resulted in constant running water on the concrete foundation. System representatives indicated that this water flows constantly when the GAC units are running, caused by backpressure from the elevation of the clearwells.

    It is recommended that the System address the issues at the GAC pressure relief valves and minimize as much water loss as possible.

12. At the time of Inspection, the solids removal system for one of the sedimentation basins was not operational at the time of the inspection. System representatives indicated that it will be fully operational soon. The inspectors observed clear sedimentation basin effluent.

    It is recommended that the System repair the solids removal system as soon as possible and minimize the strain on the filters.

Consistent with Section 1414(a)(1)(A) of the SDWA, 42 U.S.C. § 300g-3(a)(1)(A), the EPA is hereby notifying the System of the noncompliance it observed during its Inspection. This Notice of Noncompliance shall not be construed as a final agency action subject to judicial review under Section 1414(g) of the SDWA, 42 U.S.C. § 300g-3(g). The EPA reserves its rights to take any appropriate enforcement action, which may include issuance of administrative compliance orders under Section 1414(g) of the SDWA, 42 U.S.C. § 300g-3(g) or commencement of civil judicial actions under Section 1414(b) of the SDWA, 42 U.S.C. § 300g-3(b).

Request for Information

Section 1445(a)(1) of the SDWA, 42 U.S.C. § 300j-4(a)(1), and 40 C.F.R. § 141.31 authorize the EPA to require the submittal of information to determine whether a public water system is in compliance with federal drinking water regulations. Pursuant to this authority, the EPA hereby requests that the System provide the EPA with documentation of any actions that the System has taken to address each instance of noncompliance alleged herein within 14 calendar days of receipt of this letter. Such documentation may include, but need not be limited to, contracts, scopes of work, additional capital improvement project plans and/or evidence of actions taken to address these observations.

The EPA encourages the submission of this information in electronic format to Zach Shulman at Shulman.zachary@epa.gov. If portions are too large or responsive documents are unavailable in electronic format, please notify Zach Shulman in your electronic submission that additional information needs to be sent and to make arrangements for an alternative submission method.
Please be advised that, under Section 1445(c) of the SDWA, 42 U.S.C. § 300j-4(c), as amended by 40 C.F.R. § 19.4, Table 1 (Adjustment of Civil Monetary Penalties for Inflation), failure to provide the information required by this letter may result in a civil penalty of up to $69,733. In addition, under SDWA Section 1414(g), 42 U.S.C. § 300g-3(g), failure to provide the information required by this letter may result in an order requiring compliance.

Violation of such order may lead to sanctions under SDWA Section 1414, 42 U.S.C. § 300g-3(g)(3)(A) and 40 C.F.R. § 19.4, Table 1, which may include penalties of up to $69,733 per day of violation. The information provided in response to this letter may be used by the United States in any enforcement proceeding related to this matter.

The System may, if it so desires, assert a confidential business information (CBI) claim covering any, or all, the information furnished to the EPA in response to this letter. Every CBI claim must be made in a manner described in 40 C.F.R. § 2.203 and must be fully substantiated with documentary evidence which shows how the claim meets every criterion listed in 40 C.F.R. §§ 2.208 and 2.304. If no CBI claim accompanies the System's information when it is received by the EPA, it may be made available to the public by the EPA without further notice to the PWS. Further details, including how to make a business confidentiality claim, are included in Enclosure A.

Consistent with Sections 1414(a)(1) and 1445(a)(1)(B) of the SDWA, 42 U.S.C. §§ 300g-3(a)(1) and 300j-4(a)(1)(B), the EPA is also providing a copy of this Notice and Request for information to NCDEQ.

If you have any questions regarding this matter, please contact Zach Shulman, Drinking Water Enforcement Officer, at Shulman.zachary@epa.gov or (404) 562-855. For legal inquiries, please have your attorney(s) contact Samantha Kloc, Associate Regional Counsel, at kloc.samantha@epa.gov or (404) 562-9468.

Sincerely,

KERIEMA NEWMAN

Digitally signed by KERIEMA NEWMAN
Date: 2024.10.23 13:11:51 -04'00'

Keriema S. Newman
Director
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ENCLOSURE A

RIGHT TO ASSERT BUSINESS CONFIDENTIALITY CLAIMS

(40 C.F.R. Part 2)

Except for information which deals with the existence, absence, or level of contaminants in drinking water, you may, if you desire, assert a business confidentiality claim as to any or all of the information that the EPA is requesting from you. Applicable EPA regulations relating to business confidentiality claims are at 40 C.F.R. Part 2 and 40 C.F.R. § 2.304(e).

If you assert such a claim for the requested information, the EPA will only disclose the information to the extent and under the procedures set out in the cited regulations. If no business confidentiality claim accompanies the information, the EPA may make the information available to the public without any further notice to you.

40 C.F.R. § 2.203(b). **Method and time of asserting business confidentiality claim.** A business which is submitting information to the EPA may assert a business confidentiality claim covering the information by placing on (or attaching to) the information, at the time it is submitted to the EPA, a cover sheet, stamped or typed legend, or other suitable form of notice employing language such as “trade secret,” “proprietary,” or “company confidential.” Allegedly confidential portions of otherwise non-confidential documents should be clearly identified by the business and may be submitted separately to facilitate identification and handling by the EPA. If the business desires confidential treatment only until a certain date or until the occurrence of a certain event, the notice should so state.