INSPECTION REPORT

Inspection Entry Date/Time	11/08/2022 09:00 AM (ET)	Announced: Yes
Inspection Exit Date/Time	11/08/2022 12:20 PM (ET)	Access: Granted
Weather	Day 1 – Sunny, Chilly, 42° F	
Media	Water	
Statute(s)/Program(s)	Clean Water Act, NPDES, WWTP	
Type of Inspection	CEI - Compliance Evaluation Inspection	
Permittee Name	Scioto County Board of Commissioners	
Facility or Site Name	Purtee Acres WWTP	
Facility/Site Physical Address	1951 Kittle Road	
City, State, Zip Code	Wheelersburg, OH 45694	
County/Borough/Parish	Scioto County	
Facility GPS Coordinates	38.769135, -82.783967	
Mailing Address (If different)	602 Seventh Street, Room 104 Court House	
City, State, Zip Code	Portsmouth, Ohio 45662	
FRS ID	110006276564	
Permit Number(s) (If Applicable)	OH0050865	
SIC and/or NAICS	4952	

Regulatory Representatives Participating in Inspection:

Title	Name	Organization
Inspector	Megan Zale	EPA Region 5

Lead Inspector:

Anne Marie Vincent	ANNE VINCENT Digitally signed by ANNE VINCENT Date: 2023.01.12 18:59:13 -05'00'		
	EPA Region 5	vincent.annemarie@epa.gov	(440) 250-1720

Supervisor Review:

Brooke Furio	BROOKE FURIO Digitally signed by BROOKE FURIO Date: 2023.01.12 19:06:28 -05'00'		
	EPA Region 5	furio.brooke@epa.gov	(440) 250-1705

SECTION I – INTRODUCTION

Site Entry and Inspection Objectives

EPA Region 5 Lead Inspector Anne Marie Vincent, arrived at the Purtee Acres WWTP (the "Site" or "Facility"), located at 1951 Kittle Road, Wheelersburg, OH 45694, at 09:00 AM (ET) on 11/08/2022 for an announced inspection. EPA Region 5 Lead Inspector presented credentials to Scioto County Engineers: Ryan Smith, and Jonathan McKenzie; and informed them that this was an EPA Region 5 inspection to determine compliance as authorized by Clean Water Act (CWA) Section 308 and implementing regulations. This report is based on information supplied by Purtee Acres WWTP representatives, direct observations made by the EPA Region 5 inspectors, records and reports maintained by the permittee and other information including: photographs taken by EPA Region 5 inspectors, physical evidence collected by the EPA Region 5 inspectors, measurements taken by EPA Region 5 inspectors, verbal or written statements made by information supplied by Purtee Acres WWTP representatives during or subsequent to the on-site inspection, and materials, processes, data, photographs, or documents shown, demonstrated, or submitted to the EPA Region 5 inspectors by Purtee Acres WWTP representatives during or subsequent to the on-site Inspection. In addition, information gathered prior to or subsequent to the Inspection from a review of EPA, State, and/or public records may be included in this report.

Attendees

Organization	Attendee Name	Title	Contact Information	Present Opening Conference	Present Closing Conference
EPA Region 5	Anne Marie Vincent	Lead Inspector	Vincent.annemarie@epa.gov 440-250-1720	Yes	Yes
EPA Region 5	Megan Zale	Inspector	Zale.megan@epa.gov 440-250-1711	Yes	Yes
Scioto County Sewage Department	Ryan Smith	Treatment Coordinator/Back-up Operator (Purtee Acres)	wheelersburglab@yahoo.com 740-357-7935	Yes	Yes
Scioto County Sewage Department	Jonathan McKenzie	Back-up Operator (Purtee Acres) /Part Time Lab Technician-Wheelersburg WWTP	wheelersburglab@yahoo.com 740-716-8250	Yes	Yes

Inspector Vincent advised Ryan Smith that he had a right at any time during or after the inspection to make a claim of confidential business information (CBI) for any facility information, inspection photographs or document copies that may be collected during or after the inspection. Mr. Smith did not make any claims of confidentiality during the inspection. Mr. Smith explained that the assigned primary Operator of Record for the plant, Mr. Jeff Cox (Class II Operator) (Telephone 740-961-1632), was not available for the inspection. As the assigned back-up operators for the Purtee Acres WWTP, Ryan Smith and Jonathan McKenzie were present for the inspection in Jeff Cox's absence.

Facility/Site Description

National Pollutant Discharge Elimination System (NPDES) Permit

The facility operates under NPDES Permit No. OH0050865. The current NPDES permit expires April 30, 2023. The permit was initially issued on April 4, 2018. Since the NPDES permit was issued in 2018, a new SBR WWTP has been built. Mr. Smith also stated that the County has not submitted the NPDES permit renewal application yet, because they were waiting for the new WWTP to be completed and operational. Ryan Smith anticipates that the permit renewal application will be submitted shortly after the start of 2023. The permit covers discharges from Outfall 001. According to the permit, Outfall 001 discharges to an unnamed tributary to Wards Run. Wards Run is tributary to Little Scioto River. Wards Run-Little Scioto River (Assessment Unit ID: OH050901030605) is listed in Ohio EPA's CWA

Section 303(d) List as impaired for the designated use of "Human Health - Fish Consumption." For the designated use of "Human Health - Fish Consumption" the primary pollutant is identified as polychlorinated biphenyls (PCBs).

According to a US EPA Enforcement and Compliance History Online (ECHO) facility report, the facility has self-reported effluent limit/other violations in 10 of the past 12 reporting quarters showing Significant Noncompliance (SNC) Reporting Quarters 1 (2019); Reporting Quarters 2 and 3 (2020); Reporting Quarters 8 and 9 (2021); and Reporting Quarters 1, 2 and 3 (2022) and "Violation Identified/Other Violation" for non-Reportable Noncompliance (non-RNC) violations in Reporting Quarters 5 (2020) and 7 (2021). According to ECHO data, SNC violations and effluent violations that did not rise to the SNC/RNC level were self-reported for Outfall 001 for the total ammonia-nitrogen effluent monthly average limit and effluent non-monthly average limit. There were also self-reported exceedances of the effluent monthly average limit and non-monthly average limit for carbonaceous biochemical oxygen demand 5-day (CBOD5) during Reporting Quarters 1 and 11 and an exceedance of the effluent non-monthly average limit for total suspended solids (TSS) in Reporting Quarter 1. The ECHO facility report indicates a "Failure to Report DMR - Not Received" in Reporting Quarter 1 (2019) as a result of missing daily discharge monitoring reports (DMRs) from the previous 2 years which were still unresolved at the end of Reporting Quarter 1. The ECHO Effluent Limit Exceedances Report for Purtee Acres summarizes that there were 24 exceedances of the total ammonia-nitrogen monthly average limit, 29 exceedances of the total ammonia-nitrogen non-monthly average limit (weekly maximum), 2 exceedances of the CBOD5 monthly average limit, 2 exceedances of the CBOD5 non-monthly average limit (weekly maximum), and 1 exceedance of the total suspended solids non-monthly average limit (weekly maximum) for the facility from October 2019 - September 2022.

General Facility Information

Responsible official	Scioto County Commissioners
WWTP Design Capacity & Average Daily Flow	The previous design capacity, as identified in the current permit is 0.04 MGD. Ryan Smith stated that the design capacity of the newly constructed WWTP is approximately 0.04 MGD with a peak flow of .150 MGD.
WWTP Approx. # of residents served	The WWTP serves a housing subdivision of approximately 100 homes.
Outfalls: (and do the numbers, locations, and receiving waters match the permit?)	The numbering and location of the permitted outfall (Outfall 001) for the newly constructed WWTP is the same number and location as it was for the original plant and matches the permit descriptions. The receiving water for Outfall 001, an unnamed tributary to Ward's Run, matches the identified receiving water in the permit.
Operation schedule (days of operation, # shifts/day, # operators/shift, coverage overnight, weekends & emergencies), and is staffing sufficient for proper operation?	According to Ryan Smith, an operator is on site 7 days-a-week (for a total of at least 1.5 hours per week) to check the manual bar screen and general operations at the plant and conduct any necessary monitoring or sampling when required. Part II A.3. identifies a minimum staffing requirement for the operator of record being present on site for three days for a minimum of 1.5 hours per week. There is also an additional requirement for daily site visits at least 5 days per week by the permittee, his representative, agent, or operator of record.
Do you use in-house or contract out for laboratory analyses? (including for metals or WET testing?)	A contract lab, MASI Environmental Laboratories conducts the sample analyses for Total Kjeldahl Nitrogen, Total Nitrite plus Nitrate and Total Phosphorus. The in-house laboratory at the Wheelersburg WWTP analyzes the remaining parameters for the permit.
Do you accept waste from septage haulers?	No

Is there currently any portion of the treatment train that is non-operational?	The post-aeration unit associated with the chlorination/de-chlorination contact chamber (part of the original WWTP) is currently off-line. When the new electric lines were installed for the new WWTP SBR structure, the old electric lines were demolished which caused a loss of power to the post-aeration unit. All other operational units of the treatment train for the newly constructed WWTP are fully operational. The old WWTP has not been demolished and is not receiving flow since the new WWTP was brought online 10/31 - 11/1/2022.
Are there any plans for renovation or additional equipment to allow for increased wastewater flow?	The newly constructed WWTP began operating 10/31 - 11/1/2022. Construction began in 2020.
Industrial Users	None.
Type(s) of primary flow measuring device(s)?	Influent flow is measured by an in-line magmeter. The specific brand was not known at the time of inspection. According to Ryan Smith, the total daily flow is recorded each day and the daily totalizer reading resets every 24 hours. There is no effluent flow measuring device.
Backup electrical power source, and does it turn on automatically?	There are no back-up/stand-by power units on site. In the event of a power outage, the Scioto County Sanitary Engineering Department has multiple portable generators available at the Wheelersburg WWTP, Lucasville WWTP and other locations within the county that can be brought to site for emergency power.
Have any hydraulic overloads occurred at the plant?	None.
Have any bypasses or overflows happened at the plant or in the collection system in the last year?	None reported. The newly constructed WWTP does not have a bypass structure.
What sort of failure alarm does the plant have?	There is an alarm horn and alarm lights system currently in place. The next-door neighbor to the northeast of the plant will call in to the county engineers to let them know of alarms. Once the new online SCADA system for plant operations is installed, assigned personnel will receive an auto-dial notification that there are alarms at the plant. Ryan Smith expects the SCADA system to be installed in the next quarter of the year.

According to Ryan Smith, the previous WWTP for Purtee Acres was a standard package plant design installed by the owner of the Purtee Acres subdivision. Initially, the facility was referred to as the “Toft” WWTP. The Scioto County Sewage Department (County) eventually took over ownership and operation of the Purtee Acres WWTP as part of their sewer district. According to Ryan Smith, occasionally, internal county documentation such as bench sheets or monitoring sheets use “Purtee Acres” and “Toft” interchangeably. During the early 2000s, the County had an inflow and infiltration (I&I) issue at several package plants, including Purtee Acres. According to Mr. Smith, once the I&I issues outside of the package plants were resolved, the County conducted another study of the system and found that I&I into the structures at the package plants themselves was the largest remaining contributing factor to I&I. In 2017, the County began the engineering design for a new WWTP at Purtee Acres. By 2018, the funding for the new WWTP was in place through USDA. Construction of the new Aqua-Aerobic sequencing batch reactor (SBR) WWTP began in 2020 (Photograph DSCN4079.JPG) and was completed in the fall of 2022. The total cost of the new Purtee Acres WWTP was $1,375,880.00, according to

information provided by Ryan Smith via e-mail after the inspection. The Covid-19 pandemic and associated supply chain issues delayed the construction timeline. The arrival of necessary computer chips and aluminum plating were the most recent delays prior to the initial start-up. The new Aqua-Aerobic SBR WWTP began operations on October 31/ November 1, 2022. According to Mr. Smith, in the first 24 hours of start-up, there was an issue with an electronic valve sticking due to being new, but that issue was immediately addressed and resolved.

The previous WWTP units are still in place onsite but are scheduled to be demolished over the next several months, weather permitting. Although the new WWTP was designed without including sand filter beds, the County is considering the option of cleaning out the four sand filter beds remaining from the previous WWTP and using them during large storm events to prevent short cycling in the SBRs of the plant. Mr. Smith stated that the sand filter beds would only be re-used if the renewed NPDES permit in 2023 is written to allow for the use of the filter beds as an "as needed" option, not a requirement for daily operations. If the sand filter beds are re-used and included in the renewed permit, they would only be added to the treatment train for storm events and would not be used for normal daily sanitary flows.

The current NPDES permit identifies the average design flow for the previous WWTP as 0.040 million gallons per day. If the average design flow for the new SBR WWTP is different than the original plant, this value will need to be updated in the NPDES permit renewal to reflect the change. According to Ryan Smith, the estimated peak daily design flow of the new WWTP is approximately 150,000 gallons-per-day (0.150 million gallons-per-day). According to Mr. Smith, the total influent flow measurement for November 7, 2022, based on the control panel read-out, was 14,000 gallons. At the time of the inspection on November 8, 2022, the influent flow reading was approximately 10,000 gallons. Ryan Smith stated that typically, the dry weather influent flows can be between 17,000 and 20,000 gallons-per-day.

The current NPDES permit identifies the previous Purtee Acres WWTP as a Class I treatment works. Based on the average design flow of 0.1 MGD for the new WWTP, the facility could still be classified as a Class I treatment works (Ohio Administrative Code Rule 3745-7-04). Currently, Mr. Jeff Cox is the primary Operator of Record for the Purtee Acres WWTP, and he is a Class II Certified Operator. The back-up Operators of Record for the WWTP are Jonathan McKenzie (Class I Certified Operator) and Ryan Smith (Class III Certified Operator). Ryan Smith is also the Treatment Coordinator for the Scioto County Sewage Department. Jonathan McKenzie is an operator and a part-time laboratory technician for the Wheelersburg WWTP. According to Ryan Smith, any new operators are initially trained at the Wheelersburg WWTP which is operated by the County. After training at the Wheelersburg WWTP for a period of time, the operators spend time training at the smaller WWTPs/package plants within the County system.

According to Ryan Smith, a printed copy of the NPDES permit is not maintained on site, as there is no office area on site. However, the operators have online access to an electronic copy of the NPDES permit. The County has considered the possibility of constructing some type of enclosed personnel office space on site now that the new WWTP has been built.

According to Ryan Smith, the primary Operator of Record, or a back-up Operator of Record for the Purtee WWTP fills out the electronic DMRs (e-DMRs) each month. However, as the designated Responsible Official, Ryan Smith reviews the e-DMR entries and then he signs and submits the final DMRs to the Ohio Environmental Protection Agency. The primary Operator of Record or one of the back-up Operators of Record (Class I or Class III Certified) is on site 7 days per week, for a minimum of at least 1.5 hours per week, to check the manual bar screen at the headworks, the general operations at the plant, and conduct any necessary monitoring or sampling when required. Part II A.3.of the NPDES permit identifies a minimum staffing requirement for an operator of record being present on site for three days per week for a minimum of 1.5 hours per week. The permit also has an additional requirement for daily site visits at least 5 days per week by the permittee, his representative, agent, or operator of record. According to Ryan Smith, on-site hours for each visit are recorded in the operator logbooks. Once the SCADA system is installed and connected for the new WWTP, Mr. Smith

explained that there will also be a key fob reader at the WWTP to log an operator's time in at the plant and time out at the plant, but this system was not in place at the time of the inspection.

WWTP Operations

The new WWTP includes a control panel for the headworks, manual bar screen, wet well/pump station, valve pit, in-line magmeter flow meter on the wastewater force main from the wet well, a control panel for each SBR, 2 Aqua-Aerobic SBR units (venturi aerator and decanter unit in each), a sludge holding tank/digester, chlorination/de-chlorination contact chamber and a post-aeration unit (currently off-line). There are no constructed wastewater bypasses at the WWTP. The newly constructed treatment units for the WWTP are all operable. However, the original post-aeration system at the chlorination/de-chlorination contact chamber is currently not operational. New electric lines need to be hooked up to return the post-aeration unit to operation.

The pump station at the wet well for the new WWTP has 2 pumps set up as alternating lead/lag pumps. Each pump is rated at 250 gallons per minute. The valve pit houses a check valve that allows the operators to bypass the wet well pumps if there was an operational problem and use portable pumps and generators to pump the wastewater to the SBR units. There are 2 electronic valves at the SBR structure which determine which SBR unit receives the incoming wastewater flow. Each SBR unit has a capacity of 26,000 gallons. The Aqua-Aerobic SBR units do not use blowers for aeration. A dissolved oxygen meter in each SBR is programmed to activate a venturi in each SBR that aerates the wastewater. The SBRs are set to complete a full cycle five times per day. Decant water from SBR 1 and SBR 2 flows directly to the chlorination/de-chlorination contact chamber via the white PVC pipe running along the top of the sand filter beds' sidewall. With the construction of the new WWTP, this decant water line was disconnected from the previous sand filter beds and is now plumbed directly to the chlorination/de-chlorination contact chamber. The sand filter beds from the original wastewater treatment plant are no longer receiving decant water from the old WWTP clarifier and are not currently part of the design of the new WWTP. The decant water remaining in two of the four sand filter beds was still filtering through the sand filter beds during the inspection; and the filtered water flows directly to the chlorination/dechlorination contact chamber.

According to Ryan Smith, large storm events can shorten the SBR cycles. The sludge holding tank/digester was constructed without a decanter. Therefore, the sludge holding tank is decanted manually, using a submersible pump that is lowered into the sludge holding tank to pump decant water off into one of the two SBRs. On the north side of the WWTP structure, there is a pump-out connection to withdraw sludge from the sludge holding tank/digester. SBR1, SBR2 and the sludge holding tank/digester each have a sonar level sensor and a back-up float level indicator that send level information to the computerized control panels. The operators manually add chlorine tablets to the chlorination/de-chlorination contact chamber.

There are no back-up/stand-by power units on site. In the event of a power outage, the Scioto County Sewage Department has multiple portable generators available at the Wheelersburg WWTP, Lucasville WWTP and other locations within the county that can be brought to site for emergency power. There is an alarm system that consists of lights and audible alarms currently in place at the WWTP. The adjacent neighbor to the northeast of the plant will also call in to the county sewage department to let them know of alarms that occur at the plant, according to Mr. Smith. Once the new online SCADA system for plant operations is installed, assigned personnel will receive an auto-dial notification that there are alarms at the plant. Ryan Smith expects the SCADA system to be installed and programmed in the next several months for remote monitoring of the facility. The SCADA system will also allow operators to check on WWTP operations and influent flow rates from any computer or smartphone for monitoring purposes. Operators will still be on site to meet the minimum staffing requirements, conduct maintenance, monitoring, and sampling activities, and make any needed operational adjustments to the plant controls after the SCADA is operational. There is no office area or enclosed work area onsite and as such emergency contact telephone numbers are not posted on site. According to Ryan Smith, operators know

to call him when emergencies occur so that he can contact the proper regulatory agencies including Ohio EPA and US EPA when necessary.

The previous WWTP structures for Purtee Acres are still in place on site. The wastewater remaining in the original WWTP treatment units will be pumped into the headworks to the new WWTP, prior to the bar screen, before the old treatment units are demolished. The sludge in the clarifier for the previous WWTP will also be removed and transported to the Wheelersburg WWTP for processing and disposal before the clarifier is demolished.

Operators are on site 7 days a week to make daily observations of key operating parameters (i.e., sludge age, flow rate, sludge settleability etc), WWTP treatment units (i.e., SBRs, sludge holding tank/digester, chlorination/de-chlorination contact chamber) and Outfall 001; and, make any necessary adjustments to operational controls in order to properly manage those parameters and treatment units. For example, Mr. Smith stated that if there are issues observed with the settleability of sludge, the operator would manually check settleability with a sludge judge and adjust operational parameters as needed. According to Ryan Smith and Jonathan McKenzie, an onsite operator logbook is used to document daily site activities that are completed including tasks such as maintenance, sampling, site inspection observations, and actions taken to mitigate any operational problems identified at the WWTP. The onsite hours for the operators are documented in the onsite operator logbook for each day. For the previous WWTP, the operators maintained personal operator logbooks to record hours on site, site activities and operation information. The individual, personal operator logbooks were not specific to the Purtee Acres WWTP site and contained entries for operator days at multiple WWTP sites. These personal operator logbooks for the previous Purtee Acres WWTP stayed with the individual operators in their vehicles. The current site-specific bound operator logbook for Purtee Acres is kept in the control panel for the headworks of the plant. Operators also keep a monthly monitoring log sheet (loose paper) which is used to record daily plant flow rates, and monitoring results for temperature, dissolved oxygen, pH, total residual chlorine (summer only) and turbidity (Photograph DSCN4077.JPG) for each month. The monthly monitoring log sheets do not identify who made each written entry or what time the data was collected. As it is used for a current month, the log sheet is stored with the bound operator logbook inside the control panel for the headworks of the WWTP. All other site records including documents such as past monthly monitoring log sheets, past operator logbooks, chain of custody copies, operator certificates and sludge hauling records are maintained at the Wheelersburg WWTP, which serves as a central location for records filing for the multiple WWTPs operated by the County.

The parts department at the Wheelersburg WWTP maintains an inventory of spare parts for all WWTPs operated by the County. The spare parts include items such as bearings, seals, pumps, valves, and replacement parts for the Aqua-Aerobic SBR units. The According to Ryan Smith, the county also has two area businesses that can rebuild parts and equipment for the WWTPs.

Flow Measurement

The influent flow rate is measured by an in-line magmeter that can be accessed in a separate manhole for the flowmeter. The influent flow monitoring point only measures the wastewater flow coming into the facility from the collection system. Process wastewater from the treatment system is not returned/recirculated to the influent monitoring point. The specific brand of the magmeter was not known at the time of inspection. According to Ryan Smith, the total daily flow is recorded each day and the daily reading resets every 24 hours. According to Mr. Smith, the flow meter/totalizer readings will be connected to the SCADA system once the SCADA system connections are installed at the new plant. The readings will be recorded and available through the SCADA system. The flow meter/totalizer is inspected daily by the operator and maintenance is conducted as needed based on those inspections. According to Ryan Smith, there is a standard operating procedure (SOP) for yearly calibration of flowmeters/totalizers. There are no interim calibration checks between the yearly calibrations. However, Ryan Smith stated that if there are observed problems with the flowmeter and/or corresponding measurements, a call to the manufacturer would be made for assistance. The flowmeter/ totalizer is calibrated yearly, and records of the calibration are maintained at the Wheelersburg WWTP.

According to Ryan Smith, the new in-line magmeter flowmeter is an upgrade from the previous WWTP design. The previous WWTP did not have an influent or effluent flow meter, therefore daily estimated flows were based on run time meters on the old influent pumps. There is currently no effluent flow measuring device for the newly constructed WWTP, so the daily estimate for the effluent flow rate is now based on influent flow readings from the flow meter.

Monitoring/Sampling/Analysis

According to Ryan Smith, the final effluent samples and effluent field monitoring samples are collected directly from Outfall 001 from the discharge pipe. Part I.A of the NPDES permit requires composite sampling for total suspended solids, ammonia-nitrogen, total kjeldahl nitrogen, total nitrite/nitrate, total phosphorus, and carbonaceous biochemical oxygen demand (CBOD) (5-day). Part II. G of the NPDES permit requires that "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 monitored discharge." According to Mr. Smith, the permit required composite samples are collected as multiple grab samples that are combined as a composite sample. However, these composites are not flow proportionate composite samples. Ryan Smith stated that the county will be requesting time-based sampling, instead of flow proportionate sampling, in the next permit renewal for 2023. Mr. Smith considers the time-based composite sampling to provide a representative sample of the discharge. The County previously made a similar request in the permit renewal application for the South Webster WWTP that they operate; and, the renewed permit language for sampling removed the flow proportionate requirement at the South Webster facility which is also an SBR WWTP similar to the Purtee Acres WWTP.

According to Mr. Smith, for the samples sent to MASI Environmental Laboratories (MASI) in Dublin, Ohio, for analysis, MASI provides the sample bottles for the samples they are contracted to analyze. For the sample bottles for the individual parameters that require preservation, MASI provides pre-preserved bottles. The Wheelersburg WWTP lab puts together all the correct sample bottles needed on a given day for the operator to take to site. Mr. Smith explained that all samples are collected and transported on ice to the Wheelersburg WWTP. The samples that will be analyzed by MASI Environmental Laboratories (MASI), are stored in a lab refrigerator at the Wheelersburg WWTP lab until a representative from MASI arrives to pick up the samples. Generally, MASI picks up samples from the Wheelersburg WWTP lab on the first and third Thursday of each month. According to Jonathan McKenzie, there is a wet thermometer in the sample storage refrigerators at the Wheelersburg WWTP lab to ensure that the temperature is maintained at less than six degrees Celsius. Lab personnel maintain a written log of the daily temperature readings for the refrigerator used for sample storage. According to Ryan Smith, the sampling data associated with sample collection (collection date, time, location, sampler name, sample identification, analyte to be analyzed) are written directly onto the chain of custody (COC) forms and not generally written into a separate logbook. There are separate COCs used for the samples to be analyzed by MASI and the samples to be analyzed in-house by the Wheelersburg WWTP lab.

Operators measure dissolved oxygen, pH, and temperature with handheld meters at the time of sample collection and for permit required weekly measurements. The measurements are documented for the appropriate day on the monthly monitoring log sheet that is kept in the control panel for the headworks of the WWTP. The log entries for these measurements on the log sheet do not include the name of the personnel collecting the measurements or the time the measurements were collected. According to Jonathan McKenzie, the field monitoring meters are calibrated prior to each use at the Wheelersburg WWTP before the operators go to their sites. The calibrations are 3-point calibrations with pH4, pH7, and pH10 buffers. Documentation of the calibrations is maintained at the Wheelersburg WWTP.

Sludge sampling is discussed in the next report section "Sewage Sludge Management."

Sewage Sludge Management

Due to the new WWTP starting operations in late October/early November, the sludge currently in the sludge holding tank has a young "sludge age"; therefore, the plant is not yet wasting sludge from the holding tank/digester. With no sludge wasting, the amount of sludge will buildup and increase the sludge age. Once the WWTP starts wasting sludge, the sludge will be transported to the Wheelersburg WWTP to be pressed for dewatering. At the time of the inspection, the old WWTP was still in place, but not receiving flow. The in-ground clarifier for the previous WWTP still has sludge in it. Before the scheduled demolition of the old WWTP structure (to be completed in the next few months), the sludge in the in-ground clarifier will be removed and sent to the Wheelersburg WWTP for processing. The new WWTP was not built with a back-up sludge unit. According to Ryan Smith, the sludge holding tank in the new plant was designed to be larger than currently needed. The sludge holding tank capacity is 12,000 gallons. As a contingency plan for sludge disposal, Mr. Smith explained that they are building a covered concrete pad for composting sludge at the Wheelersburg WWTP. If the county cannot resume regular sludge disposal at the landfills or if the Purtee Acres WWTP runs low on sludge holding capacity, the composting site at Wheelersburg WWTP could be used. If the composting process results in a Class A composted sludge, the County may look at land application opportunities.

According to Ryan Smith, the county sewage department has been having problems finding landfills to haul pressed sludge to for the last two years. Rumpke has not been taking sludge from the Scioto County Wheelersburg WWTP since buying the local landfills. Ryan Smith explained that there is a recent rule that went into effect for landfills that requires landfills to meet a trash to sludge ratio. Ryan Smith has had recent conversations with Rumpke representatives in an attempt to restart hauling sludge to Rumpke landfills. As an alternate option to hauling sludge to landfills, the county may use the new covered concrete composting pad being built at the Wheelersburg WWTP to store the pressed sludge.

Ryan Smith stated that, for sludge sampling, the plant operator will collect sludge samples from the center of the sludge holding tank/digester while it is in a stirring mode. The operator uses a sample collection container attached to a rope to dip the collection container in the tank and collect the sample. According to Ryan Smith, the sludge sample is analyzed for percent solids at the Wheelersburg WWTP lab and data is reported as gallons removed and dry tons. The sludge capacity of the new WWTP is much larger than the previous WWTP. Sludge was hauled out of the previous Purtee Acres WWTP to Wheelersburg WWTP two to three times per year for processing. The County will not know how often they will need to remove sludge from the new Purtee Acres WWTP plant until it has been in operation for a period of time. Ryan Smith anticipates that sludge will be hauled from the new Purtee Acres WWTP to the Wheelersburg WWTP for processing once per year.

Combined Sewer Overflows and Sanitary Sewer Overflows

According to Ryan Smith, there are no sanitary sewer overflows or combined sewer overflows associated with the area served by the Purtee Acres WWTP. Ryan Smith is responsible for reporting these events on the annual report for all treatment plants in the county system.

Locations

Location/Area/Sub-area	Description
Chlorination/De-chlorination Contact Chamber with Post-Aeration	**The chlorination/de-chlorination contact chamber is used to provide disinfection for the decant water from the SBR units.**
Dual Sequencing Batch Reactors with Sludge Holding Tank/Digester	**The treatment system is comprised of 2 sequencing batch reactors (SBR1 and SBR2) and a sludge holding tank/digester.**
Headworks	**The headworks consists of a manual bar screen, wet well, electronic control panel, a valve pit and influent flow meter.**
Outfall 001	**Effluent Outfall for the treatment system.**
Previous WWTP Units	**The previous WWTP system is scheduled to be demolished, except for the sand filter beds which may be cleaned and re-used in conjunction with the newly built SBR treatment system. The sand beds may be re-used if they can be added to the NPDES permit as optional operational units for storm event situations where large inflow volumes may cause short cycling.**
Sand Filter Beds	**Remaining from original WWTP design. Currently not included in the new treatment system design.**

II – OBSERVATIONS

Location: Chlorination/De-chlorination Contact Chamber with Post-Aeration		
Observation #: AV1-OB-001	**Date:** 11/08/2022	**Weather:** Sunny, Chilly, 42° F
During the site walk-through, EPA observed the chlorination/de-chlorination contact chamber and the post-aeration unit (Photographs DSCN4070.JPG and DSCN4071.JPG). The post-aeration unit at the chlorination/de-chlorination contact chamber was not operational at the time of the inspection. EPA also observed aquatic vegetation (possibly duck weed) floating on the surface of the water in the chlorination side of the chlorination/de-chlorination contact chamber. A PVC pipe runs along the top of the old sand filter beds' southern sidewall to transport decant water from SBR1 and SBR2 directly to the chlorination/de-chlorination contact chamber.		
Photo(s) 1. DSCN4070.JPG 2. DSCN4071.JPG		

Location: Headworks		
Observation #: AV1-OB-002	**Date:** 11/08/2022	**Weather:** Sunny, Chilly, 42° F

During the inspection walk-through EPA observed the headworks, headworks control panel, manual bar screen, wet well/pump station, valve pit (Photograph DSCN4063.JPG and DSCN4078.JPG), and influent flowmeter access manhole for the newly constructed WWTP. EPA observed liquid in the bottom of the access manhole for the in-line flowmeter location (Photograph DSCN4076.JPG). Ryan Smith explained that the water was from groundwater infiltration into the new manhole structure. EPA did not observe any leakage from around the in-line magmeter location in the sewage pipe.

Photo(s)

1. DSCN4063.JPG
2. DSCN4076.JPG

Location: Dual Sequencing Batch Reactors with Sludge Holding Tank/Digester		
Observation #: AV1-OB-003	**Date:** 11/08/2022	**Weather:** Sunny, Chilly, 42° F

EPA observed SBR 1, SBR 2, the sludge holding tank/digester, the connection for sludge withdrawal and the control panels for SBR 1 and SBR2. SBR 1 was in the React mode and SBR 2 was in the Mix/Fill mode at the time of the inspection (Photographs DSCN4064.JPG and DSCN4067.JPG). SBR 1 and SBR 2 each have an enclosed control panel and operations screen on the upper platform of the WWTP structure (Photograph DSCN4065.JPG). The sludge holding tank/digester was designed and constructed without a decanter (Photograph DSCN4066.JPG). According to Mr. Smith, the sludge holding tank is decanted manually, using a submersible pump that is lowered into the sludge holding tank to pump decant water into one of the two SBRs. EPA observed some foam in the sludge holding tank/digester. Ryan Smith stated that the foam in the sludge holding tank/digester is a result of the units not wasting sludge yet in order to increase the sludge volume and increase the young sludge age in the sludge holding tank/digester of the new WWTP. On the north side of the WWTP structure, EPA observed the pump-out connection (Photograph DSCN4068.JPG) used to withdraw sludge from the sludge holding tank/digester. EPA did not observe any evidence of hydraulic overloading issues at the new WWTP. There were no noxious odors observed. The new WWTP had no visible signs of leakage from pipes or evidence of corrosion. The area of the new WWTP on site was generally clean and free from trash or debris. Due to the recent construction of the new WWTP, the construction area around the new plant was still denuded and had not yet been reseeded with grass cover.

The previous WWTP treatment units which are still present onsite showed signs of corrosion and excessive wear due to age. The previous WWTP is set to be demolished after the remaining wastewater and sludge are removed.

Photo(s)

1. DSCN4065.JPG
2. DSCN4067.JPG
3. DSCN4066.JPG
4. DSCN4064.JPG
5. DSCN4068.JPG

Location: Outfall 001		
Observation #: AV1-OB-004	**Date:** 11/08/2022	**Weather:** Sunny, Chilly, 42° F

EPA observed Outfall 001. The Outfall 001 marker sign was in place. The printed side of the marker sign was positioned to face towards the receiving stream and the outfall pipe was visible (Photograph DSCN4072.JPG). Outfall 001 was actively flowing (Photograph DSCN4073.JPG). EPA observed that the effluent from Outfall 001 appeared clear with no visible floating solids or oil sheen present; and, there were no observable discolorations, foam, or odors evident in the receiving stream from the effluent.

Photo(s)

1. DSCN4073.JPG
2. DSCN4072.JPG

Location: Previous WWTP Units		
Observation #: AV1-OB-005	**Date:** 11/08/2022	**Weather:** Sunny, Chilly, 42° F

EPA observed that the previous WWTP was still in place and had not yet been removed (Photograph DSCN4078.JPG). EPA observed that wastewater was still present in the original WWTP treatment units (Photograph DSCN4075.JPG). According to Ryan Smith, the remaining wastewater will be pumped to the headworks of the new WWTP (prior to the bar screen) before the treatment units are demolished. The previous treatment units are no longer receiving influent flow since the new SBR WWTP began operating. EPA observed that the clarifier for the previous WWTP still contains sludge (Photograph DSCN4074.JPG). According to Ryan Smith, the sludge in this clarifier will be removed for processing at the Wheelersburg WWTP prior to the original WWTP being demolished.

Photo(s)

1. DSCN4078.JPG
2. DSCN4074.JPG
3. DSCN4075.JPG

Location: Sand Filter Beds		
Observation #: AV1-OB-006	**Date:** 11/08/2022	**Weather:** Sunny, Chilly, 42° F

EPA observed that 2 of the 4 sand filter beds (Photograph DSCN4069.JPG) still contained decant water that was filtering through the sand beds. These four sand filter beds from the original WWTP are no longer receiving decant water flow from the previous WWTP clarifier. The filtered decant water from the sand filter beds flows to the chlorination/de-chlorination contact chamber. SBR 1 and SBR 2 decant water is not plumbed to the sand filter beds, but instead flows directly to the chlorination/de-chlorination contact chamber. The new WWTP was not designed to be used with sand filter beds and as such, the sand filter beds are not connected to the new WWTP.

Photo(s)

1. DSCN4069.JPG

SECTION III – RECORDS REVIEW

Records may not be in sequential order.

Records: Monthly Monitoring Log Sheets		**AOC:** Yes
Ref #: AV1-RR-001	**Reviewed By:** Anne Marie Vincent	**Reviewed Date:** 11/08/2022, 01/06/2023

The November 2022 monthly monitoring log sheet (Photograph DSCN4077.JPG) was the only log sheet available onsite for review during the inspection. Previous log sheets are maintained at the Wheelersburg WWTP for retention purposes. After the site inspection, Ryan Smith provided EPA with copies of monthly monitoring log sheets for the months of July, August, September, October, and November 2022. EPA reviewed these monthly monitoring log sheets which are used on site to record daily flow volumes; effluent turbidity units; precipitation volumes; and, effluent temperature, dissolved oxygen, total residual chlorine, pH measurements.

Records: Annual Reports, Permit to Install Letter and Operator Certification		**AOC:** No
Ref #: AV1-RR-002	**Reviewed By:** Anne Marie Vincent	**Reviewed Date:** 01/06/2023

EPA reviewed the following document copies provided by Ryan Smith via e-mail after the inspection: Annual Sludge Reports (reporting years 2019 - 2021); Ohio EPA Permit to Install (PTI) Approval Letter (for new plant); Annual Sanitary Sewer Overflow Reports (reporting years 2019 - 2021); and the Class II Operator License Certificate Number WW2-1133609-21 for Jeff A. Cox (May 2021). Annual reports were found to have been submitted on time. The Class II Operator Certificate was current for the primary operator of record for the plant.

Records: On-site Operator Logbook Entries (November 7 -December 8, 2022)		**AOC:** Yes
Ref #: AV1-RR-003	**Reviewed By:** Anne Marie Vincent	**Reviewed Date:** 01/06/2023

EPA reviewed the photographs of the November and December operator logbook entries provided by Ryan Smith via e-mail after the inspection.

Records: Bench Sheets for In-House Analyses (July – October 2022)		**AOC:** Yes
Ref #: AV1-RR-004	**Reviewed By:** Anne Marie Vincent	**Reviewed Date:** 01/06/2023

EPA reviewed the following in-house analyses bench sheet copies for July – October 2022 which were provided by Ryan Smith via e-mail after the inspection: TSS, CBOD5 and ammonia as nitrogen.

Records: Chain of Custody Forms (July – October 2022)		**AOC:** Yes
Ref #: AV1-RR-005	**Reviewed By:** Anne Marie Vincent	**Reviewed Date:** 01/06/2023

EPA reviewed copies of chain of custody forms for sampling conducted from July 15 – October 28, 2022 which were provided by Ryan Smith via e-mail after the inspection.

Records: Calibration Sheet (pH) (August 2022) and BOD Incubator Temperature Check Sheets	**AOC:** Yes
Ref #: AV1-RR-006 **Reviewed By:** Anne Marie Vincent	**Reviewed Date:** 01/06/2023

EPA reviewed a copy of the pH calibration sheet from August 2022 and copies of the BOD incubator temperature check sheets (July – October 2022) which were provided by Ryan Smith via e-mail after the inspection.

SECTION IV – SAMPLING ACTIVITIES AND ANALYTICAL RESULTS

No sampling was conducted.

SECTION V - AREAS OF CONCERN

Areas of Concern may not be in sequential order.

The presentation of areas of concern does not constitute a formal compliance determination or violation.

AOC Reference #: AV1-OC-FD	**Opening Conference**

Regulation and/or Permit Requirement

NPDES Permit OH0050865 Part IA identifies the permit limitations and monitoring requirements for Outfall 001.

AOC:

According to a US EPA Enforcement and Compliance History Online (ECHO) facility report, the facility has self-reported effluent limit/other violations in 10 of the past 12 reporting quarters showing Significant Noncompliance (SNC) Reporting Quarters 1 (2019); Reporting Quarters 2 and 3 (2020); Reporting Quarters 8 and 9 (2021); and Reporting Quarters 1, 2 and 3 (2022) and "Violation Identified/Other Violation" for non-Reportable Noncompliance (non-RNC) violations in Reporting Quarters 5 (2020) and 7 (2021). According to ECHO data, SNC violations and effluent violations that did not rise to the SNC/RNC level were self-reported for Outfall 001 for the total ammonia-nitrogen effluent monthly average limit and effluent non-monthly average limit. There were also self-reported exceedances of the effluent monthly average limit and non-monthly average limit for carbonaceous biochemical oxygen demand 5-day (CBOD5) during Reporting Quarters 1 and 11 and an exceedance of the effluent non-monthly average limit for total suspended solids (TSS) in Reporting Quarter 1. The ECHO facility report indicates a "Failure to Report DMR - Not Received" in Reporting Quarter 1 (2019) as a result of missing DMRs from the previous 2 years which were still unresolved at the end of Reporting Quarter 1. The ECHO Effluent Limit Exceedances Report for Purtee Acres summarizes that there were 24 exceedances of the total ammonia-nitrogen monthly average limit, 29 exceedances of the total ammonia-nitrogen non-monthly average limit (weekly maximum), 2 exceedances of the CBOD5 monthly average limit, 2 exceedances of the CBOD5 non-monthly average limit (weekly maximum), and 1 exceedance of the total suspended solids non-monthly average limit (weekly maximum) for the facility from October 2019 - September 2022. These exceedances occurred prior to the new Purtee Acres SBR WWTP beginning operations in late October/early November 2022.

AOC Reference #: AV1-OC-FD	**Opening Conference –** WWTP Operations

Regulation and/or Permit Requirement

NPDES Permit OH0050865 Parts 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.”
Part III.3 also states “All wastewater treatment works shall be operated in a manner consistent with the following:
A. 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…”

AOC:

The new WWTP was designed to use the original chlorination/de-chlorination contact chamber and post aeration system. The chlorination/de-chlorination contact chamber was operational at the time of the inspection. However, the post-aeration system associated with the chlorination/de-chlorination contact chamber was not operational. According to Mr. Smith, new electric lines for the post aeration unit need to be connected in order to return the post-aeration unit to operation.

AOC Reference #: AV1-OC-FD	**Opening Conference –** WWTP Operations

Regulation and/or Permit Requirement

NPDES Permit OH0050865 Parts 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.”
Part III.3 also states “All wastewater treatment works shall be operated in a manner consistent with the following:
A. 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…”

AOC:

The new online SCADA system for monitoring WWTP plant operations and alarms has not yet been installed. Ryan Smith expects the SCADA system to be installed and programmed in the next several months for remote monitoring of the facility. Until the SCADA system is online, the new facility has an on-site alarm system that consists of lights and audible horns to notify on-site staff and neighboring residents (during non-staffed hours) that there is an alarm situation at the WWTP.

AOC Reference #: AV1-OC-FD	**Opening Conference –** Monitoring/Sampling/Analysis

Regulation and/or Permit Requirement

Part I.A of NPDES Permit OH0050865 requires composite sampling for total suspended solids, ammonia-nitrogen, total kjeldahl nitrogen, total nitrite/nitrate, total phosphorus, and carbonaceous biochemical oxygen demand (CBOD) (5-day). NPDES Permit OH0050865 Parts II.G 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 monitored discharge.”

AOC:

According to Ryan Smith, the permit required composite samples are collected as multiple grab samples that are combined as a composite sample. However, these composites are not flow proportionate composite samples. Ryan Smith stated that the county will be requesting time proportionate sampling, instead of flow proportionate sampling, in the next permit renewal for 2023. Mr. Smith considers the time-based composite sampling to provide a representative sample of the discharge.

AOC Reference #: AV1-OB-001	**Location:** Chlorination/De-chlorination Contact Chamber with Post-Aeration

Regulation and/or Permit Requirement

NPDES Permit OH0050865 Parts 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.” Part III.3 also states “All wastewater treatment works shall be operated in a manner consistent with the following:
A. 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…”

AOC:

EPA also observed aquatic vegetation (possibly duck weed) floating on the surface of the water in the chlorination side of the chlorination/de-chlorination contact chamber.

AOC Reference #: AV1-OB-002	Location: Headworks

Regulation and/or Permit Requirement

NPDES Permit OH0050865 Parts 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.”
Part III.3 also states “All wastewater treatment works shall be operated in a manner consistent with the following:
A. 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…”

AOC:

EPA observed liquid in the bottom of the newly installed manhole for the in-line flowmeter location (Photograph DSCN4076.JPG). Ryan Smith explained that the water was from groundwater infiltration into the manhole structure.

AOC Reference #: AV1-RR-001	Records Review: Monthly Monitoring Log Sheets

Regulation and/or Permit Requirement

NPDES Permit OH0050865 Part III. Section 6. states “For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information…
B. The person(s) who performed the sampling or measurements;…”

AOC:

EPA noted that the monthly monitoring log sheet entries do not include the name or initials of the person/operator performing the sampling or measurement being documented in the daily monitoring entries.

AOC Reference #: AV1-RR-001	Records Review: Monthly Monitoring Log Sheets

Regulation and/or Permit Requirement

NPDES Permit OH0050865 Part III. Section 4. D. states “If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified in Section 5. SAMPLING AND ANALYTICAL METHODS, the results of such monitoring shall be included in the calculation and reporting of the values required in the reports specified above.”

AOC:

EPA noted that the monthly monitoring log sheet entries include more measurements of DO, pH and temperature than is required (once per week). However, when reviewing these measurements with the DMR copies provided by Ryan Smith for July, August and September 2022, the DMR does not include all recorded pH, temperature and DO values recorded on the monthly monitoring log sheets.

AOC Reference #: AV1-RR-001	**Records Review:** Monthly Monitoring Log Sheets

Regulation and/or Permit Requirement

NPDES Permit OH0050865 Part II.F. states that "If Severity Units are required for Turbidity, use the following table to determine the value between 0 and 4 to report."

AOC:

EPA noted that the monthly monitoring log sheet entries for turbidity use a non-value based "-" dash mark instead of a "0" when the effluent is clear. When compared with the associated DMR for the same month, the DMR has the turbidity severity unit value of 0 entered instead of the "-" which is used on the monthly monitoring log sheets for initial onsite documentation.

AOC Reference #: AV1-RR-001	**Records Review:** Monthly Monitoring Log Sheets

Regulation and/or Permit Requirement

NPDES Permit OH0050865 Part I.A. identifies the final effluent limitations and monitoring requirements for Outfall 001. Turbidity monitoring is required once per day in all months and total residual chlorine is required once per day during summer months.

AOC:

EPA noted that the monthly monitoring log sheet entries for the month of September 2022 include entries for these parameters two or three times per week. However, the corresponding DMR for September 2022 reports turbidity and residual chlorine values for every day of the month, including days where there are no data entries on the monthly monitoring log sheet for September. For example, the week of September 11, 2022, has two written monitoring result entries on 9/12/22 and 9/14/22 for total residual chlorine and turbidity. The DMR reports monitoring values for every day of that week, including the days for which there is no monitoring data entered on the monthly monitoring log sheet for September.

AOC Reference #: AV1-RR-003	**Records Review:** On-site Operator Logbook Entries

Regulation and/or Permit Requirement

NPDES Permit OH0050865 Part II. A. 3. a. states, "The permittee shall ensure that the operator of record is physically present at the treatment works in accordance with the minimum staffing requirements included in paragraph (C)(1) of rule 3745-7-04 of the Ohio Administrative Code which for the treatment facility covered under this permit is three (3) days per week for a minimum of 1.5 hours per week at each treatment facility, unless the director has approved a staffing reduction. Note, however, that 3745-7-09 OAC requires daily visits to the treatment facility at least 5 days per week by the permittee, his representative, agent or operator of record as required by the rule."

AOC:

EPA noted that for the copies of the November 7 – December 8, 2022 operator logbook entries provided by Ryan Smith, the name or initials of the operator on site are not documented for the following days: November 10, 15, 21, 22; and December 6 and 7. In addition, several logbook entries do not include documentation of

the time of arrival to site and departure from site for the operators. There are seven instances where the logbook entries include an arrival time, but do not document a departure time (November 10, 15, 22, 29, 30; and December 6 and 8). There are two instances where the arrival and departure times are both missing from the logbook entries (November 21 and December 7). There was only one logbook entry that included an arrival time and departure time for the operator (November 7). Without documentation of arrival time and departure time and the name or initials of the operator present on site, EPA is unable to verify if the operators are meeting the minimum staffing requirement of 1.5 hours per week. Based on the monthly monitoring log sheets, monitoring data entries are made at a minimum of 3 times per week (August and September 2022) and 5 times per week (July and October 2022). There is one instance during the week of September 11, 2022, where there are only 2 days for which monitoring data was recorded. EPA did not have copies of the September logbook entries to cross check if there were additional days on site for the operators during this week to meet the minimum 3-day requirement.

AOC Reference #: AV1-RR-004	**Records Review:** Bench Sheets for In-House Analyses (July – October 2022)

Regulation and/or Permit Requirement

NPDES Permit OH0050865 Part III. Section 6. states "For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information… D. The person(s) who performed the analyses…"

AOC: EPA observed the Wheelersburg WWTP laboratory bench sheets for the in-house analysis of ammonia (as nitrogen), CBOD, TSS and fecal coliform from July, August, September, and October 2022. EPA noted that the following bench sheet entries for Purtee Acres/Toft did not include the name or initials of the analyst performing the analysis for ammonia (as nitrogen): 7/21, 8/18, 8/25, 9/15, and 10/27. EPA noted that the entries for Purtee Acres/Toft on the provided bench sheet copies did not include the name or initials of the analyst performing the analysis for CBOD: 7/7, 7/14, 7/21, 7/27, 8/4, 8/11, 8/18, 8/25, 9/1, 9/8, 9/15, 9/22, 10/6, 10/13, 10/20 and 10/27. EPA noted that the entries for Purtee Acres/Toft on the provided bench sheet copies did not include the name or initials of the analyst performing the analysis for TSS: 7/7, 7/14, 7/21, 8/4, 8/18, 8/25, 9/1, 9/15, and 10/6. EPA also noted that the data for the TSS entries on the bench sheets appear to be mistakenly noted under "Influent" instead of "Effluent". TSS analysis of the effluent at Outfall 001 is required under the permit for Purtee Acres.

AOC Reference #: AV1-RR-005	**Records Review:** Chain of Custody (COC) Forms (July – October 2022)

Regulation and/or Permit Requirement

AOC: EPA observed that the copies of the COCs for samples collected at the Purtee Acres WWTP on July 15, 22; August 5, 12, 19 and 24; September 9; and October 7, 14, 20 and 28 did not have a "received by" signature and date. These were the only COCs received by EPA for Purtee Acres WWTP sampling. With the minimal information recorded on the COCs (plant name, date, sample collector, sample type (influent/effluent, grab/composite, upstream/downstream, collection time, sample receiver's name, and relinquish date and time) EPA could not determine if the COC copies were for samples being analyzed at the in-house laboratory located at the Wheelersburg WWTP or for samples being relinquished to MASI Laboratories (MASI) for analysis. The sample collection dates on the MASI certificate of analysis reports in August and October for

Purtee Acres (also referred to as Toft WWTP and Tony WWTP) do not match any of the sample collection dates on the COCs provided.	
AOC Reference #: AV1-RR-006	**Records Review:** Calibration Sheet (pH) (August 2022)
Regulation and/or Permit Requirement NPDES Permit OH0050865 Part III. Section 7. C. states, "The permittee shall retain all of the following records for the wastewater treatment works for a minimum of three years except those records that pertain to sewage sludge disposal, use, storage, or treatment, which shall be kept for a minimum of five years, including: … C. All instrumentation, calibration and maintenance records;…"	
AOC: EPA observed that the pH meter calibration sheet includes the date of calibration, the resulting slope from the calibration and an indication that a 3-point calibration was completed. The calibration sheet has no information identifying which pH meter was calibrated (no instrument identification information such as meter name, manufacturer, model, or serial number etc.).	

SECTION VI – CLOSING CONFERENCE AND FOLLOW UP

Closing Conference

The EPA Region 5 Lead Inspector held a closing conference with Facility personnel at 12:20 PM (ET) on 11/08/2022 for the inspection. During the closing conference, EPA Region 5 Lead Inspector discussed the observations and Areas of Concern identified during the inspection. Observations and Areas of Concern have not yet been evaluated for a formal compliance determination.

The EPA Region 5 Lead Inspector held a closing conference with facility personnel at 12:00 pm (ET) on 10/8/2022. During the closing conference, EPA Lead Inspector Anne Marie Vincent discussed the observations and preliminary Areas of Concern identified during the inspection. EPA Lead Inspector explained that preliminary observations and Areas of Concern had not yet been evaluated for a formal compliance determination. Items discussed included the following:

1. The NPDES permit requires flow proportionate composite sampling for Outfall 001 for TSS, ammonia-nitrogen, total TKN, total nitrite-nitrate, total P and CBOD 5 day. Currently, grab samples are being composited, but the composite sample is not flow proportionate. EPA acknowledged that according to Mr. Smith, the county will be requesting in the January 2023 permit renewal application that the requirement for flow proportionate composite sampling be changed to a time-based composite sample.

2. Aquatic vegetation (possibly duck weed) was observed floating on the surface of the water in the chlorination side of the chlorination/de-chlorination contact chamber.

3. The post-aeration unit at the chlorination/de-chlorination contact chamber was not operational. EPA acknowledged that Mr. Smith had explained that the electric for the post-aeration unit had been disconnected during the installation of the new electric lines for the new WWTP and the electric is expected to be restored in the coming weeks when the construction contractor is on site to finish the punch list for final construction activities.

4. The old WWTP treatment units are still in place onsite, but are scheduled to be demolished in the coming months depending on weather and site conditions. Prior to demolition, wastewater remaining in the treatment units will be treated through the new WWTP and the sludge remaining tin the old clarifier will be transported and processed at the Wheelersburg WWTP for disposal.

5. Inspector Vincent reminded Mr. Smith and Mr. McKenzie to ensure operators were noting their names or initials with the daily entries in the operator logbook.

Inspector Vincent explained to Mr. Smith and Mr. McKenzie that additional concerns may be identified following the inspection based on information provided during the inspection, and those concerns would also be noted in the final report. A copy of the final report will be provided to the Scioto County Board of Commissioners within approximately 70 days of the inspection.

Follow-up

After the inspection, in an e-mail dated November 11, 2022, EPA requested the following list of follow-up information from Mr. Smith for the Purtee Acres WWTP site. A '**(P)**' denotes that the information was provided after the inspection via e-mail.

- Cost of new SBR plant at Purtee Acres **(P)**
- Design volumes for the new Purtee Acres SBR1/SBR2 tanks and the sludge holding tank/digester **(P)**
- A description of how the integrated venturi system on the Aqua-aerobics units in each SBR operates to provide aeration without a blower system **(P)**
- Total population served by Purtee Acres **(P)**
- SSO Annual Reports of the last year **(P)**
- Calibration records for pH and DO meters for the last 3 months **(August 2022 pH calibration sheet was provided.)**
- Chain of Custody forms and lab reports for the last three months (lab reports from Wheelersburg WWTP lab and MASI) **(P)**
- Sludge hauling records (sludge invoices) for the last 3 years **(P)**
- Last 3 months of DMR data **(July, August and September 2022 provided)**
- PTI for the new treatment plant at Purtee Acres **(P)**
- Operator training certificates for Purtee Acres WWTP **(Provided for the primary Operator of Record)**
- Copies of the last 4 weeks of operator logbook entries that document arrival time onsite, activities performed, operational notes, sampling/monitoring notes etc. from Purtee Acres (from the onsite logbooks -if present -or from the individual operator logbooks that each operator keeps with them) **(P)**
- October and November log sheets for flow volumes and monitoring readings at Purtee Acres **(July, August, September, and October provided)**

In a follow-up telephone conversation between Inspector Vincent and Ryan Smith on December 16, 2022, Mr. Smith stated that there are now plans to modify the newly constructed bar screen at the Purtee Acres headworks by installing an automated mechanical bar screen system for more effective removal of trash at the headworks. In addition, the County is developing plans to also install an effluent flow meter and autosampler at Outfall 001. The County still plans to request time-based composite samples for the effluent instead of flow proportionate samples in the upcoming permit renewal.

SECTION VII – LIST OF APPENDICES

1. Photograph Log

APPENDIX 1: PHOTOGRAPH LOG

Note: Due to a camera settings programming error, the time stamp on each photograph is 12 hours before the actual time taken. The corrected time is noted in each photograph description box.

Headworks	DSCN4063.JPG	
11/08/2022 09:41 AM	Photographer: Anne Marie Vincent	
Headworks	No CBI	No PII
Overview of the Headworks of the WWTP which includes an electronic control panel, manual bar screen, wet well, pump station, valve pit, and flow meter manhole for access to the in-line magmeter used for influent flow measurements.		

SBR 1	DSCN4064.JPG	
11/08/2022 09:52 AM	Photographer: Anne Marie Vincent	
Dual Sequencing Batch Reactors with Sludge Holding Tank/Digester	No CBI	No PII
SBR 1 was in the react mode during the inspection.		

Control Panel and Operations Screen for SBR 1	DSCN4065.JPG	
11/08/2022 09:54 AM	Photographer: Anne Marie Vincent	
Dual Sequencing Batch Reactors with Sludge Holding Tank/Digester	No CBI	No PII
SBR 1 and SBR 2 each have an enclosed control panel and operations screen on the upper platform of the WWTP structure. This photograph is of the control panel and operations screen for SBR1.		

Sludge Holding Tank	DSCN4066.JPG	
11/08/2022 09:58 AM	Photographer: Anne Marie Vincent	
Dual Sequencing Batch Reactors with Sludge Holding Tank/Digester	No CBI	No PII
The WWTP is designed with a sludge holding tank/digester located between SBR 1 and SBR 2. A decanter was not included in the design for the sludge holding tank or in its final construction. Decanting must be done manually with a submersible pump.		

SBR 2	DSCN4067.JPG	
11/08/2022 09:59 AM	Photographer: Anne Marie Vincent	
Dual Sequencing Batch Reactors with Sludge Holding Tank/Digester	No CBI	No PII
SBR 2 was in the Mix/Fill mode at the time of the inspection.		

Sludge Withdrawal Connection	DSCN4068.JPG	
11/08/2022 10:07 AM	Photographer: Anne Marie Vincent	
Dual Sequencing Batch Reactors with Sludge Holding Tank/Digester	No CBI	No PII
View looking down from the upper level of the WWTP onto the sludge withdrawal connection used to remove sludge from the holding tank/digester and pump it into a tanker truck to be transported to the Wheelersburg WWTP for pressing/dewatering.		

Sand Filter Beds	DSCN4069.JPG	
11/08/2022 10:17 AM	Photographer: Anne Marie Vincent	
Sand Filter Beds	No CBI	No PII
The sand filter beds from the original WWTP are no longer receiving any decant water flow from the previous WWTP clarifier. At the time of the inspection, the decant water remaining in two of the four sand filter beds was still filtering through the beds. Filtered water then flows to the chlorination/de-chlorination contact chamber. Decant water from SBR 1 and SBR 2 flows directly to the chlorination/de-chlorination contact tank via the white PVC pipe running along the top of the sand filter bed sidewall.		

Chlorination Contact Chamber	DSCN4070.JPG	
11/08/2022 10:30 AM	Photographer: Anne Marie Vincent	
Chlorination/De-chlorination Contact Chamber with Post-Aeration	No CBI	No PII
Chlorination tablets are added manually to the chlorination contact chamber (left side of photograph). Note the green aquatic vegetation floating on the surface of the water in the chamber. The de-chlorination side of the unit is on the right side of the photograph. Aquatic vegetation was not observed on the de-chlorination side of the chamber.		

Chlorination Contact Chamber with De-chlorination	DSCN4071.JPG	
11/08/2022 10:30 AM	Photographer: Anne Marie Vincent	
Chlorination/De-chlorination Contact Chamber with Post-Aeration	No CBI	No PII
The chlorination/de-chlorination contact chamber is equipped with a post-aeration unit that is currently off-line. New electric lines need to be hooked up to make the post-aeration unit operational.		

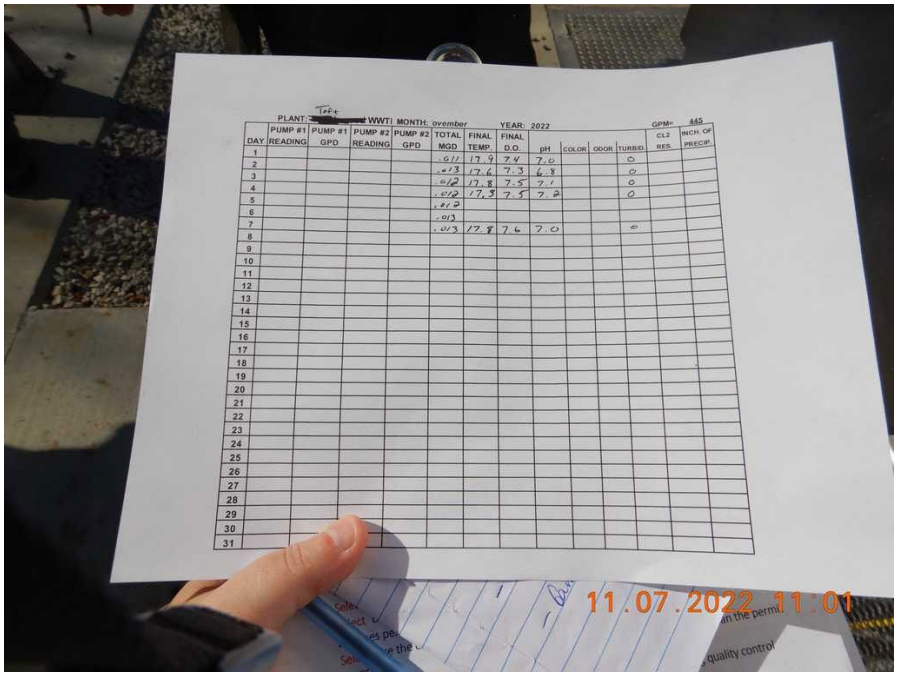
Outfall 001	DSCN4072.JPG	
11/08/2022 10:34 AM	Photographer: Anne Marie Vincent	
Outfall 001	No CBI	No PII
The marker sign for Outfall 001 was present at the outfall. The printed side of the sign was positioned to face towards the receiving stream. The broken PVC outfall pipe can be seen in the lower right corner of the photograph.		

Outfall 001	DSCN4073.JPG	
11/08/2022 10:34 AM	Photographer: Anne Marie Vincent	
Outfall 001	No CBI	No PII
Outfall 001 was flowing at the time of the inspection. Effluent appeared clear. No observable discoloration, foam, or odors from the effluent.		

Original WWTP	DSCN4074.JPG	
11/08/2022 10:41 AM	Photographer: Anne Marie Vincent	
Previous WWTP Units	No CBI	No PII
The clarifier from the original WWTP still has sludge in it. The sludge will be removed for processing at the Wheelersburg WWTP prior to the original WWTP being demolished in the next few months.		

Original WWTP	DSCN4075.JPG	
11/08/2022 10:42 AM	Photographer: Anne Marie Vincent	
Previous WWTP Units	No CBI	No PII
Wastewater remaining in the original WWTP treatment units will be pumped into the headworks to the new WWTP prior to the bar screen before the units are demolished.		

Influent Flow Measurement	DSCN4076.JPG	
11/08/2022 10:50 AM	Photographer: Anne Marie Vincent	
Headworks	No CBI	No PII
An in-line magmeter is used to measure influent flow to the new WWTP. The water in the bottom of the manhole was described by Ryan Smith as being from groundwater infiltration into the manhole.		



Daily Measurement Log	DSCN4077.JPG	
11/08/2022 11:01 AM	Photographer: Anne Marie Vincent	
[Location/Area]	No CBI	No PII
EPA observed an example of the monthly monitoring log sheets used to record daily flow volumes; effluent turbidity units; and, temperature, dissolved oxygen, total residual chlorine (only in the summer) and pH measurements for the effluent, and rainfall amounts during November 2022.		

Overview of Previous WWTP and New Upgraded WWTP	DSCN4078.JPG	
11/08/2022 12:14 PM	Photographer: Anne Marie Vincent	
Previous WWTP Units	No CBI	No PII
Overview photograph showing both the previous WWTP units (lower edge, center-right) and the locations of the new upgraded WWTP headworks and headworks control panel (lower left corner); and new dual SBR and sludge holding tank/digester structure (center).		

New Upgraded WWTP Construction Sign	DSCN4079.JPG	
11/08/2022 12:20 PM	Photographer: Anne Marie Vincent	
[Location/Area]	No CBI	No PII
Purtee Acres WWTP construction sign for the new upgraded WWTP at the entrance to the facility driveway.		