INSPECTION REPORT

Inspection Date(s):	05/10/2022	Announced: No
Time:	Entry: 08:25 AM (ET)	Exit: 11:14 AM (ET)
Media:	Water	
Statute(s)/Program(s):	Clean Water Act, NPDES, WWTP	
Type of inspection:	CEI - Compliance Evaluation Inspection	
Access:	Granted	
Permittee Name:	Village of Mt. Orab	
Facility or Site Name:	Mt. Orab WWTP	
Facility/Site Physical Address:	12943 US Route 68	
(City, state, zip code)	Mt. Orab, OH 45154	
County/Parish:	Brown County	
Facility GPS Coordinates:	38.993133, -83.921373	
Mailing address: (If different)		
(City, state, zip code)		
Facility/Site Identifier:	Mt. Orab WWTP	
Permit Number:	OH0026646	
SIC or NAICS:	4952	

Persons Participating in Inspection:

Title	Name	Phone	Email	Present at Opening Conf.	Present at Closing Conf.
Lead Inspector	Andi Hodaj	(312) 353-4645	hodaj.andi@epa.gov	Yes	Yes
Inspector	Ray Cullen	(312) 886-0538	cullen.raymond@epa.gov	Yes	Yes
Environmental Specialist 2	Richard Miller	(937) 285-6647	Richard.Miller@epa.ohio.gov	Yes	Yes
Operator of Record	Ross Standring	(513) 301-3162	ross.standring@mtoraboh.us	Yes	Yes

Lead Inspector:

Andi Hodaj	ANDI HODAJ Digitally signed by ANDI HODAJ Date: 2022.06.13 17:28:06 -05'00'		
	Region 5	hodaj.andi@epa.gov	(312) 353-4645

Supervisor Review:

Molly Smith	MOLLY SMITH Digitally signed by MOLLY SMITH Date: 2022.06.14 09:47:50 -05'00'		

	Region 5	Smith.Molly@epa.gov	

SECTION I – INTRODUCTION

Site Entry and Inspection Objectives

U.S. Environmental Protection Agency, Region 5, and Ohio EPA inspectors arrived at the Mt. Orab Wastewater Treatment Plant (WWTP) (the "Site" or "Facility"), located at 12943 US Route 68, at 08:25 AM (ET) on 05/10/2022 for an unannounced inspection. The table above identifies the attendees that participated in the inspection. The Region 5 inspectors presented their credentials to Ross Standring, the Facility Operator of Record. The Region 5 Lead Inspector informed him that this was an EPA Region 5 inspection to determine compliance with the Clean Water Act (CWA) and the National Pollutant Discharge Elimination System (NPDES) permit program. The inspection was conducted under the authority of Section 308 of the CWA.

This report is based on information supplied by Facility representatives, observations made by the Region 5 inspectors, and records and reports maintained by the Facility and Region 5 including: direct observations made, photographs taken, physical evidence collected, and measurements taken by the Region 5 inspectors; verbal or written statements provided by Facility representatives during or subsequent to the inspection; and materials, processes, data, photographs, or documents shown, demonstrated, or submitted to the Region 5 inspectors by Facility representatives during or subsequent to the inspection. In addition, information gathered prior to or subsequent to the inspection from a review of U.S. Environmental Protection Agency, state, and public records may be included in this report.

Facility/Site Description

The Region 5 Lead Inspector confirmed the following facility information:

The Facility is publicly owned by the Village of Mt. Orab, Ohio (the Village). It has a design flow of 0.7 million gallons per day (MGD) and serves approximately 3,500 residents connected to a sanitary-only collection system. Two industrial users discharge to the WWTP, but the Village does not have a system-wide pretreatment program. The Facility consists of a preliminary treatment building, vortex grit separation, a flow splitter box, an influent chamber, oxidation ditches, a clarifier splitter box, final clarifiers, ultraviolet (UV) disinfection, a Parshall flume, a post aeration tank, a cascade aerator, and two 60,000-gallon aerobic digesters. The Facility discharges into Snapping Turtle Run via outfall 001.

The Village applied for and received a Permit To Install (PTI) from Ohio EPA to expand treatment capacity at the Facility to an average daily design flow of 1.18 MGD. Based on the PTI, Ohio EPA also issued to the Village a modified NPDES permit with an effective date of August 1, 2021 and an expiration date of June 30, 2023. Changes in the modified permit include increased pollutant loading limits for the final outfall to account for the increased average daily design flow. The new loading limits will go into effect 19 months from the effective date of the modified permit. The permit includes a compliance schedule that requires the Village to complete construction of Facility improvements as soon as possible, but not later than March 1, 2023. Mr. Standring stated that the Village has not yet started work on expanding treatment capacity due to funding issues.

Photo(s)

1. RIMG2658.JPG

Facility/Site Information

Responsible official	Ross Standring
WWTP Design Capacity & Average Daily Flow	0.7 MGD
WWTP Approx. # of residents served	3500 - 4000
Outfalls: (and do the numbers, locations, and receiving waters match the permit?)	One outfall, 001. Number and location match the permit.
Operation schedule (days of operation, # shifts/day, # operators/shift, coverage overnight, weekends & emergencies)?	1 operator. 7 days per week
Do you use in-house or contract out for laboratory analyses? (including for metals or WET testing?)	Temperature, Dissolved Oxygen, pH, Total Suspended Solids (TSS), Ammonia – Nitrogen, Orthophosphate, Carbonaceous Biochemical Oxygen Demand (CBOD) and Escheria Coli are measured in-house and the rest of the parameters in the permit are analyzed by Masi Laboratories.
Do you accept waste from septage haulers? If so, what problems have you experienced?	No
Is there currently any portion of the treatment train that is non-operational?	Equalization (EQ) tank was out of operation at the time of inspection.
Are there any plans for renovation or additional equipment to allow for increased wastewater flow?	Yes. A PTI has been submitted and approved by Ohio EPA. The upgrades will include a new clarifier, repurposing the EQ tank into an aeration basin, adding a new UV system and monitoring upgrades.

Unit(s)

Unit/Area/Sub-area	Description
Digesters	**There are two 60,000-gallon digesters at the Facility.**
Outfall 001	**Outfall 001 discharges into Snapping Turtle Run.**
Pretreatment	**The pretreatment unit includes the preliminary treatment building, the vortex grit separator, the flow splitter box and the influent chamber.**

Secondary treatment	**The secondary treatment includes the oxidation ditches, three clarifiers, the UV disinfection system, a post aeration tank and a cascade aerator.**

SECTION II – OBSERVATIONS

Observations may not be in sequential order.

Unit: Digesters	**Contains CBI:** No
Observation #: AH2-OB-004	**Date:** 05/10/2022

EPA observed the two aerobic digesters that, according to Mr. Standring, were built in 2016. Each digester has a 60,000-gallon capacity and are connected to each other via a valve. Sludge in the digesters is pressed weekly, and Mr. Standring stated that this might increase to twice per week going forward. Leachate from the digesters gets pumped back to the oxidation ditches. EPA observed the sludge belt press, which has a dual pump system. EPA observed drums of polymer (FLOPAM) next to the influent pumps that are used to turn sludge into "cake". The cake is hauled to a landfill.

Photo(s)

1. RIMG2678.JPG
2. RIMG2679.JPG

Unit: Outfall 001	**Contains CBI:** No
Observation #: AH2-OB-003	**Date:** 05/10/2022

EPA observed outfall 001 discharging into Snapping Turtle Run and the outfall signage. The outfall signage was facing away from the creek, not towards the creek.

Photo(s)

1. RIMG2676.JPG

Unit: Pretreatment	**Contains CBI:** No
Observation #: AH2-OB-001	**Date:** 05/10/2022

EPA observed the influent channel, the vortex grit separator, the grit dumpster and the influent autosampler inside the pretreatment building. The grit from the dumpster is taken by Rumpke of Ohio, Inc. (Rumpke) as needed, according to Mr. Standring. The pretreatment building was built in 2016 and also houses the control room. The Facility has a supervisory control and data acquisition (SCADA) system that monitors flows and one of the clarifiers. During the inspection, EPA observed two influent 10" pipes that convey flows from the Villages of Mt. Orab and Hamersville. According to the Facility, it uses geothermal heating to keep pipes from freezing in the pretreatment building. During the inspection, EPA observed a thermometer reading of 5°C at the influent autosampler. From the top of the pretreatment building, EPA observed the EQ tank that was about a quarter full of rain water. Mr. Standring stated that monthly copper samples are taken from both the influent and effluent in order to understand what has caused recent copper limit exceedances in the effluent. Mr. Standring stated that based on the data so far, increased copper concentrations were due to the copper sulfate that was added at the drinking water treatment plant for algae control. Since the drinking water plant substituted the copper sulfate with ultrasonic radiation to treat for algae, no high copper readings have occurred at the Facility since November 2021.

Photo(s)

1. RIMG2659.JPG
2. RIMG2660.JPG
3. RIMG2661.JPG
4. RIMG2662.JPG
5. RIMG2663.JPG

Unit: Secondary treatment **Contains CBI:** No

Observation #: AH2-OB-002 **Date:** 05/10/2022

From pretreatment, wastewater is routed to the oxidation ditches. The oxidation ditches are a modified activated sludge biological treatment that provide longer retention time to remove organics. Wastewater from the oxidation ditches flows into a splitter box that splits the flow equally among three clarifiers. Mr. Standring stated that one of the clarifiers was constructed in 2008, and the other two were constructed earlier. EPA observed floating foam and solids on the two older clarifiers. Return flow from the clarifiers goes back to the oxidation ditches, and effluent from the clarifiers flows into the UV channel for disinfection. Effluent flow is measured at the UV channel. EPA observed a discharge of 546 gallons per minute from the flowmeter at the time of the inspection. According to Mr. Standring, the flowmeter is calibrated annually. Flow from the UV channel is directed to the post aeration tank and the cascade aerator and from there to outfall 001. At the bottom of cascading stairs there is a bypass pipe on the south side of the channel that is used when bypass of the post aeration tank is needed for maintenance.

Photo(s)

1. RIMG2664.JPG
2. RIMG2667.JPG
3. RIMG2665.JPG
4. RIMG2666.JPG
5. RIMG2668.JPG
6. RIMG2669.JPG
7. RIMG2670.JPG
8. RIMG2671.JPG
9. RIMG2672.JPG
10. RIMG2673.JPG
11. RIMG2674.JPG
12. RIMG2675.JPG
13. RIMG2677.JPG

SECTION III – RECORDS REVIEW

Records may not be in sequential order.

Record: Manifests		**Area of Concern (AOC):**No
Ref #: AH2-RR-007	**Reviewed By:** Andi Hodaj	**Reviewed Date:** 05/10/2022
EPA reviewed Annual Sludge Reports for years 2019, 2020 and 2021. Rumpke hauls sludge from the Facility to a landfill operated by Rumpke.		
Record: Overflow/Bypass/Upset Reports or Notifications		**AOC:** No
Ref #: AH2-RR-006	**Reviewed By:** Andi Hodaj	**Reviewed Date:** 05/10/2022
EPA reviewed an Unanticipated Emergency Overflow Report for the month of May 2020.		
Record: Other - Operator's certificate for wastewater treatment facilities		**AOC:** No
Ref #: AH2-RR-005	**Reviewed By:** Andi Hodaj	**Reviewed Date:** 05/10/2022
EPA reviewed the certificate of the operator of record. Mr. Ross Standring had a Class III Wastewater Treatment Professional Operator Certificate.		
Photo(s) 1. RIMG2681.JPG		
Record: Process Description/Flow Diagram		**AOC:** No
Ref #: AH2-RR-004	**Reviewed By:** Andi Hodaj	**Reviewed Date:** 05/10/2022
EPA reviewed the process flow diagram.		
Record: Laboratory standard operating procedures (SOPs)		**AOC:** No
Ref #: AH2-RR-003	**Reviewed By:** Andi Hodaj	**Reviewed Date:** 05/10/2022
EPA reviewed the Facility's laboratory SOP.		
Photo(s) 1. RIMG2680.JPG 2. RIMG2682.JPG		
Record: Discharge Monitoring Reports (DMRs)		**AOC:** Yes
Ref #: AH2-RR-002	**Reviewed By:** Andi Hodaj	**Reviewed Date:** 05/10/2022
EPA reviewed DMRs for the months of February and March 2022. No effluent limit violations were self-reported. For the month of February, the effluent flow was above the 0.7 MGD average daily design rate for most of the month and as high as 1.9 MGD.		
Record: Calibration Records		**AOC:** No
Ref #: AH2-RR-001	**Reviewed By:** Andi Hodaj	**Reviewed Date:** 05/10/2022

The Village analyzes some of the pollutants included in the Facility's permit in an in-house lab and sends samples for the analysis of the rest to MASI Environmental Laboratories (MASI). EPA reviewed calibration records and certificate of calibrations for the instruments used in the in-house lab such as the pH meter, biochemical oxygen demand (BOD) incubator, dissolved oxygen (DO) probe.

Photo(s)

1. RIMG2683.JPG

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.

Unit:
AH2-OC-NT
The modified NPDES permit includes a compliance schedule that requires the Village to complete construction of Facility improvements as soon as possible, but not later than March 1, 2023. Mr. Standring stated that the Village has not yet started work on expanding treatment capacity due to funding issues.
AH2-RR-002
For the month of February, the effluent flow was above the 0.7 MGD average daily design rate for most of the month and as high as 1.9 MGD.
Unit: Outfall 001
AH2-OB-003
The outfall signage was facing away from the creek and needs to be facing the creek.
Unit: Secondary treatment
AH2-OB-002
EPA observed floating foam and solids on the two older clarifiers.

SECTION VI – CLOSING CONFERENCE AND FOLLOW UP

Closing Conference

The Region 5 Lead Inspector held a closing conference with Mr. Sandring immediately prior to concluding the inspection at 11:14 AM (ET). During the closing conference, the Region 5 Lead Inspector discussed the observations and Areas of Concern identified during the inspection, which have not yet been evaluated for a formal compliance determination.

The closing conference took place in the lab area at 10:45 AM (ET). EPA discussed some of the Areas of Concern that were observed during the inspection, such as increased flows to the Facility, foam and sediments in the clarifiers, and the compliance schedule in the NPDES permit. EPA also noted the fact that there had not been any self-reported effluent exceedances in the last eight months.

Follow Up

No follow up was required after exiting the Facility.

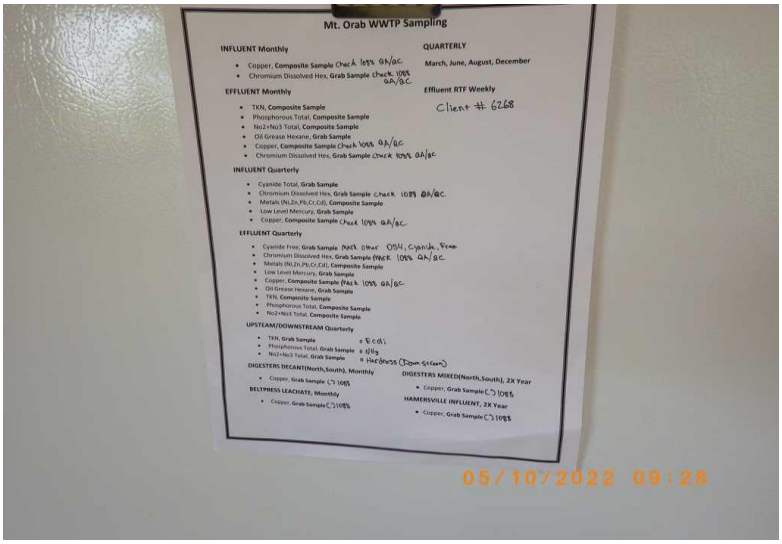
Communication Log

No additional information was received by Region 5 after exiting the Facility.

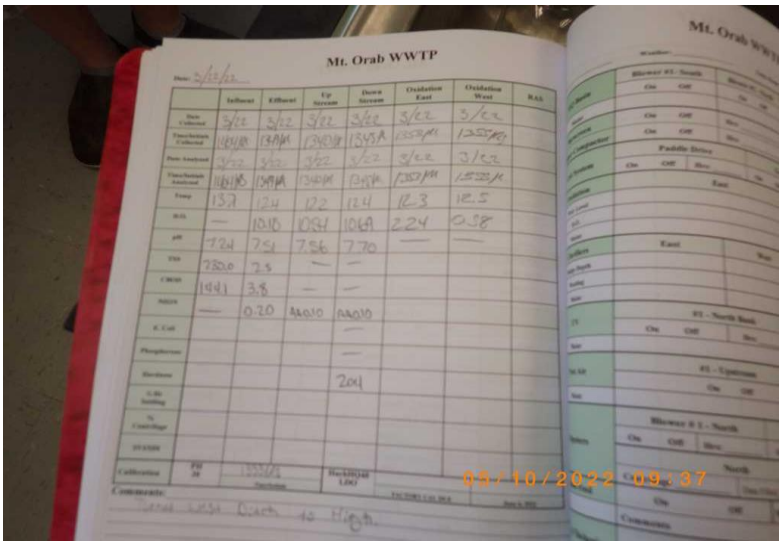
SECTION VII – LIST OF APPENDICES

1. Photo Log

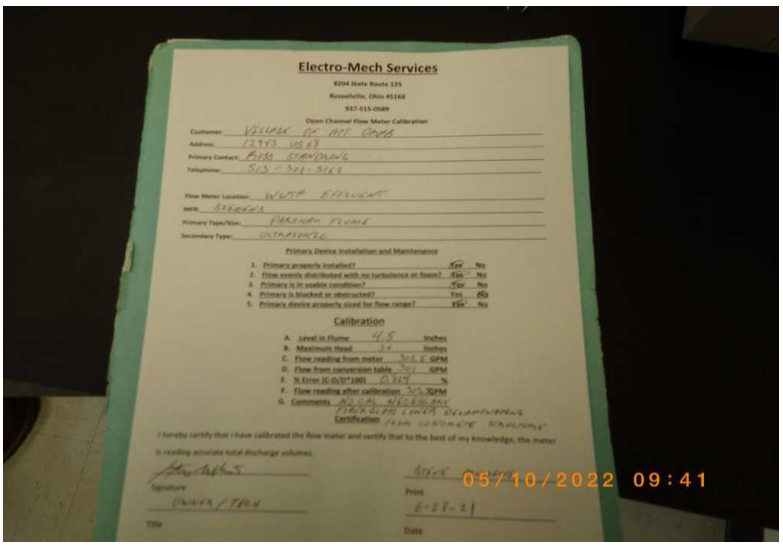
APPENDIX 1: PHOTOLOG
All photographs taken by Andi Hodaj, Environmental Engineer, U.S. EPA
Camera: RICOH WG-4
Time stamps in the photographs are in central time

WWTP schematic	
RIMG2658.JPG	
05/10/2022 08:50 AM (ET)	
Andi Hodaj	
[Unit/Area]	
No CBI	
No PII	
Schematic of the wastewater treatment plant.	
List of pollutants that MASI analyzes	
RIMG2680.JPG	
05/10/2022 10:28 AM (ET)	
Andi Hodaj	
[Unit/Area]	
No CBI	
No PII	
Certificate of operator	
RIMG2681.JPG	
05/10/2022 10:33 AM (ET)	
Andi Hodaj	
[Unit/Area]	
No CBI	
No PII	
Class III operator certificate for Mr. Standring.	

Log of measurements
RIMG2682.JPG
05/10/2022 10:37 AM (ET)
Andi Hodaj
[Unit/Area]
No CBI
No PII
Logbook of pollutant measurements for pollutants that are measured in the in-house lab.



Flow meter calibration
RIMG2683.JPG
05/10/2022 10:41 AM (ET)
Andi Hodaj
[Unit/Area]
No CBI
No PII
Record of flow meter calibrations.



Digester
RIMG2678.JPG
05/10/2022 10:01 AM (ET)
Andi Hodaj
Digesters
No CBI
No PII
The south aerobic digester. Camera looking south.

Belt press	
RIMG2679.JPG	
05/10/2022 10:08 AM (ET)	
Andi Hodaj	
Digesters	
No CBI	
No PII	
Belt press and dumpster. Camera looking southwest.	
Outfall 001	
RIMG2676.JPG	
05/10/2022 09:56 AM (ET)	
Andi Hodaj	
Outfall 001	
No CBI	
No PII	
Signage for outfall 001. Camera looking south.	
Pretreatment building	
RIMG2659.JPG	
05/10/2022 08:59 AM (ET)	
Andi Hodaj	
Pretreatment	
No CBI	
No PII	
Pretreatment building was built in 2016.	

Influent channel	
RIMG2660.JPG	
05/10/2022 09:02 AM (ET)	
Andi Hodaj	
Pretreatment	
No CBI	
No PII	
Influent channel and bar screen inside the pretreatment building.	
Influent autosampler	
RIMG2661.JPG	
05/10/2022 09:07 AM (ET)	
Andi Hodaj	
Pretreatment	
No CBI	
No PII	
Influent autosampler and the thermometer inside it in the pretreatment building.	
Inflow pipes	
RIMG2662.JPG	
05/10/2022 09:12 AM (ET)	
Andi Hodaj	
Pretreatment	
No CBI	
No PII	
Inflow pipes, from left to right: for future expansion, from Mt. Orab and from Hamersville.	

EQ Tank	
RIMG2663.JPG	
05/10/2022 09:26 AM (ET)	
Andi Hodaj	
Pretreatment	
No CBI	
No PII	
The EQ tank was not in operation. Camera looking west.	
Oxidation ditches	
RIMG2664.JPG	
05/10/2022 09:31 AM (ET)	
Andi Hodaj	
Secondary treatment	
No CBI	
No PII	
Oxidation ditches. Camera looking southwest.	
Clarifier	
RIMG2667.JPG	
05/10/2022 09:39 AM (ET)	
Andi Hodaj	
Secondary treatment	
No CBI	
No PII	
One of the three clarifiers. Camera looking Southeast.	

Oxidation ditch	
RIMG2665.JPG	
05/10/2022 09:32 AM (ET)	
Andi Hodaj	
Secondary treatment	
No CBI	
No PII	
The west oxidation ditch. Camera looking northwest.	
Oxidation ditches	
RIMG2666.JPG	
05/10/2022 09:38 AM (ET)	
Andi Hodaj	
Secondary treatment	
No CBI	
No PII	
Oxidation ditches. Camera looking north.	
Clarifier	
RIMG2668.JPG	
05/10/2022 09:39 AM (ET)	
Andi Hodaj	
Secondary treatment	
No CBI	
No PII	
The west of the two old clarifiers. Camera looking southwest.	

Clarifier RIMG2669.JPG 05/10/2022 09:42 AM (ET) Andi Hodaj Secondary treatment No CBI No PII Middle clarifier with foam floating on it. Camera looking down.	
Clarifier RIMG2670.JPG 05/10/2022 09:42 AM (ET) Andi Hodaj Secondary treatment No CBI No PII The west clarifier. Camera looking west, down.	
UV disinfection RIMG2671.JPG 05/10/2022 09:47 AM (ET) Andi Hodaj Secondary treatment No CBI No PII UV disinfection channel. Camera looking south.	

Flow meter RIMG2672.JPG 05/10/2022 09:48 AM (ET) Andi Hodaj Secondary treatment No CBI No PII Eflluent flow meter. Camera looking south.	
Post aeration tank RIMG2673.JPG 05/10/2022 09:51 AM (ET) Andi Hodaj Secondary treatment No CBI No PII Post aeration tank and the top of the cascade aerator. Camera looking southwest.	
Post aeration tank RIMG2674.JPG 05/10/2022 09:51 AM (ET) Andi Hodaj Secondary treatment No CBI No PII Post aeration tank. Camera looking southwest.	

Cascade aerator	
RIMG2675.JPG	
05/10/2022 09:53 AM (ET)	
Andi Hodaj	
Secondary treatment	
No CBI	
No PII	
Cascade aerator. Camera looking northwest.	
New clarifier	
RIMG2677.JPG	
05/10/2022 10:00 AM (ET)	
Andi Hodaj	
Secondary treatment	
No CBI	
No PII	
The clarifier built in 2008. Camera looking east.	