



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
25063 CENTER RIDGE ROAD
WESTLAKE, OHIO 44145

DATE: June 16, 2025

SUBJECT: CLEAN WATER ACT INSPECTION REPORT
Village of Arlington WWTP, 18377 Township Road 71,
Arlington, Hancock County, Ohio, 45814

FROM: Anne Marie Vincent, Life Scientist
WECAB, Multimedia Section

THRU: Brooke Furio, Section Supervisor
WECAB, Multimedia Section

BASIC INFORMATION

Facility Name: Village of Arlington Wastewater Treatment Plant (WWTP)

Facility Physical Address: 18377 Township Road 71, Arlington, Ohio, 45814

Facility Type: Publicly Owned Treatment Works (Facultative 3-Cell Lagoon System)

NPDES Permit Number: OH0053171/2PA00050*ID

Effective Date: August 1, 2024

Expiration Date: July 31, 2029

Facility Registry Service (FRS) Number: 110009822834

Date(s) of Inspection: April 24, 2025

U.S. EPA Inspector(s):

1. Anne Marie Vincent, Lead Inspector/Life Scientist
2. Gabrielle Giampietro, Environmental Engineer
3. Jeremy Leggett, Life Scientist

Facility Representative(s):

1. Mike Palmer, Village of Arlington Mayor (Responsible Official)
2. Bryan Lloyd, Village of Arlington Wastewater Operator of Record
3. Josh Childs, Village of Arlington Water and Sewer Superintendent
4. Elliott Tyzzer, Village of Arlington Water/Drainage/Sewer Committee Chair

Other Participants:

1. Kevin Fahy (PE), Village of Arlington Consultant Engineer, Blanchard Design Associates, Inc.

Facility Contact Email Address(es)/Telephone Numbers:

1. Bryan Lloyd, voawatersewer@gmail.com, bdllloyd53@gmail.com / (419) 303-2096
2. Josh Childs, voawatersewer@gmail.com / (419) 348-3197
3. Mike Palmer mmpalmer83@aol.com / (419) 348-7944

Inspection Type: Clean Water Act (CWA) National Pollutant Discharge Elimination System (NPDES) Compliance Evaluation Inspection

Facility Notification:

- ☐ Unannounced Inspection
☒ Announced Inspection

Arrival	April 24, 2025	Time: 9:00 AM
Departure	April 24, 2025	Time: 1:45 PM

OPENING CONFERENCE**U.S. EPA Attendees:**

1. Anne Marie Vincent,
2. Gabrielle Giampietro,
3. Jeremy Leggett

Facility Attendees:

1. Bryan Lloyd,
2. Josh Childs,
3. Mike Palmer,
4. Kevin Fahy,
5. Elliott Tyzzer

- ☒ Presented Credentials to Village of Arlington representatives Bryan Lloyd, Josh Childs and Mike Palmer.
- ☒ Stated authority and purpose of inspection.
- ☒ Provided Confidential Business Information (CBI) notification to Bryan Lloyd, Josh Childs and Mike Palmer. No CBI was claimed.
- ☐ Provided US EPA Small Business Resource Information Sheet (See Closing Conference)
- ☒ Reviewed Cybersecurity Questions for Wastewater Facilities with the facility.

The following information within the report was obtained during the inspection interview and provided verbally by Bryan Lloyd unless otherwise noted. Discussion topics included, but were not limited to, facility operations and equipment, facility and equipment maintenance, parts inventories, standard operating procedures, staffing, recordkeeping, flow measurements, monitoring, sampling, the collection system, sanitary sewer overflows, combined sewer overflows, and pretreatment.

Facility Ownership: Village of Arlington

Mailing Address: 204 North Main Street, PO Box 699, Arlington, Ohio 45814

Responsible Official: Mike Palmer, Mayor/419-348-7944

Background:

NPDES Permit Compliance

Based on U.S. EPA Enforcement and Compliance History Online (ECHO) facility compliance data and the March 2025 DMR for the WWTP, the village self-reported effluent exceedances in 22 of 24 months from April 2023 through March 2025. There were no instances of late or missing DMRs reported. The ECHO Effluent Limit Exceedances Report for this timeframe summarizes the self-reported exceedance data for Outfall 001 for a total of 77 exceedances in the following parameters: Dissolved Oxygen (DO), pH, Total Suspended Solids (TSS), Total Phosphorus (Total P), Escherichia Coli (E. coli), Total Residual Chlorine and carbonaceous biochemical oxygen demand (CBOD5).

Receiving Stream Watershed Water Quality Impairments

The NPDES permit for the Village of Arlington WWTP identifies that Outfall 001 discharges to Buck Run Creek which is tributary to Lower Eagle Creek. This was verified during the inspection. Lower Eagle Creek is a tributary to the Blanchard River. Lower Eagle Creek (Assessment Unit ID: OH041000080302) is listed in Ohio EPA's CWA Section 303(d) List as impaired for the designated uses of "Recreation – Primary Contact", "Human Health – Fish Consumption", "Aquatic Life- Warmwater Habitat", and Aquatic Life – Modified Warmwater Habitat – Channel Modification". For the designated use of "Recreation - Primary Contact" the impaired parameter is identified as Escherichia coli (E. coli). For the designated uses of "Aquatic Life - Warmwater Habitat" and "Aquatic Life – Modified Warmwater Habitat – Channel Modification" the impaired parameters include Ammonia, Nitrate + Nitrite as N and Total Phosphorus. For the designated use of "Human Health – Fish Consumption" the cause is listed as unknown.

Facility Information: Process and Operations

The Village of Arlington WWTP ('Arlington' or 'WWTP' or 'Facility') is a 3-cell facultative partial-mix aerated lagoon system and is identified as a Class I treatment works facility. At the Main Pump House (approximately 900 feet east of the WWTP), wastewater from the Village collection system passes through a comminutor and is pumped via the lift station to the WWTP through a 6" PVC force main into the west end of Cell 1. Cell 1 has two rotor brush aerators and a location along its west bank where Brennfloc RE 5000 is added as a flocculant to aid in

phosphorus and total suspended solids control. Nature's Pond 4-In-One Plumbing, Septic & Sewage (bio-enzymatic additive) is also added here as a sludge reduction additive. Flow travels through Cell 1 and then into Cell 2 via gravity.

Cell 2 has a single 5-Horsepower torpedo-style aerator. Treated water from Cell 2 flows into Cell 3 via gravity. Treated water from Cell 3 exits the lagoon via gravity overflow and flows through a Parshall flume and into a chlorination/dechlorination unit. During the permit defined summer months, sodium hypochlorite (NaOCl) is used for chlorination in the first chamber of the chlorination/dechlorination unit. Sodium thiosulfate is added to the last chamber of the chlorination/dechlorination unit to provide dechlorination. After dechlorination, the effluent is discharged at Outfall 001 into Buck Run Creek.

The facility has an average design flow capacity of 0.168 million gallons per day (MGD), according to the facility NDPES permit. The sanitary sewer collection system is a separate sewer system, with no instances of combined sewer overflows. The sanitary sewer collection system includes three lift stations, one at the Main Pump House and 2 smaller lift stations. The WWTP does not receive sanitary flow from any satellite communities or from septage haulers. There are currently no industrial users within the collection system service area. However, there is a Village ordinance in place to address industrial users if one were to begin operating within the service area. The collection system has not experienced any backups or overflows in the last two years. According to Josh Childs and Mayor Palmer, the WWTP services approximately 560 residences which account for approximately 1,474 residents.

According to Mr. Loyd, Mr. Fahy and Mr. Childs, there is a substantial amount of inflow and infiltration (I & I) entering the sewer system due to old red clay tiles and rubberized putty joints and this is impacting the frequency of permit exceedance events. Mr. Llyod indicated that he is observing that permit exceedances appear to be correlated to rainfall events. Facility personnel use a portable pump at the Main lift station to the WWTP for additional pumping capacity to Cell 1 during prolonged rain events. The portable pump sends influent wastewater to Cell 1 through a second 6-inch auxiliary force main. According to Mr. Lloyd, the Village has been corresponding with the Ohio Environmental Protection Agency (Ohio EPA) to express the Village's preference to address the collection system I&I issues first before considering significant and costly plant upgrades in an effort to return to compliance.

TD Engineering, LLC completed an engineering report for the Village that examined several options to improve the performance of the WWTP and bring the plant back into compliance with its NPDES permit. The engineering analysis only looked at the WWTP, and did not include improvements relative to the off-site lift stations or the sanitary collection system. The engineering report does state that "The Village experiences a high degree of stormwater and groundwater inflow and infiltration (I&I) in their sanitary collection system... Saturated ground conditions often persist in the months of January through May and as a result, the average daily flowrate will be higher. When it rains or snows that daily flowrate quickly rises. In Arlington's

case, when the wet weather event ceases, the flow drops relatively slowly. This may indicate that much of the flow is due to infiltration of groundwater through joints in the sewers and sewer laterals.” According to Mr. Lloyd, the estimated costs associated with the various WWTP improvement projects presented in the engineering report were “high” and did not address the I&I issue, which the Village considers to be a contributing factor to the non-compliance at the WWTP. The Village believes that reducing the influent flow by addressing the significant I&I issues in the collection system will enable the plant to return to compliance. The Village allocated twenty thousand dollars for testing of the collection system, including video camera inspection of sewer lines, dye testing and smoke testing. Smoke testing and dye testing activities were completed in 2022. Results from that testing are being used to develop a map of priority problem areas within the Village where improvements can be made to address I&I.

According to Mr. Lloyd and Mr. Childs, based on sludge judge measurements in 2022, the sludge blanket in Cell 1 was approximately 20-inches thick. The sludge blankets in Cell 2 and Cell 3 were approximately 12-inches thick. The Facility has a 3-year schedule to analyze the solids/sludge blankets in the cells. The next cycle of sludge judge measurements will be conducted in 2025. The Village contracts with Industrial Fluid Management (IFM) to conduct the sludge sampling and analysis to recommend treatment adjustments for managing the sludge volumes through the implementation of bioaugmentation in Cell 1. Bioaugmentation occurs weekly with the addition of Nature’s Pond 4-In-One Plumbing, Septic & Sewage (bio-enzymatic additive) to promote sludge volume reduction. BoJhun Environmental Services is the laboratory that conducts the settleability and sludge characterization analyses when needed. According to Mr. Lloyd, the Village is not currently planning to remove any sludge solids from the cells, as it does not appear that the sludge levels would be contributing to the phosphorus or TSS exceedances. Brennfloc RE 5000 is added at the west bank of Cell 1 before treated water flows into Cell 2. This flocculant is added to aid in phosphorus and total suspended solids control, according to Mr. Childs. The Facility adds approximately 15 gallons of Brennfloc RE 5000 per day. Mr. Childs also stated that in 2024, Tilapia were introduced into the lagoon cells which helped reduce the amount of surface vegetation (duckweed, algae). The Facility may add Tilapia to the cells again in 2025.

Facility Operators and Operator Records

Mr. Lloyd is the primary Operator of Record for the WWTP (Class I treatment works facility). Mr. Lloyd holds a Class II certification. According to Mr. Lloyd, there is no formally designated back-up Operator of Record for the WWTP. If a back-up Operator of Record is needed on site, Mr. Lloyd asks one of the certified operators from the Bluffton, Ohio WWTP to assist at the Village of Arlington, as Mr. Lloyd is also employed as the Assistant Administrator in Bluffton, Ohio. According to Mr. Lloyd, he is on site at the Arlington WWTP as the Operator of Record at least 3 days a week for approximately 1 hour a day. As required by the facility’s NPDES permit and in accordance with rule 3745-7-04 of the Ohio Administrative Code, the minimum staffing requirements for the Arlington WWTP is 3 days a week for a minimum total time of 1.5 hours on site. As the primary Operator of Record, Mr. Lloyd is also responsible for entering the data

for the Daily Discharge Monitoring Reports (DMRs), signing the DMRs electronically and submitting them to Ohio EPA.

Daily operations, maintenance, sampling and monitoring as required by the permit are generally conducted by Josh Childs, Village of Arlington Water and Sewer Superintendent. Additional qualified staff trained to conduct daily operations, sampling and monitoring activities include Brett Price, Village of Arlington Streets and Park Commissioner and Ben Slough, Village of Arlington Parks Commissioner. Both Mr. Price and Mr. Slough have been trained on site by current and previous WWTP operations staff. Mr. Lloyd documents the Operator of Record site visits (including time entries) in a bound operator logbook. On-site daily activities associated with operations, maintenance, sampling, and monitoring are recorded in a separate bound logbook by Mr. Childs, Mr. Price or Mr. Slough. Copies of WWTP records such as the completed chain of custody forms, DMRs and sampling analytical reports are maintained at the Village of Arlington water plant office.

Monitoring and Sampling

Permit required monitoring, sampling locations (influent, effluent, upstream, downstream), sampling and monitoring procedures, procedures for cleaning sampling equipment, monitoring equipment calibration procedures, sample preservation protocols, and contract laboratory information were discussed with facility representatives. The Village uses BoJhun Environmental Services in Fostoria, Ohio for the analysis of the permit required samples.

FACILITY WALK-THROUGH OCCURRED:

Yes

Discussions and Observations:

Village of Arlington personnel including their consultant engineer, led by Bryan Lloyd and Josh Childs, conducted a facility walk-through for U.S. EPA. The facility walk-through included observations and discussions of the headworks at Main Pump House including the main lift station and comminutor (Photograph 1), influent, Cells 1, 2 and 3, location of Brennfloc RE 5000 dosing for Cell 1, chlorination/dechlorination unit, upstream and downstream sampling locations and Outfall 001. The inspection also included a visit to the drinking water plant office to observe the sample holding refrigerator. Noxious odors were not observed during the walk-through.

- Cells 1, 2 and 3: Observations of the three cells found no evidence of excessive scum build-up, grease, foam, or floating sludge in the cells (Photographs 2, 3, 4 and 6). In addition, there was no observable evidence of leakage through the berms, animal burrowing activity, or rooted, woody plant growth around any of three cells. The two rotor brush aerators in Cell 1 were operational. The torpedo-style aerator in Cell 2 was not operational. An electrician service appointment for the torpedo-style aerator had been previously scheduled for 4/25/2024. All 3 cells initially looked to have a normal

coloring when looking across the water surface; however, upon closer examination, all three cells were observed to have a greenish discoloration (Photographs 2, 3 and 4).

- Parshall Flume and Flow Measurement: The WWTP does not have a flow meter to measure daily effluent flow rates. According to Mr. Childs, the facility is measuring estimated daily effluent flow rates at the Parshall flume which is located between cell 3 and the chlorination/dechlorination unit just prior to flow entering the chlorination/dechlorination unit. The Parshall flume does not have a transducer for continuous measurement of the water level and flowrate. The measuring gauge to measure flow height in the flume is not permanently affixed to the flume sidewall. The measuring gauge is stored in a vertical pipe adjacent to the flume. To determine an estimated flow rate, an operator removes the measuring gauge from its storage pipe and manually holds it in place at the end of the diverging section of the flume to measure the height of flow. This measurement from the gauge is compared to a flume flow chart which converts the height measurement to an estimated instantaneous flow rate for the effluent. Mr. Childs stated that even under high flows, the Facility is able to maintain proper geometry for the Parshall flume in order to properly measure estimated flows. The daily estimated instantaneous flow rate is also used during the permit defined summer months for adjusting the chlorination/dechlorination unit chemical dosing.

In reviewing the daily DMRs from April 2024 through March 2025, seven out of twelve months (2024: April, May, June, July, August, December and January 2025) included reported daily flow rates that were greater than the WWTP's average design flow of 0.168 MGD. The numbers of days each month during this time frame with daily reported flow rates greater than 0.168 MGD and the range of those flows rates greater than 0.168 MGD were as follows: April 2024 - 11 days (0.2194 to 0.4835 MGD), May 2024 – 6 days (0.3424 to 0.4108 MGD), June 2024 – 4 days (all days reported as 0.1918 MGD), July 2024 – 4 days (0.2785 to 0.4108 MGD), August 2024- 2 days (both days reported as 0.3424 MGD), December 2024 – 1 day with a daily reported flow rate of 0.2785 MGD, and January 2025 – 2 days (both days reported as 0.6411 MGD). These months also had reported permit exceedances. For the same time period (April 2024 through March 2025), the months with monthly average flow rates reported on the daily DMRs that were greater than 0.168 MGD were April (0.20408 MGD) and May 2024 (0.189 MGD). However, it can also be noted, that the months of September through November 2024, which did not have reported daily flow rates greater than the average design flow, still had reported permit exceedances on the daily DMRs.

- Chlorination/Dechlorination Unit: The chemical feeds for chlorination and dechlorination were not operating at the time of the inspection as it was outside the permit defined months when the chemicals are used. Mr. Childs stated that when in use, chlorination and dechlorination chemical dosing is adjusted each day by the on-site personnel and the adjustments are based on the daily flow rate.

Flow from Cell 3 was observed entering the northwest corner of the chlorination/dechlorination unit through a parshall flume. Facility operators use a hand-held measuring gauge that is not permanently affixed to the flume sidewall to measure the height of the flow which is then converted to an estimated daily flow rate that is reported on the daily DMRs for the Outfall 001. After the flume, flow enters the chlorination/dechlorination unit and travels through multiple chlorine contact chambers to the final chamber where dechlorination occurs in the northeast corner of the unit. U.S. EPA observed grass clippings floating on the surface of the water in the chambers of the chlorination/dechlorination unit. Significant growth of organic material, on the overflow baffles for the chambers was also observed.

- Outfall 001/Receiving Stream: U.S. EPA did not observe any floating solids, oil sheen, or foam in the effluent discharging from Outfall 001 or in the receiving water and there was no noxious odor detected at the outfall (Photograph 11). However, the effluent discharge from Outfall 001 was observed to have a green discoloration. The green discoloration from the effluent was observed to extend from Outfall 001, downstream in the receiving water (Photograph 11). However, the discoloration was not present in the receiving stream at the downstream sampling location (road crossing at Fellowship Road adjacent to driveway entrance to WWTP). The green discoloration was not observed in the receiving waters, immediately upstream of Outfall 001 (Photograph 12). U.S. EPA and facility representatives drove to the upstream receiving water sampling location located near the village park at a road crossing over Buck Run Creek. At the time of the inspection there was no observed discoloration or floating debris at this upstream sampling location.

The receiving waters are accurately described in the permit. The Outfall 001 signage is in place at the receiving stream, is double sided and includes all permit required information on both sides of the sign.

Photographs: Photographs were taken during the inspection. A Digital Image Photograph Log is attached in Appendix A.

Field Measurements: Field Measurements were not taken during this inspection.

RECORDS

List of Records Reviewed Onsite:

If copies were provided to EPA during the inspection, the document will be identified with a (C) in the following list.

1. Current Operator of Record Logbook;
2. Class II Operator Certificate for Bryan Lloyd;
3. Daily Plant Operations Logbook;

4. Monthly Bench Sheets (daily flow readings and daily monitoring data for pH, Temperature, Dissolved Oxygen, and Residual Chlorine – when applicable), April 2024 – April 2025;
5. Chain of Custody (COC) forms and associated Laboratory Sample Analysis Reports (April 2024 through March 2025);
6. Copy of current NPDES Permit OH0053171;
7. Records for pH meter calibration;
8. TD Engineering, LLC *Arlington WWTP Improvements Preliminary Engineering Report - Final* (Undated); and
9. April 2024 Daily DMR.

List of Records Not Present at Inspection:

1. The facility does not currently have written procedures for responding to emergencies such as power failures, floods, fires, or extreme weather. Facility operators have begun developing standard operating procedures and contingency plans for these types of situations, according to Bryan Llyod.

List of Requested Documents to be Provided by Facility Following the Inspection:

Requested documents were to be provided to U.S. EPA by May 5, 2025.

1. Daily DMRs (February 2025 and March 2025);
2. Sanitary Sewer Overflow Annual Report for Reporting Year 2024;
3. COC forms and associated Laboratory Sample Analysis Reports (April 2024 through March 2025);
4. TD Engineering, LLC *Arlington WWTP Improvements Preliminary Engineering Report - Final* (Undated).

List of Documents Received from Facility after Inspection:

Received via e-mail on April 25, 2025.

1. Daily DMRs (February 2025 and March 2025);
2. Sanitary Sewer Overflow Annual Report for Reporting Year 2024;
3. COC forms and associated Laboratory Sample Analysis Reports (April 2024 through March 2025);
4. TD Engineering, LLC *Arlington WWTP Improvements Preliminary Engineering Report - Final* (Undated).

CLOSING CONFERENCE

Attendees:

1. Anne Marie Vincent, US EPA
2. Gabrielle Giampietro, U.S.EPA
3. Jeremy Leggett, U.S.EPA
4. Bryan Lloyd, Village of Arlington Operator of Record
5. Josh Childs, Village of Arlington Water and Sewer Superintendent

6. Mike Palmer, Mayor (Responsible Official)
7. Kevin Fahy, Village Engineer (Consultant)

- ☒ Provided U.S. EPA point of contact to the facility.
- ☒ Explained Inspection Report process.
- ☒ Confirmed the CBI status for information and records provided for the Inspection. No CBI claims were made by the facility representatives present.
- ☒ Discussed Preliminary Area(s) of Concern including: lack of temperature monitoring for sample holding refrigerator, grab samples are not cooled in between collection while conducting composite sampling, composite samples are not collected as flow proportionate samples, there is evidence of minor erosion on southern berm of Cell 3 due to geese nesting activity, aerator for Cell #2 is off-line, grass clippings were observed floating in chlorination/dechlorination unit, significant growth of organic material on overflow baffles within the chlorination/dechlorination unit, continued monitoring exceedances as reported on Daily DMRs, and green discoloration of effluent observed in the Outfall 001 discharge into Buck Run Creek.
- ☒ Reviewed list of requested document copies to be provided to U.S. EPA by May 5, 2025.
- ☒ Provided the U.S. EPA Small Business Resource Information Sheet to Mr. Lloyd.

AREAS OF CONCERN

1. NPDES Permit No. OH0053171 Part I. A identifies the permit limitations and monitoring requirements for Outfall 001, including but not limited to flow rate monitoring and discharge limitations for DO, pH, CBOD5, TSS, Total P, Total Residual Chlorine and E. coli.
 - a. According to a U.S. EPA ECHO Effluent Limit Exceedances Report for the WWTP, the village self-reported effluent exceedances in 11 of 12 months from April 2023 through March 2024. The ECHO Effluent Limit Exceedances Report for April 2023 through March 2024 identifies 48 permit limit exceedances for this period including 3 exceedances of DO daily minimum limit, 2 exceedances of pH daily maximum limit, 7 exceedances of the TSS weekly maximum limit, 4 exceedances of the TSS monthly average limit, 8 exceedances of the Total P weekly maximum limit, 13 exceedances of the Total P monthly average limit, 1 exceedance of the CBOD5 weekly maximum limit, 5 exceedances of the weekly geometric mean limit for E. coli, 2 exceedances of the monthly geometric mean limit for E. coli, and 3 exceedances of the Total Residual Chlorine daily maximum limit.
 - b. Based on the submitted DMR for March 2025 and the U.S. EPA ECHO facility report for the WWTP for April 2024 through February 2025, the village self-reported permit limit exceedances in 11 of 12 months. From April 2024 through March 2025, exceedance data for Outfall 001 identified 29 exceedances. The specific exceedances during this time period included 7 exceedances of the TSS weekly maximum limit, 8 exceedances of the TSS monthly average limit, 4 exceedances of the Total P weekly maximum limit, 6 exceedances of the Total P monthly average

limit, 2 exceedances of the CBOD5 weekly maximum limit, 1 exceedance of the CBOD5 monthly average limit and 1 exceedance of the weekly geometric mean limit for E. coli.

- c. According to Part I.A in the permit, the effluent flow rate for Outfall 001 is to be monitored continuously with a measurement taken once per day. The effluent flow rate at the WWTP plant is not monitored continuously. Facility personnel are determining the estimated daily effluent flow rate by measuring the height of flow in the Parshall flume with a measuring gauge that is manually placed at the end of the diverging section of the flume. This height measurement is then compared to a flume flow chart which converts the height measurement to an estimated instantaneous flow rate.
2. NPDES Permit No. OH0053171 Part III. 3. A states, "At all times, the permittee shall maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee necessary to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with conditions of the permit."
- a. Facility personnel are determining the estimated daily effluent flow rate with a measuring gauge that is manually placed at the end of the diverging section of the Parshall flume to measure the height of flow. This measurement is then compared to a flume flow chart which converts the height measurement to an estimated instantaneous flow rate. The primary point of head measurement for a Parshall flume should be in the converging section, upstream from the throat, at a distance of two-thirds the length of the sidewall measured from the back of the throat.
 - b. The WWTP engineering report completed by TD Engineering, LLC, also identifies concerns relative to the Parshall flume's orientation in order to achieve proper flow measurements and its usefulness only for determining estimated instantaneous effluent flow rates instead of continuous real time effluent flow rates.
 - c. The single 5-horsepower aerator in Cell 2 (Photograph 3) was not operational at the time of the inspection. According to Mr. Childs, a recent power surge caused an electrical issue which took the aerator offline. The facility already had a service appointment with an electrician scheduled for 4/25/2024 to repair the electrical issue.
 - d. U.S.EPA observed areas of minor erosion on the top edge of the southern berm for Cell 3 in bare areas with loss of grass cover (Photograph 5). Erosion appears to be impacted by previous and current nesting activities with incubating eggs from Canadian Geese on site.
 - e. U.S. EPA observed grass clippings floating in the chambers of the chlorination/dechlorination unit (Photograph 9). U.S. EPA also observed that the overflow baffles

in the chambers were covered with significant growth of organic material, possibly moss and algae. (Photographs 9 and 10). The effluent water in the final chamber of the chlorination/dechlorination unit appeared green in color.

- f. The permittee does not have a built-in emergency power generator on site for the WWTP. The main lift station, one of the smaller lift stations in the collection system and the WWTP have electrical hook-ups for portable generators to be tied into those systems to provide emergency power when needed. The second smaller lift station in the collection system does not have a mechanism for back-up power.
 - g. The permittee does not maintain written procedures for responding to emergencies such as power failures, floods, fires, and other natural disasters. According to Mr. Lloyd, the facility has begun developing standard operating procedures and contingency plans for these types of events.
3. NPDES Permit No. OH0053171 Part II. E states, "The permittee shall maintain in good working order and operate as efficiently as possible the "treatment works" and "sewerage system" as defined in ORC 6111.01 to achieve compliance with the terms and conditions of this permit and to prevent discharges to the waters of the state, surface of the ground, basements, homes, buildings, etc."
- a. According to facility representatives and the TD Engineering, LLC report, there is a substantial amount of I&I entering the sewer collection system which is impacting influent flows and the frequency of permit exceedances. Mr. Lloyd also indicated that there is an apparent correlation between the frequency of exceedances and rainfall events. Based on a review of the DMRs submitted by the Facility to Ohio EPA from April 2024 through March 2025, the months of September 2024, October 2024 and November 2024, did not have reported daily flow rates greater than the average design flow of the WWTP. However, although there were no reported daily flow rates greater than the WWTP's average design flow (0.168 MGD) during these three months, the DMRs reported values exceeding permit limits for TSS and E. coli.

The Village prefers to focus on addressing the I&I issues within the collection system before considering significant and costly plant upgrades in an effort to return to compliance and has discussed this with Ohio EPA. The Village has completed initial dye and smoke testing to begin identifying I&I problem areas within the system.

4. NPDES Permit No. OH0053171 Part II. F. states "Composite samples shall be comprised of at least three grab samples proportionate in volume to the sewage flow rate at the time of sampling and collected at intervals of at least 30 minutes, but not more than 2 hours, during the period that the plant is staffed on each day for sampling. Such samples shall be collected at such times and locations, and in such fashion, as to be representative of the facility's overall performance."

- a. According to Mr. Lloyd and Mr. Childs, permit required composite samples are not collected as flow proportionate samples. The composite samples are comprised of three grab samples that are collected 30 minutes apart. The three grab samples are composited in a 5-gallon plastic bucket. The liquid in the 5-gallon bucket containing the 3 composited grab samples is poured off into individual sample bottles which are sent for laboratory analysis.
5. NPDES Permit No. OH0053171 Part III. 5. states "Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored flow. Test procedures for the analysis of pollutants shall conform to regulation 40 CFR 136, "Test Procedures For The Analysis of Pollutants" unless other test procedures have been specified in this permit."
 - a. According to Mr. Lloyd and Mr. Childs, after collection is complete, sample containers are transported to the Arlington water plant in a portable cooler and the containers are placed in the on-site sample holding refrigerator while waiting to be retrieved by the contract laboratory personnel. During the inspection, U.S.EPA visually observed that the sample holding refrigerator at the Arlington water plant for storage of the permit required WWTP samples does not have a temperature display or a thermometer present to verify that samples are being maintained and preserved at less than or equal to 6° C (E. coli samples must be maintained and preserved at less than 10° C) as required per Table II "Required Containers, Preservation Techniques, and Holding Times" (Footnote 18), in 40 CFR Part 136.3.
 - b. Mr. Childs also stated that the combined grab sample volumes placed in the 5-gallon bucket for composite sampling are not cooled during the compositing process in between the collection of each of the three individual grab samples. Table II "Required Containers, Preservation Techniques, and Holding Times" (Footnote 2), found in 40 CFR Part 136.3 states that "For a composite sample to be split into separate aliquots for preservation and/or analysis, maintain the sample at ≤ 6 °C, unless specified otherwise in this Table II or in the method(s), until collection, splitting, and preservation is completed."

Mr. Childs stated that the sample collection procedure will be updated to address cooling the three grab samples during the compositing process.

6. NPDES Permit No. OH0053171 Part III. 2. C. states "The effluent shall, at all times, be free of substances: In amounts that will alter the natural color or odor of the receiving water to such degree as to create a nuisance;..."
 - a. The effluent discharge from Outfall 001 was observed to have a green discoloration. The green discoloration from the effluent was observed to extend from Outfall 001, downstream in the receiving water. The discoloration was not present in the receiving waters at the downstream sampling location (road crossing over Buck Run Creek, just north of the WWTP driveway entrance), approximately 900 feet west of Outfall 001.

DIGITAL SIGNATURES

Inspector/Report Author: Anne Marie Vincent, Life Scientist/Inspector

Inspector/Report Author Signature/Date: ANNE VINCENT Digitally signed by ANNE VINCENT
Date: 2025.06.16 15:51:20 -04'00'

Section Supervisor: Brooke Furio, Multimedia Section Supervisor

Section Supervisor Signature/Date: BROOKE FURIO Digitally signed by BROOKE FURIO
Date: 2025.06.17 06:36:42 -04'00'

Facility Name: Village of Arlington WWTP

Facility Location: 8176 State Route 235, Arlington, Ohio 45812

Date of Inspection: February 29, 2024

APPENDICES AND ATTACHMENTS

1. Appendix A: Digital Image Photograph Log
2. Appendix B: WWTP Flow Diagram

Facility Name: Village of Arlington WWTP

Facility Location: 8176 State Route 235, Arlington, Ohio 45812

Date of Inspection: February 29, 2024

APPENDIX A:

DIGITAL IMAGE PHOTOGRAPH LOG

Village of Arlington Wastewater Treatment Plant (WWTP)
U.S. EPA Clean Water Act Compliance Evaluation Inspection
4/24/2025

All photos taken by Anne Marie Vincent, Life Scientist/Inspector, U.S. EPA
Camera: Nikon CoolPix W300 (Serial Number: 31034297)



1: DSCN4324

Description: View from WWTP looking towards the Main Pump House (gray building at center of photograph) that houses the main lift station for the plant. The lift station is designed with a comminutor that grinds any solids and debris in the influent flows.

Location: Arlington WWTP Rear Gravel Parking Lot

Camera Direction: East

Date/Time: 4/24/2025 / 11:49 AM ET



2: DSCN4325

Description: Two S&N Airoflo 2600 Series rotor brush aerators are located in Cell 1.

Location: Cell 1

Camera Direction: West

Date/Time: 4/24/2025 / 11:52 AM ET



3: DSCN4326

Description: A single torpedo-style aerator (5 horsepower) is deployed near the northeast corner of Cell 2. The Cell 2 aerator was offline at time of inspection due to a previous power surge. Electrician service appointment for aerator was already scheduled to occur on 4/25/2024.

Location: Cell 2

Camera Direction: North West

Date/Time: 4/24/2025 / 11:59 AM ET



4: DSCN4327

Description: Location along the west bank of Cell 1 where Brennfloc RE 5000 flocculant is added at the gravity overflow from Cell 1 into Cell 2 to aid in phosphorus and total suspended solids control. Nature's Pond 4-In-One Plumbing, Septic & Sewage (bio-enzymatic additive) is also added at this location as a sludge reduction additive.

Location: West Bank of Cell 1

Camera Direction: East

Date/Time: 4/24/2025 / 12:04 PM ET



5: DSCN4328

Description: EPA observed loss of grass cover and erosion along the top of the southern berm of Cell 3, between Cell 2 and Cell 3.

Location: Berm area between Cell 2 and Cell 3

Camera Direction: North

Date/Time: 4/24/2025 / 12:08 PM ET



6: DSCN4329

Description: Overview of Cell 3.

Location: Cell 3

Camera Direction: West

Date/Time: 4/24/2025 / 12:11 PM ET



7: DSCN4330

Description: When required May through October, the facility drips sodium hypochlorite directly into the inlet to the first contact chamber for the Chlorination/Dechlorination Unit.

Location: Parshall Flume at Influent Inlet to First Contact Chamber of Chlorination/Dechlorination Unit.

Camera Direction: Down

Date/Time: 4/24/2025 / 12:14 PM ET



8: DSCN4331

Description: The measuring gauge for the Parshall flume at the influent to the Chlorination /Dechlorination Unit is not permanently affixed to the flume sidewall. The measuring gauge is stored in a vertical pipe adjacent to the flume.

Location: Flume Location at Influent to First Contact Chamber of the Chlorination/Dechlorination Unit

Camera Direction: North/Down

Date/Time: 4/24/2025 / 12:14 PM ET



9: DSCN4332

Description: Chlorination/Dechlorination Unit consists of four overflow baffles and three underflow baffles. EPA observed accumulated grass clippings floating on the surface of the water within three of the chambers of the Chlorination/Dechlorination Unit. Concrete overflow baffles were observed to have significant organic growth covering the tops of the baffles.

Location: Chlorination/Dechlorination Unit

Camera Direction: South/Down

Date/Time: 4/24/2025 / 12:15 PM ET



10: DSCN4333

Description: View of the dechlorination chamber. From May through October, sodium thiosulfate is dripped into this final chamber to dechlorinate the flow before it is discharged from the Chlorination/Dechlorination Unit to the final outfall. The white plastic tubing for adding sodium thiosulfate can be seen in the upper left corner of the photograph. The outlet from the dechlorination chamber is the white PVC pipe in the lower left corner of the photograph.

Location: Chlorination/Dechlorination Unit

Camera Direction: Down

Date/Time: 4/24/2025 / 12:16 PM ET



11: DSCN4334

Description: Outfall 001 discharge into Buck Run Creek. EPA observed a green discoloration from organic matter coating the rip rap rocks below the Outfall 001 outlet and a plume of green discoloration within the receiving waters where flow from Outfall 001 enters the waterway. U.S. EPA noted that at the downstream sampling location at the Fellowship Road overpass, the discoloration was no longer present in the receiving waters.

Location: Outfall 001

Camera Direction: Northwest/Down

Date/Time: 4/24/2025 / 12:21 PM ET



12: DSCN4335

Description: View of Buck Run Creek upstream of Outfall 001. No discoloration present.

Location: Immediately Upstream of Outfall 001

Camera Direction: Northeast/East

Date/Time: 4/24/2025 / 12:21 PM ET

Facility Name: Village of Alger WWTP

Facility Location: 8176 State Route 235, Alger, Ohio 45812

Date of Inspection: February 29, 2024

APPENDIX B:

WWTP FLOW DIAGRAM

VILLAGE OF ARLINGTON Wastewater Treatment Facility

