

October 21, 2025

TRANSMITTED ELECTRONICALLY

James Bennett
Pickaway Correctional Institute
P.O. Box 209
Orient, Ohio 43146

Re: Pickaway Correctional Institute

Inspection NPDES

Pickaway County

4PP00003

Subject: Ohio EPA Biosolids Inspection

Dear Mr. Bennett:

On April 10, 2025, Ohio EPA Division of Surface Water (DSW) conducted a Biosolids Inspection at Pickaway Correctional Institute's Wastewater Treatment Plant (PCI), located at 11781 State Route 762 in Orient, Ohio 43146. Representing Ohio EPA were Whitney White from the Ohio EPA Central Office and Joanna Asuncion from Central District Office, who conducted a separate Compliance Evaluation Inspection (CEI). Representing PCI was Kenneth Griffith, James Lyons, and Nathan Thornsberry.

The purpose of the inspection was to evaluate the PCI biosolids management program for compliance with Ohio's environmental laws and regulations as found in Chapter 6111 of the Ohio Revised Code (ORC), Chapter 3745-40 of the Ohio Administrative Code (OAC), and the terms and conditions of your National Pollutant Discharge Elimination System (NPDES) permit.

NPDES Permit:

PCI's NPDES permit (4PP00003*HD) has an effective date of February 01, 2023, and an expiration date of January 31, 2028. The permit contains the following stations for monitoring sewage sludge and biosolids: 581 (Class B land application), 586 (disposal in a landfill), and 588 (transfer to another NPDES permit holder).

Facility Description:

PCI has a design capacity of 2.3 million gallons per day (MGD) with an average flow of 0.724 MGD and a peak flow of 3.474 MGD in 2024. Wastewater treatment components include headworks fine screening with less than a 1.59 cm aperture, a grit removal system, two oxidation ditches, two clarifiers, a mixing chamber, two anoxic tanks, a gravity thickener, and an aerobic digester. Biosolids are dewatered using a belt filter press and stored on the biosolids storage pad. The storage pad provides four months or about 120 days of storage. During the inspection, it was stated that the biosolids stored at that time would be taken to a landfill by Synagro, and subsequent biosolids will be beneficially used once the storage pad is full.

Annual Sludge Reports:

PCI's biosolids program includes 22 authorized Class B biosolids beneficial use sites in Pickaway County totaling 927.5 acres. 75.45 dry tons of sludge from PCI was landfilled in 2020. Biosolids were not removed in 2021 and 2024. PCI's 2022 Annual Sludge Report (ASR) indicates that site 65-00050 was used in 2022. Gibson Lime Services, PCI's beneficial user at the time, informed Ohio EPA that site 65-00110 was used in 2022. PCI's 2023 ASR indicates that no sludge was removed during the year; however, Gibson Lime Services reported that 373.1 wet tons of biosolids were beneficially used at sites 65-00177, 65-00178, and 65-00179 in 2023. The 2020-2023 reporting year ASRs were submitted on time. The 2024 reporting year ASR was submitted after the March 1 deadline on July 31, 2025. All annual sludge fees have been paid in full.

Findings:

- 1. The Geometric Mean of Seven Fecal Coliform Samples was listed as the pathogen reduction option used by PCI on their 2022 ASR; however, fecal coliform laboratory results were not attached to the report and were not available on site.
- 2. The 2022 ASR contained one SOUR test for 2015, six SOUR tests for 2021, and two SOUR tests for 2022. The sludge tested in July of 2022 was 2.5% total solids, and 7.2% total solids in November of 2022.
- 3. Analytical results for metals were not available at the facility during the inspection; however, results were reported on the 2021 and 2022 ASR and the Electronic Discharge Monitoring Report (eDMR). The reported metals results were well below NPDES permit limits.
- 4. Some beneficial use records were provided on the 2022 ASR for the beneficial use event that occurred in November of 2022. This includes an agronomic rate calculation (ARC), signage records, and a site transfer application. Upon review, it was determined that the ARC and transfer application were incomplete, and the signage records indicated that signs were not in place for seven days prior to the delivery of biosolids to the beneficial use site. Gibson Lime Services provided an invoice for the beneficial use of 567 wet tons of biosolids on December 2, 2022, but records were not available for this beneficial use event. Soil analytical results, Notice and Necessary Information (NANI) forms, forecast, and storage records were not available for the 2022 beneficial use events.
- 5. PCI could not provide beneficial use records for 2023; however, Gibson Lime Services reported that 373.1 wet tons of biosolids were beneficially used at sites 65-00177, 65-00178, and 65-00179.
- 6. During the inspection, it was stated that most of the PCI biosolids analytical data and beneficial use records were lost when their former operator retired. Analytical results for metals concentration in sludge, soil analytical results for beneficial use sites, site authorization letters and applications, forecast records, beneficial user and generator Notice and Necessary Information forms, standard operating procedures (SOPs), and any records regarding beneficial use of biosolids in 2023 were unavailable.

Recommendations:

These recommendations are offered by Ohio EPA in an effort to provide compliance assistance to your facility.

- Please provide the analytical results and geometric mean calculations for seven fecal coliform grab samples to Ohio EPA prior to beneficially using biosolids from PCI. Additionally, please develop a fecal coliform sampling and analysis SOP that includes sampling and analysis frequency, location, and method. Guidance for developing biosolids SOPs is available on the Ohio EPA Biosolids Website. All fecal coliform analytical results should be included in all future ASRs.
- 2. As stated in the Notice of Violation (NOV) letter issued to PCI on May 19, 2025, please develop a SOUR test SOP. An example SOUR test SOP template is available on the <u>Ohio EPA Biosolids Website</u>. Ohio EPA recommends that SOUR samples be collected from the digester to ensure that the samples are between 0.5-2% solids and are representative of the digester's performance. If the DO of the sludge sample falls below 1.0 mg/L, then the test should be restarted; in this case, the sample should be oxygenated through agitation or aeration. Please provide seven SOUR test results to Ohio EPA prior to beneficially using biosolids from PCI. All future ASRs should include SOUR test analytical results and calculations.
- 3. As stated in the PCI NOV issued on May 19, 2025, please develop a biosolids sampling SOP that describes the sampling frequency, method, and parameters to be monitored during each reporting period. This plan should include how records will be maintained so that they are available on site for at least five years after they are generated.
- 4. Please review the additional information section for violations six through nine of the NOV issued on May 19, 2025, to PCI and complete the requested actions for each violation to comply with OAC 3745-40-06, 08, 09, and 11. Please note that the beneficial use SOP requested in violation six of the PCI NOV should also describe how soil analytical results will be obtained and utilized, how generator notice and necessary information (NANI) forms will be developed and provided to farmers, how forecast records will be maintained, and how biosolids storage records will be maintained for future beneficial use sites.
- 5. Ohio EPA recommends that two or more staff members maintain copies of biosolids beneficial use records. Additionally, at least two staff members should be trained in collecting and analyzing (if applicable) biosolids samples for the parameters listed in Table 581 of PCI's NPDES permit. Copies of all records developed by beneficial users should be available at PCI.

If you have any questions or comments concerning the enclosed inspection report, please contact me at 614-705-1141 or e-mail at whitney.white@epa.ohio.gov.

Sincerely,

Whitney White

Whitney White Biosolids Coordinator (Environmental Specialist II) Division of Surface Water Central Office

Ec:

James Bennett, Pickaway Correctional Institute WWTP, Operator of Record james.bennett@drc.ohio.gov

Kerrie Ryan, Pickaway Correctional Institute WWTP, Deputy Director of Administration, kerrie.ryan@odrc.state.oh.us

Kenneth Griffith, Pickaway Correctional Institute WWTP, Operations Manager kenneth.griffith2@drc.ohio.gov

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BIOSOLIDS GENERATOR INSPECTION CHECKLIST

1. Contact Information

	Treatment Works	Contractor	Inspector
Entity Name	Pickaway Correctional Institute	Synagro Technologies	Ohio EPA
Contact	James Bennett	Ryan Wenger	Whitney White
Title	Operator of Record	Area Director	Environmental Specialist II
Phone	(419) 560-2721	614-206-9547	(614)705-1141
Email	james.bennett@drc.ohio.gov	rwenger@synagro.com	whitney.white@epa.ohio.gov
Mailing	11781 State Route 762	17860 Ankneytown Road	50 West Town Street
Address	Orient, Ohio 43146	Fredericktown, Ohio 43019	Columbus, Ohio 43215

Joanna Asuncion, Ohio EPA

Kenneth Griffith, Operations Manager

Jim Lyons, Class I Wastewater Operator

Nate Thornsberry, Class I Drinking Water Operator

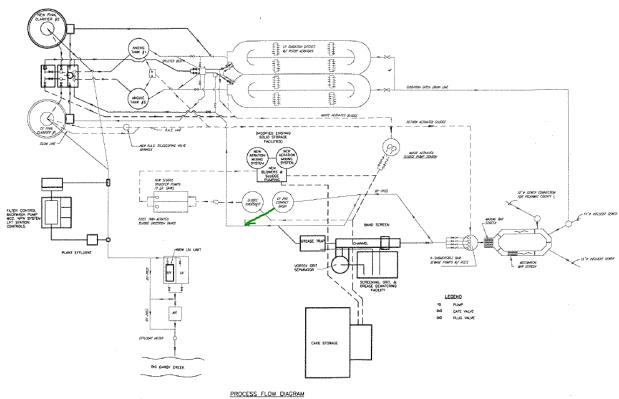
2. Facility Information

Average Daily Flow (MGD)	0.724		
Design Treatment Capacity (MGD)	2.3		
Biosolids Storage Capacity (Years)	2		
Contracted Alternative / Contingency Disposal	SWACO I	₋andfill	
Headworks Screening (max aperture of 1.59 cm)	Screen S	ize: <5/8 inch	1
	Alternati	ve: N/A	
Planned Upgrades:			
 Secondary RAS pump was repaired in Ma 	rch 2025		
Recent Maintenance Issues/Equipment Failures:			
 Two broken aerators in the southern oxid 	dation dite	ch	
Are work and storage areas properly maintained	? 🛛 Ye:	s 🗆 No	
NPDES Permit Verification	In	Beneficial	Use
	Permit	or Disposal	
Station 581: Class B Biosolids	×	×	
Station 584: Exceptional Quality Biosolids			
Station 585: Incineration			
Station 586: Landfill	×	×	
Station 588: Transfer to NPDES Permittee	×		

3. Sewage Sludge Treatment

Treatment Units	Quantity	Comments (Online/Offline and Capacity/Dimensions)
Oxidation Ditch	2	The northern oxidation ditch was offline for repairs and cleaning.
Clarifiers	2	
Anoxic Tanks	2	
Gravity Thickener	1	
Aerobic Digester	1	
Belt Filter Press	1	The belt press is operated monthly.
Storage Pad	1	

4. Wastewater Treatment Train Flow Chart



5. Operational Questions

Digester Operational Temperature	Digester Environment:	Temperature:
	Aerobic	Ambient
	Anaerobic	N/A
Dewatering Efficiency	Sample Location:	Average % Solids:
	Prior to Dewatering	1.9%
	After Dewatering	17-19%

6. Field Storage Requirements

Are biosolids being stored at a beneficial use site?	□ Yes ⊠No	□NA	Notes
Are records being maintained to show < 90 days storage, amounts, and map with locations?	☐ Yes ☐ No	⊠NA	Notes:

7. Pathogen Reduction Alternative

	P-1	Geometric Mean of Seven Fecal Coliform Samples	Less than two million most probable number or colony forming units per gram of total solids (dry weight basis).			
	Documentation of stabilization via an actively mixed aerobic or anaerobic process or through lime					
	stabilizati	on.				
	Fecal coliform analytical results.					
	The geometric mean calculations.					
Comr	nents:					
•	P-1: The Geometric Mean of Seven Fecal Coliform Samples was listed as the pathogen reduction option used on the 2022 reporting year annual sludge report (ASR); however, fecal coliform					

laboratory results were not attached to the report or available on site.

8. Vector Attraction Reduction Option

	VAR-4	Specific Oxygen Uptake Rate (SOUR)	and 30°C (5 shall be ≤1	sewage sludge that is treated between 10°C 0°F and 86°F), the specific oxygen uptake rate .5 milligrams of oxygen per hour per gram of (dry weight basis) at 20°C (68°F).			
\boxtimes	Dissolved oxygen readings at 1-minute intervals over fifteen-minutes.						
×	-	ture records showing that the to 20°C (68°F):	ne test was	Sour _{20-degrees Celsius} = Sour _{T-degrees Celsius} $\mathbf{x} \Theta^{(20\text{-T})}$ (Where T is the temperature of the sewage sludge when the SOUR test was started; and Where $\Theta = 1.05$ if T > 20 degrees Celsius; or Where $\Theta = 1.07$ if T < 20 degrees Celsius)			
×	Total solid	ds for the sewage sludge sam	iple.				

	Sour calculations:	Max. SOUR:	0.3 (mg/g)/hr	Min. SOUR:	0.1 (mg/g)/hr		
Comr	nents:						
•	Nine SOUR test results were prov	ided on the 202	22 ASR; however, only	two tests wer	e conducted in		
	2022. These results were not available at the facility. The results attached to the 2022 ASR were						
	provided to PCI on April 11, 2025.						

9. Biosolids Classification

	Class B Record Requirements				Record Req	uire	ments			
	The f	ollowing and	alytic	al res	ults:					
		Arsenic			Copper		Mercury		Nickel	
		Zinc			Cadmium		Lead		Molybdenum	
		Selenium			Ammonia		Total Kjeldahl Nitrogen		Total	
					Nitrogen				Phosphorus	
				otas						
		dard Operati	ng				r monitoring locations			
		edure(must			•	-	nonitoring frequency			
	include) Sample collection/monitoring procedures									
							preservation procedures			
						_	analysis procedures			
					-	ons	required for sample/r	nonit	oring	
	analysis									
	-									
					site authorization applications					
							Use Site Authorization let			
					-	Bene	eficial User Notices and	Nece	ssary	
					Information					
						-	at Class B biosolids were	not st	tored	
					≥90 days at the					
		ficial use s	ite		Soil pH for each					
	recoi	ds			•		each beneficial use site			
					•		ulations for each beneficia	al use	site	
					Forecast/actua	•	•			
							itoring records (if applicat			
							ords for all beneficial use s	ites		
				\boxtimes	•		of beneficial use			
				\boxtimes	3					
							e of biosolids occurred			
							e is met at each beneficial	l use s	site, including how the	
			plicat	ion e	quipment is cali	brate	ed.			
Con	<u>nment</u>		(1.1					
	• Th	ie majority o	t PCI	's bio	solids analytical	data	and beneficial use record	s were	e lost when their	

former operator left the facility in 2023. Analytical results for metals concentration in sludge, soil

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- analytical results for beneficial use sites, site authorization letters and applications, forecast records, beneficial user and generator Notice and Necessary Information forms, SOPs, and any records regarding beneficial use of biosolids in 2023 were unavailable.
- Gibson Lime Service confirmed that 373.1 wet tons of sludge from PCI were applied to sites 65-00177, 65-00178, and 65-00179 in 2023. No records were available for these beneficial use events, and they were not reported on the 2023 ASR.
- ARCs were provided for 2022; however, the total phosphorus in sludge, expected crop yield, and crop nitrogen requirements were not listed, therefore, an agronomic rate could not be calculated.
- In 2022, signs were posted three days prior to beneficial use instead of one week as required. Signs were posted for 30 days following the final date of beneficial use.

10. Monitoring Information

Where does biosolids sample	SOUR test samples are collected from the aerobic digester.					
collection occur?	Total solids samples are collected from the digester and the					
	dewatered biosolids storage pad.					
Who collects the biosolids samples?	Jim Lyons					
What are the biosolids sample	Samples have not been sent to a laboratory since 2022. No sample					
preservation/shipping procedures?	preservation/shipping SOP was available.					
Is a chain of custody utilized?	Records are not available					
At what frequencies are biosolids						
samples collected?	☑ Quarterly □ Monthly					
	□ Other:					
Comments:						
Total solids samples are analyzed each time the belt filter press is used.						

11. Analytical Information

N	Analytical Information					
	Does the generator perform in-house analyses? If yes, list in-house analyses in comments.					
	Does the generator utilize	e a contracted laboratory to perfo	rm analyses? If yes, list contracted			
	analyses in comments.					
vide '	the contracted laboratory ir	formation:				
b Na	me	MASI Environmental Laboratories				
ldres	ress					
Contact Name		Phone	Email			
idget	t Troesch	614-873-4654				
	vide b Na	□ Does the generator perform □ Does the generator utilized analyses in comments. vide the contracted laboratory in b Name Idress	□ Does the generator perform in-house analyses? If yes, list			

Comments:

• Total solids samples are analyzed in-house. If biosolids are beneficially used in 2025, the SOUR test will be conducted in-house.

12. Method Verification

Υ	N	N/A	Method verification (If no, describe in the comments)			
		×	Fecal Coliform - Is Standard Methods 9221E or 9222D, EPA Method 1680 or 1681 utilized?			
		X	Are fecal coliform samples analyzed within eight hours of collection? If not, describe in			
			comments.			
		X	Enteric Viruses - Is ASTM D 4994-89 utilized?			
		×	Helminth ova - Is Yanko, W.A "Occurrence of Pathogens in Distribution and Marketing			
			Municipal Sludges" utilized?			
		×	Salmonella sp. Bacteria - Is Standard Methods 9260D, Kenner, B.A and H.P. Clark, "Detection			
			and Enumeration of Salmonella and Pseudomonas aeruginosa," or EPA Method 1682			
			utilized?			
		×	Inorganic Metals - Is SW-846 utilized (6010D, 7061A, 7000B, 7470A, 7471B)?			
		×	Specific Oxygen Uptake Rate - Is Standard Methods 2710B utilized?			
×			Total, Fixed, and Volatile Solids - Is Standard Methods 2540G utilized?			
Cor	Comments:					
	The only laboratory records available were the total solids analytical sheets and SOP.					

Inspection Photos



Figure 1. Influent bar screen. Photo taken 4/10/2025 by Whitney White. Pickaway Correctional Institute WWTP, NPDES #4PP00003.



Figure 2. Two new mechanical fine screens. Photo taken 4/10/2025 by Whitney White. Pickaway Correctional Institution WWTP, NPDES #4PP00003.



Figure 3. Band screen. Photo taken 4/10/2025 by Whitney White. Pickaway Correctional Institution WWTP, NPDES #4PP00003.



Figure 4. South oxidation ditch. Photo taken 4/10/2025 by Whitney White. Pickaway Correctional Institution WWTP, NPDES #4PP00003.



Figure 5. North oxidation ditch. Photo taken 4/10/2025 by Whitney White. Pickaway Correctional Institution WWTP, NPDES #4PP00003.



Figure 6. One of two clarifiers. Photo taken 4/10/2025 by Whitney White. Pickaway Correctional Institution WWTP, NPDES #4PP00003.



Figure 7. Clarifier Weir. Photo taken 4/10/2025 by Whitney White. Pickaway Correctional Institution WWTP, NPDES #4PP00003.



Figure 8. One of two anoxic tanks. Photo taken 4/10/2025 by Whitney White. Pickaway Correctional Institution WWTP, NPDES #4PP00003.



Figure 9. Sludge thickener. Photo taken 4/10/2025 by Whitney White. Pickaway Correctional Institution WWTP, NPDES #4PP00003.



Figure 10. Sludge thickener weir. Photo taken 4/10/2025 by Whitney White. Pickaway Correctional Institution WWTP, NPDES #4PP00003.



Figure 11. Aerobic digester. Photo taken 4/10/2025 by Whitney White. Pickaway Correctional Institution WWTP, NPDES #4PP00003.



Figure 12. Aerated sludge holding tank. Photo taken 4/10/2025 by Whitney White. Pickaway Correctional Institution WWTP, NPDES #4PP00003.



Figure 13. Belt filter press. Photo taken 4/10/2025 by Whitney White. Pickaway Correctional Institution WWTP, NPDES #4PP00003.



Figure 14. Biosolids storage pad. Photo taken 4/10/2025 by Whitney White. Pickaway Correctional Institution WWTP, NPDES #4PP00003.