



State of Ohio Environmental Protection Agency

**Northwest District Office**

347 North Dunbridge Road  
Bowling Green, OH 43402-9398

TELE: (419) 352-8461 FAX: (419) 352-8468  
www.epa.state.oh.us

Ted Strickland, Governor  
Lee Fisher, Lieutenant Governor  
Chris Korleski, Director

Re: Defiance County  
City of Defiance  
NPDES Permit

March 6, 2008

Mr. Jeff Stone, Superintendent  
Defiance Water Pollution Control  
324 Perry Street  
Defiance, Ohio 43512

Dear Mr. Stone:

On January 24 and February 11, 2008, an NPDES permit collection system and an NPDES permit compliance inspection was conducted at the City of Defiance Pollution Control Facility. You, Mark Lenhart, Assistant Superintendent, were present at each inspection and Neil Pry, Collection Supervisor, was present at the collection system inspection to provided information on plant operations and collection system maintenance.

The facility has experienced violations for pH, Fecal Coliform, TSS and Oil and Grease since the last inspection. We have received documentation regarding these violations, which involves corrections to the MOR's sent to Ohio EPA, high flow issues and some revisions of operation procedures at the plant. During the last year the facility documented six uses of 050 which is the secondary treatment bypass. During the recent flooding event the City was able to treat the 15 Million Gallons per day that reached the plant and the bypass was not used.

Due to a polychlorinated biphenol, (PCB) release at the Old Zellar property, PCB's were detected in the facility's influent in January of 2005. The PCB contaminated site owners have remediated the site under an agreement with US EPA. Concerns remain that storm water in combination with inflow and infiltration conditions at the site are promoting migration of PCBs from the site into the City of Defiance combined sewers. PCB samples continue to be taken from the lagoons prior to land application of the sludge, since the sludge lagoons may concentrate the PCBs. To date, PCB levels have not inhibited land application of the sludge.

The City has expedited the separation of sewers which serve the PCB contaminated site. The City is working closely with Ohio EPA during the design phase of this project. The City's goal is to prevent all storm water from the contaminated PCB site from entering the City's sanitary sewers.

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The City has invested \$30,000 dollars in replacing the socks on the aeration tank diffusers. The staff are rebuilding sludge pumps and completed the raw sludge pumps last year. Improvements to the sludge digesters include new controllers, new safety alarms for combustibles, and control valves to better control hot water circulation in the sludge digesters.

You keep an extensive and well organized spare parts inventory and safety equipment inventory which allows you to do repairs rapidly and safely. You have completed revisions to your chlorine safety procedures which greatly improves the safety of the City, local businesses and your staff.

During my visit, both roughing towers were not in operation. All other major treatment units were in operation. The final effluent discharging to the Maumee River was turbid and tan due to the river water intrusion during the flooding which started on February 4, 2008. The flooding reached 17.9 feet which is a few feet short of the 100 year flood event which is approximately 22 feet.

The City is back on schedule with the sewer separation projects as required in the NPDES permit schedule of compliance. Groups #1 and #3 are under construction. Group #4 has been designed and should be constructed this year. Group #6, which serves the PCB contaminated property, is in the design phase. Assessment work on the Maumee Interceptor sewer will begin soon. The City is in the process of hiring one more person for maintenance and one person to handle the CSO LTCP sewer separation projects.

During our January 25, 2008 inspection we reached a better understanding regarding the impact of high river water on your collection system and especially the interceptor sewers. Large portions of the interceptor sewers and at least 18 mechanical regulators are located in the flood plain. Due to the lack of access, current condition of the sewers and their original design, river water intrusion is a serious issue for the City of Defiance. A field log and CSO monthly monitoring report is being developed with Ohio EPA's assistance to document more clearly dry weather overflows and CSO wet weather events. Separation of sewers may eliminate I & I sources during rain events, however, separated sewers that tie into an interceptor sewer full of river water will result in sanitary sewer overflows, which are illegal.

The plant appeared to be operating satisfactorily. A copy of our completed inspection report is enclosed for your records.

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If you have any questions please call me at (419) 373-3067.

Yours truly,

A handwritten signature in cursive script, appearing to read "Dana Martin-Hayden".

Dana Martin-Hayden  
Division of Surface Water

/csl

Enclosure

pc: Mayor and Council, City of Defiance  
DSW NWDO-File w/enclosure

# NPDES COMPLIANCE INSPECTION REPORT

## Section A: National Data System Coding

Permit #	NPDES	Yr/Mo/Day	Inspection Type	Inspector	FacType
2PD00013	OH0024899	08/02/11	<u>C</u>	<u>S</u>	<u>1</u>

## Section B: Facility Data

Name and Location of Facility Inspected	Entry Time	Permit Effective Date
Defiance Water Pollution Control State Route 281 Defiance, Ohio 43512	12:45 PM	May 1, 2005
	Exit Time	Permit Expiration Date
	2:00 PM	July 31, 2008

Name(s) and Title(s) of On-Site Representative(s)	Phone Number(s)
Mr. Jeff Stone, Superintendent Mr. Mark Lenhart, Asst. Superintendent	419-782-0841

Name, Address and Title of Responsible Official	Phone Number
Mayor & Council City of Defiance 324 Perry Street Defiance, Ohio 43512	419-782-0841

## Section C: Areas Evaluated During Inspection (S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)

<u>S</u> Permit	<u>S</u> Flow Measurement	<u>S</u> Pretreatment
<u>S</u> Records/Reports	<u>S</u> Laboratory	<u>S</u> Compliance Schedules
<u>S</u> Operations & Maintenance	<u>S</u> Effluent/Receiving Waters	<u>S</u> Self-Monitoring Program
<u>S</u> Facility Site Review	<u>S</u> Sludge Storage/Disposal	<u>N</u> Other
<u>N</u> Collection System		

## Section D: Summary of Findings/Comments (Attach additional sheets if necessary)

The final effluent discharging to the Maumee River was turbid and tan due to the river water intrusion during the flooding which started on February 4, 2008. The flooding reached 17.9 feet which is a few feet short of the 100 year flood event which is approximately 22 feet.

The City is back on schedule with their collection system storm and sewer separation projects as required in the NPDES permit schedule of compliance. Group #1 and #3 is under construction. Group #4 has been designed and should be constructed this year. Group #6, which serves the PCB contaminated property, is in the design phase. Assessment work on the Maumee Interceptor sewer will begin soon. The City is in the process of hiring one more person for maintenance and one person to handle the CSO LTCP sewer separation projects.

Large portions of the interceptor sewers and at least 18 mechanical regulators are located in the flood plain. Due to the lack of access, current condition of the sewers and their original design, river water intrusion is a serious issue for the City of Defiance. A field log and CSO monthly monitoring report is being developed with Ohio EPA's assistance to document more clearly dry weather overflows and CSO wet weather events. Separation of sewers may eliminate I & I sources during rain events, however, separated sewers that tie into an interceptor sewer full of river water will result in sanitary sewer overflows, which are illegal.

The City has invested \$30,000 dollars in replacing the socks on the aeration tank diffusers. Your staff are rebuilding sludge pumps and completed the raw sludge pumps last year. Improvements to the sludge digesters include new controllers, new safety alarms for combustibles, and control valves to better control hot water circulation in the sludge digesters.

Dana Martin-Hayden 3/6/08, Ohio EPA, Northwest District Office  
 Name(s) and Signature(s) of Inspector(s) Date

Elizabeth A. Wick, P.E. 5/7/08, Ohio EPA, Northwest District Office  
 Name and Signature of Reviewer Date

Sections E thru K: Complete on all inspections as appropriate. N/A - Not Applicable N/E - Not Evaluated

**Section E: Permit Verification**

	Yes	No	N/A	N/E
<b>INSPECTION OBSERVATIONS VERIFY THE PERMIT</b>				
(a) CORRECT NAME AND MAILING ADDRESS OF PERMITTEE	<u>X</u>	___	___	___
(b) CORRECT NAME AND LOCATION OF RECEIVING WATERS	<u>X</u>	___	___	___
(c) PRODUCT(S) AND PRODUCTION RATES CONFORM WITH PERMIT APPLICATION (INDUSTRIES)	<u>X</u>	___	___	___
(d) FLOWS AND LOADINGS CONFORM WITH NPDES PERMIT PERMIT APPLICATION/BRIEFING MEMO	<u>X</u>	___	___	___
(e) TREAT PROCESSES ARE AS DESCRIBED IN PERMIT APPLICATION/BRIEFING MEMO	<u>X</u>	___	___	___
(f) NEW TREATMENT PROCESS(ES) ADDED SINCE LAST INSPECTION	___	<u>X</u>	___	___
(g) NOTIFICATION GIVEN TO STATE OF NEW, DIFFERENT OR INCREASED DISCHARGES	<u>X</u>	___	___	___
(h) ALL DISCHARGES ARE PERMITTED	<u>X</u>	___	___	___
(i) NUMBER AND LOCATION OF DISCHARGE POINTS ARE AS DESCRIBED IN PERMIT	<u>X</u>	___	___	___

COMMENTS/STATUS:

i) during next permit cycle - describe station 602 in more detail - currently states "After final settling and prior to mixing with post settled by-pass - MH sampled is located in between the final tanks" add to permit "prior to Cl and dechlorination"

**Section F: Compliance Schedules/Violations**

	Yes	No	N/A	N/E
(a) ANY SIGNIFICANT VIOLATIONS SINCE THE LAST INSPECTION	<u>X</u>	___	___	___
(b) PERMITTEE IS TAKING ACTIONS TO RESOLVE VIOLATIONS	<u>X</u>	___	___	___
(c) PERMITTEE HAS COMPLIANCE SCHEDULE	<u>X</u>	___	___	___
(d) COMPLIANCE SCHEDULE CONTAINED IN <u>NPDES Permit</u>	<u>X</u>	___	___	___
(e) PERMITTEE IS MEETING COMPLIANCE SCHEDULE	<u>X</u>	___	___	___

COMMENTS/STATUS:

**Section G: Operation and Maintenance**

**TREATMENT WORKS:**

	Yes	No	N/A	N/E
TREATMENT FACILITY PROPERLY OPERATED AND MAINTAINED				
(a) STANDBY POWER AVAILABLE ___ GENERATOR <u>X</u> DUAL FEED	<u>X</u>	___	___	___
(b) ADEQUATE ALARM SYSTEM AVAILABLE FOR POWER OR EQUIPMENT FAILURES	<u>X</u>	___	___	___
(c) ALL TREATMENT UNITS IN SERVICE OTHER THAN BACKUP UNITS	___	<u>X</u>	___	___
(d) SUFFICIENT OPERATING STAFF PROVIDED # SHIFTS <u>2</u> DAYS/WEEK <u>7</u>	<u>X</u>	___	___	___
(e) OPERATOR HOLDS UNEXPIRED LICENSE OF CLASS REQUIRED BY PERMIT CLASS: <u>IV</u>	<u>X</u>	___	___	___
(f) ROUTINE AND PREVENTIVE MAINTENANCE SCHEDULED/PERFORMED ON TIME	<u>X</u>	___	___	___
(g) ANY MAJOR EQUIPMENT BREAKDOWN SINCE LAST INSPECTION	<u>X</u>	<u>X</u>	___	___
(h) OPERATION AND MAINTENANCE MANUAL PROVIDED AND MAINTAINED	<u>X</u>	___	___	___
(i) ANY PLANT BYPASSES SINCE LAST INSPECTION	<u>X</u>	___	___	___
(j) REGULATORY AGENCY NOTIFIED OF BYPASSES <u>X</u> ON MORS ___ 800 NO.	<u>X</u>	___	___	___
(k) ANY HYDRAULIC AND/OR ORGANIC OVERLOADS EXPERIENCED SINCE LAST INSPECTION	<u>X</u>	___	___	___

**COMMENT/STATUS:**

- (a) no generator but dual feed, stand by generators for lift stations.
- (c) Both roughing towers are offline not helping to meet limits, purposely off line
- (d) 2 shifts 5 days a week and 1 shift on weekends
- (e) Mark Lehnart has EPA approval to run the plant while he obtains his Class IV.
- (g) gear drive on final clarifier broke -shipped to chicago for a rebuild - \$20,000
- (i) hydraulic overload occurred 6 times - 050 was used which bypasses secondary treatment
- (k) only hydraulic overloads - because they have bio-towers they have plenty of organic capacity that they don't use

**COLLECTION SYSTEM:**

	Yes	No	N/A	N/E
(a) PERCENT COMBINED SYSTEM <u>38</u>				
(b) ANY COLLECTION SYSTEM OVERFLOWS SINCE LAST INSPECTION (CSO <u>X</u> SSO <u>X</u> )	<u>X</u>	___	___	___
(c) REGULATORY AGENCY NOTIFIED OF OVERFLOWS (SSOs)	<u>X</u>	___	___	___
(d) CSO O AND M PLAN PROVIDED AND IMPLEMENTED	<u>X</u>	___	___	___
(e) CSOs MONITORED AND REPORTED IN ACCORDANCE WITH PERMIT	<u>X</u>	___	___	___
(f) PORTABLE PUMPS USED TO RELIEVE SYSTEM	<u>X</u>	___	___	___
(g) LIFT STATION ALARM SYSTEMS PROVIDED AND MAINTAINED	<u>X</u>	___	___	___
(h) ARE LIFT STATIONS EQUIPPED WITH PERMANENT STANDBY POWER OR EQUIVALENT	<u>X</u>	___	___	___
(i) IS THERE AN INFLOW INFILTRATION PROBLEM (SEPARATE SEWER SYSTEM) OR WERE THERE ANY MAJOR REPAIRS TO COLLECTION SYSTEM SINCE LAST INSPECTION	<u>X</u>	___	___	___
(j) ANY COMPLAINTS RECEIVED SINCE LAST INSPECTION OF BASEMENT FLOODING	<u>X</u>	___	___	___
(k) ARE ANY PORTIONS OF THE SEWER SYSTEM AT OR NEAR CAPACITY	<u>X</u>	___	___	___

**COMMENTS/STATUS:**

- (e) Developing a new form to better document dry weather overflows - Ohio EPA comments to follow
- (f) used w/ blockages and other cases where pumping will have an effect. - not used in sections where river water intrusion is taking place.
- (g) Telemetry on all stations.
- (h) One lift station, Elliot Road, has a permanent generator while all the other pump stations have a hook up for the portable generators, except Kingsbury Road. Kingsbury Road has a dual feed. Kern Ave will have a permanent generator on stand by.
- (i) Major repairs to the collection system have been done beside those scheduled in the CSO LTCP. They have removed I&I from group II, Carter Road and Maumee West Pump station has been redone.
- (j) 90% of the time due to home owner laterals
- (k) An express sewer is being designed and installed as part of group II.

**Section H: Sludge Management**

(a) SLUDGE MANAGEMENT PLAN (SMP)				
SUBMITTED DATE <u>09/01</u> APPROVAL # _____ NOT SUBMITTED ___ N/A <u>X</u>				
	Yes	No	N/A	N/E
(b) SLUDGE MANAGEMENT PLAN CURRENT	<u>X</u>	___	___	___
(c) SLUDGE ADEQUATELY DISPOSED (METHOD: <u>Land Applied</u> )	<u>X</u>	___	___	___
(d) IF SLUDGE IS INCINERATED, WHERE IS ASH DISPOSED OF <u>NA</u>	___	___	___	___
(e) IS SLUDGE DISPOSAL CONTRACTED (NAME: <u>Pradco</u> )	<u>X</u>	___	___	___
(f) HAS AMOUNT OF SLUDGE GENERATED CHANGED SIGNIFICANTLY SINCE LAST INSPECTION	___	<u>X</u>	___	___
(g) ADEQUATE SLUDGE STORAGE PROVIDED AT PLANT	<u>X</u>	___	___	___
(h) LAND APPLICATION SITES MONITORED AND INSPECTED PER SMP	<u>X</u>	___	___	___
(i) RECORDS KEPT IN ACCORDANCE WITH STATE AND FEDERAL LAW	<u>X</u>	___	___	___
(j) ANY COMPLAINTS RECEIVED IN LAST YEAR REGARDING SLUDGE	___	<u>X</u>	___	___
(k) IS SLUDGE ADEQUATELY PROCESSED (DIGESTION, DEWATERING, PATHOGEN CONTROL)	<u>X</u>	___	___	___

COMMENTS/STATUS:

(g) Four lagoons provide 900,000 gallons of storage each, combined is about 1 year of storage. City raised issue that the need to sample for PCB's causes the treatment period for the sludge lagoon to be decreased by 5 weeks. As a result, sludge which is more dilute is being applied and sampled more often. Since the sludge concentrates in the sludge lagoons the PCB's, which concentrate in sludge, need to be sampled in the sludge stream which is being land applied. The Ohio EPA will support all efforts the City makes to increase the storage volume available, which may include more aggressive land application in the summer months or possible temporary storage.

**Section I: Self-Monitoring Program**

Part 1. Flow measurement

	Yes	No	N/A	N/E
(a) PRIMARY FLOW MEASURING DEVICE PROPERLY OPERATED & MAINTAINED <u>X</u>	<u>X</u>	___	___	___
TYPE OF DEVICE: <u>X</u> ULTRASONIC & PARSHALL FLUME ___ ULTRASONIC & WEIR ___ WEIR <u>X</u> CALCULATED FROM INFLUENT <u>X</u> OTHER (Specify _____)				
(b) CALIBRATION FREQUENCY ADEQUATE (Date of last calibration <u>Oct. 2006</u> )	<u>X</u>	___	___	___
(c) SECONDARY INSTRUMENTS (totalizers, recorders, etc.) PROPERLY OPERATED AND MAINTAINED	<u>X</u>	___	___	___
(d) FLOW MEASUREMENT EQUIPMENT ADEQUATE TO HANDLE EXPECTED RANGES OF FLOWS	<u>X</u>	___	___	___
(e) ACTUAL FLOW DISCHARGED IS MEASURED	<u>X</u>	___	___	___
(f) FLOW MEASURING EQUIPMENT INSPECTION				
FREQUENCY: <u>X</u> DAILY ___ WEEKLY ___ MONTHLY ___ OTHER				

COMMENTS/STATUS:

- (a) Flow measuring device at head of plant is ultrasonic mag meter type, Fisher & Porter. Magnetic flow meters are used for the two waste sludge and RAS. A capacitance flow meter for effluent flow and a mag meter, Fisher & Porter for roughing towers is used.
- (b) The Mag meter was calibrated in October 2007 and the parshall flume on the effluent was calibrated on October 2007. Staff frequently checks the mag meter visually and the capacitance flow meter with meters.
- (c) Just had the instruments re calibrated and they finished up on 10/10/2007.
- (f) PLC can be checked too, as well as visual inspections during inspections.

**Part 2. Sampling**

	Yes	No	N/A	N/E
(a) SAMPLING LOCATION(S) ARE AS SPECIFIED BY PERMIT	<u>X</u>	___	___	___
(b) PARAMETERS AND SAMPLING FREQUENCY AGREE WITH PERMIT	<u>X</u>	___	___	___
(c) PERMITTEE USES REQUIRED SAMPLING METHOD	<u>X</u>	___	___	___
(d) SAMPLE COLLECTION PROCEDURES ARE ADEQUATE	<u>X</u>	___	___	___
(i) SAMPLES REFRIGERATED DURING COMPOSITING	<u>X</u>	___	___	___
(ii) PROPER PRESERVATION TECHNIQUES USED	<u>X</u>	___	___	___
(iii) CONTAINERS AND SAMPLE HOLDING TIMES PRIOR TO ANALYSES CONFORM WITH 40 CFR 136.3	<u>X</u>	___	___	___
(e) MONITORING RECORDS (e.g., flow, pH, D.O., etc.) MAINTAINED FOR A MINIMUM OF THREE YEARS INCLUDING ALL ORIGINAL STRIP CHART RECORDINGS (e.g., continuous monitoring instrumentation, calibration and maintenance records)	<u>X</u>	___	___	___
(f) ADEQUATE RECORDS MAINTAINED OF SAMPLING DATE, TIME, EXACT LOCATION, ETC.	<u>X</u>	___	___	___

COMMENTS/STATUS:

**Part 3. Laboratory**

	Yes	No	N/A	N/E
<b>GENERAL</b>				
(a) EPA APPROVED ANALYTICAL TESTING PROCEDURES USED (40 CFR 136.3)	<u>X</u>	___	___	___
(b) IF ALTERNATE ANALYTICAL PROCEDURES ARE USED, PROPER APPROVAL HAS BEEN OBTAINED	___	___	<u>X</u>	___
(c) ANALYSES BEING PERFORMED MORE FREQUENTLY THAN REQUIRED BY PERMIT	<u>X</u>	___	___	___
(d) IF (c) IS YES, ARE RESULTS REPORTED IN PERMITTEE'S SELF-MONITORING REPORT	<u>X</u>	___	___	___
(e) COMMERCIAL LABORATORY USED	<u>X</u>	___	___	___
(1) PARAMETERS ANALYZED BY COMMERCIAL LAB <u>Metals, sludge, oil &amp; grease, priority pollutants, nitrates, biomonitoring, dioxin and PCBs</u>				

(2) LAB NAME: Alloway (biomonitoring) - Triangle Lab/ MN lab (dioxin & PCB) - Ginosko for everything else  
Pace Analytical for PCB low level testing.

**QUALITY CONTROL/QUALITY ASSURANCE**

(f) QUALITY ASSURANCE MANUAL PROVIDED AND MAINTAINED	<u>X</u>	___	___	___
(g) SATISFACTORY CALIBRATION AND MAINTENANCE OF INSTRUMENTS AND EQUIPMENT	<u>X</u>	___	___	___
(h) ADEQUATE RECORDS MAINTAINED	<u>X</u>	___	___	___
(i) RESULTS OF LATEST USEPA QUALITY ASSURANCE PERFORMANCE SAMPLING PROGRAM DATE : <u>June 2007</u> <u>X</u> SATISFACTORY ___ MARGINAL ___ UNSATISFACTORY				

COMMENTS/STATUS:

c) more BOD's performed for operation control

g) Due to the efforts the City has taken in the past, by contracting Alloway labs, to create a QA/QC laboratory program, they are now trouble shooting any issues in the lab quickly and effectively.

h) Mark reviews the QA/QC from the lab.

i) The City's DMQR results for every parameter were satisfactory and they accomplished this goal without their contracted Lab's assistance.

**Section J: Effluent/Receiving Water Observations**

OUTFALL NO.	OIL SHEEN	GREASE	TURBIDITY	VISIBLE FOAM	VISIBLE FLOAT SOLIDS	COLOR	OTHER
001	None	None	Yes	None	None	Tan	

COMMENTS/STATUS:

**Section K: Multimedia Observations**

	Yes	No	N/A	N/E
(a) ARE THERE INDICATIONS OF SLOPPY HOUSEKEEPING OR POOR MAINTENANCE IN WORK AND STORAGE AREAS OR LABORATORIES	___	<u>X</u>	___	___
(b) DO YOU NOTICE STAINING OR DISCOLORATION OF SOILS, PAVEMENT, OR FLOORS	___	<u>X</u>	___	___
(c) DO YOU NOTICE DISTRESSED (UNHEALTHY, DISCOLORED, DEAD) VEGETATION	___	<u>X</u>	___	___
(d) DO YOU SEE UNIDENTIFIED DARK SMOKE OR DUSTCLOUDS COMING FROM SOURCES OTHER THAN SMOKESTACKS	___	<u>X</u>	___	___
(e) DO YOU NOTICE ANY UNUSUAL ODORS OR STRONG CHEMICAL SMELLS	___	<u>X</u>	___	___
(f) DO YOU SEE ANY OPEN OR UNMARKED DRUMS, UNSECURED LIQUIDS, OR DAMAGED CONTAINMENT FACILITIES?	___	<u>X</u>	___	___

IF ANY OF THE ABOVE ARE OBSERVED, ASK THE FOLLOWING QUESTIONS:

- (1) WHAT IS THE CAUSE OF THE CONDITION?
- (2) IS THE OBSERVED CONDITION OR SOURCE A WASTE PRODUCT?
- (3) WHERE IS THE SUSPECTED CONTAMINANT NORMALLY DISPOSED?
- (4) IS THIS DISPOSAL PERMITTED?
- (5) HOW LONG HAS THE CONDITION EXISTED AND WHEN DID IT BEGIN?

COMMENTS/STATUS:

## F. GUIDE - VISUAL OBSERVATION - UNIT PROCESS

RATING CODES: S = Satisfactory; U = Unsatisfactory; M = Marginal; IN = In Operation; OUT = Out of Operation

CONDITION OR APPEARANCE		RATING	COMMENTS
General	Grounds	S	
	Buildings	S	
	Potable Water Supply Protection	S	City Supply
	Safety Features	S	Fenced
	Bypasses	OUT	050 bypassed secondary treatment 6 times last year - flood on 2/4 was 17.9'
	Stormwater Overflows	--	
	Alternate Power Source	S	
	Influent		
Preliminary	Maintenance of Collection Systems	S	New Supervisor, Neil Pry - started 4 months ago
	Pump Station	IN	At plant
	Ventilation	IN	
	Bar Screen	IN	Mechanical Bar Screen being used since cold causing mechanical to shear
	Disposal of Screenings	S	Landfilled - Defiance County Landfill
	Mechanical Bar Screen	OUT	1 Unit - 4 degree C weather - sticking and could shear
	Grit Chamber	IN	2 aerated units
	Disposal of Grit	S	Landfilled - Defiance County Landfill
	Blowers for Grit	IN	1/2 units
	Polymer for primary tanks	OUT	not used since the 1980's - too expensive
Primary	Settling Tanks	IN	5/5 online, tan color, ice building up on surface and skimmer trap
	Scum Removal	IN	All 5 square units
	Sludge Removal	IN	2 primary sludge pumps/alternate use
	Effluent	S	tan color and clear
	Blower	IN	1 keeps solids in suspension, on way to primary settling tanks
Sludge Disposal	Digesters	IN	2/2 primary units
	Temperature and pH	S	
	Gas Production	S	
	Heating Equipment	IN	
	Sludge Pumps	IN	4 total - 2 in digester, 2 by primary
	Drying Beds	OUT	
	Disposal of Sludge	S	Land Apply
	Sludge Lagoons	IN	3/4 units - #1 land applied in Jan. / waiting for PCB results for #3/ using #4
Other	Flow Meter and Recorder	IN	approximately 6.0 MGD
	Records	S	
	Lab Controls	S	
	Chemical Treatment	IN	(Ferrous chloride) Phosphorous removal - > screening < pump blockages
	Caustic Soda	IN	added into the split flow conversion chamber
Secondary-Tertiary List items as	Aeration	IN	3/3 units, brown -consistent bubbling-River high DO at 9.8 usually at DO 2.5
	Blowers	IN	1/4 units
	Final Clarifier	IN	3/3, little algae on weirs, some floating sludge in older tanks, dark red brown
	RAS Pumps	IN	3/7 pumps - newer final settling tank has (3 RAS but no WAS)
	Roughing Towers	OUT	2 units, too cold and river water - so dilute loading low and not needed.,
	Roughing Towers (pumps)	OUT	0/3
Disinfection	Effluent	S	turbid and tan - same color as the river
	Disinfection System	OUT	
	Effective Dosage		
	Contact Time		
	Contact Tank	IN	2 units in series - units very clean - no algae
	Dechlorination	OUT	