



State of Ohio Environmental Protection Agency

PERSONAL FILE

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Certified Mail #91 7108 2133 3932 4450 1444

December 22, 2008

Mr. Dave Glass, Safety Service Director
And Assistant City Engineer
City Hall
40 Public Square
Mount Vernon, OH 43050

**Re: Mount Vernon Sewage Treatment Plant
NPDES permit: 4PD00100**

Dear Mr. Glass:

Attached is the Sampling and Compliance Inspection Report conducted by Ohio EPA for the Mount Vernon Sewage Treatment Plant (STP) located at 3 Cougar Drive and operating under NPDES permit 4PD00100.

There are a few items in the Attachment section of the report which require a written response or copy of a future report. **Please respond in writing within 30 days of the receipt of this letter/report.**

Should you have any questions, please call me at 614-728-3846.

Sincerely,

Larry Korecko
Environmental Specialist
Compliance and Enforcement
Division of Surface Water
Central District Office

c: Judy Scott, Administrator, Treatment and Distribution

LK/nsm Mount Vernon STP cover Letter CEI 11-08_1

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

NPDES Compliance Inspection Report

A. NATIONAL DATA SYSTEM CODING

Permit No. 4PD00100	NPDES No. OH0026662	Date 11/13/2008	Inspection Type S	Inspector S	Facility Type 1
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B. FACILITY DATA

Name and Location of Facility Inspected Mount Vernon STP 3 Cougar Drive Mount Vernon, Ohio	Entry Time	Permit Effective Date 7/1/05
	Exit Time	Permit Expiration Date 7/31/09

Name(s) and Title(s) of On-Site Representative(s)	Phone Number(s)
Judith Scott, Plant Administrator	740-393--9502
Name, Address and Title of Responsible Official	Phone Number
Dave Glass, Safety Service Director and Assistant City Engineer City Hall, 40 Public Square, Mount Vernon, Ohio 43050	740-393-9520

C. AREAS EVALUATED DURING INSPECTION

<u>S</u> Permit	<u>S</u> Flow Measurement	<u>N</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> </u> Other
<u>M*</u> Collection System		

(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)

D. SUMMARY OF FINDINGS/COMMENTS (attach additional sheets if necessary)

--- Please update Ohio EPA on Clinton Road pump station as far as what information has been found out and what possible solutions can be taken to eliminate overflows (SSOs).

--- Please provide Ohio EPA with a copy of the report/study done by Strand consultants and expected to be completed in December 2008 on the three interceptor sewers and there potential inflow/infiltration impact to the collection system.

Larry Korecko
Larry Korecko, Inspector, Ohio EPA, Central District Office

12-10-08
Date

Erin Sherer
Erin Sherer, Reviewer, Ohio EPA, Central District Office

12-12-08
Date

E. PERMIT VERIFICATION

Inspection Observations Verify the Permit	Yes	No	N/A	N/E
a. Correct name and mailing address of permittee	X			
b. Correct name and location of receiving waters	X			
c. Product(s) and production rates conform with permit application (industries)			X	
d. Flows and loadings conform with NPDES permit	X			
e. Treatment processes are as described in permit application/briefing memo	X			
f. New treatment process(es) added since last inspection		X		
g. Notification given to state of new, different, or increased discharges	X			
h. All discharges are permitted	X			
i. Number and location of discharge points are as described in permit	X			

Comments:

F. COMPLIANCE SCHEDULES/VIOLATIONS

	Yes	No	N/A	N/E
a. Any significant violations since the last inspection		X		
b. Permittee is taking actions to resolve violations	X*			
c. Permittee has compliance schedule	X			
d. Compliance schedule contained in _____ NPDES permit				
e. Permittee is meeting compliance schedule	X*			

Comments:

G. OPERATION AND MAINTENANCE

Treatment Facility Properly Operated and Maintained	Yes	No	N/A	N/E
a. Standby power available: Generator <u>X</u> Dual Feed _____	X*			
b. Adequate alarm system available for power or equipment failures	X			
c. All treatment units in service other than backup units	X*			
d. Sufficient operating staff provided: # of shifts _____ Days/Week _____	X			
e. Operator holds unexpired license of class required by permit Class: _____	X			
f. Routine and preventive maintenance schedule/performed on time	X			
g. Any major equipment breakdown since last inspection	X*			
h. Operation and maintenance manual provided and maintained	X			
i. Any plant bypasses since last inspection	X*			
j. Regulatory agency notified of bypasses <u>X</u> on MORS <u>X</u> 800 Number _____	X			
k. Any hydraulic and/or organic overloads experienced since last inspection	X*			

Comments:

Complete as appropriate for sampling inspections
Do not attach this page when completing reports for evaluation inspections

L. SAMPLING PROCEDURES (FOR CSI'S)

- Grab samples obtained
- Composite obtained
- Compositing frequency Every 15 minutes Preservation For parameters that need preservation
- Flow proportioned sample obtained
- Automatic sampler used
- Sample split with permittee
- Chain of custody employed
- Sample obtained from facility sampling device
- Sample refrigerated during compositing: Yes No
- Sample representative of volume and nature of discharge Yes

Comments:

ATTACHMENT
Mount Vernon STP

General

The Kokosing River Watershed Total Maximum Daily Load (TMDL) Report is in the process of being drafted by Ohio EPA. When completed, this report may or may not recommend changes in permit limits for the Mt. Vernon STP. If limits are made more stringent, a timetable will be provided to meet those limits.

Operations and Maintenance

Upgrades and replacement of various equipment and associated electrical components continues to take place. These are primarily spelled out in the No Feasible Alternatives Analyses report which Mt. Vernon submitted in June 2006.

A major component is electrical and instrumentation upgrades which includes either a new generator or a second generator which will allow the entire plant to keep running during an electrical power outage. City council approved that final design engineering work could start in October 2008. Malcolm Pirnie, the consultant has scheduled to have design work completed by September 2009.

Another major on-going item is the sewer rehabilitation for three interceptor sewers: Kokosing, New Center Run, and Old Center Run. This involved cleaning and televising each interceptor along with flow monitoring and manhole inspections. Results of these studies are expected in late December 2008. **A copy of the report will be provided to Ohio EPA in January 2009.**

No major equipment breakdown which would cause permit violations occurred in the last year.

The secondary grit project is still under construction. Two new grit pumps have been received and wiring these units is underway.

Both primary digestors were cleaned in the last year.

Facility Site Review

All major units were in operation and the grounds looked clean. The final discharge appeared clear.

Collection System

There are on-going studies of three major sewer lines (Kokosing, New Center Run and Old Center Run) by the firm Stand and Associates along with the Village of Mount Vernon sewer personnel and equipment.

There was one incident of sewage in basement to report since August 2008.

All pump stations are now equipped with "quick connects" such that a portable generator can be hooked up or portable pumps can be used.

Please update Ohio EPA on the Clinton Road pump station regarding what has been found and possible solutions to eliminating or greatly lessening the overflows (SSOs) that occur here.

The SCADA system is being connected to more and more equipment and treatment trains. Several pump stations are connected to SCADA now and the others are on autodialers.

Graphs of flow data for 2007 and 2008 of the final discharge are provided. These graphs still indicate significant Inflow /infiltration (I/I).

Effluent and Receiving Waters

Review in SWIMS of monthly self monitoring discharge reports for the period August 2007 through October 2008 revealed only a few minor violations that are listed on a separate page of this report.

Ohio EPA took several samples of the Mount Vernon STP effluent during the summer of 2007 for the TMDL report. One of these was a composite sample for August 15-16, 2007 and the rest were grab samples. The results of these samples are provided as attachments to this report. All sample results from these samplings were in compliance with permit limits for those parameters that had permit limits.

Sludge Storage/Disposal

Mount Vernon STP uses Burch Hydro to land apply their sludge. Mount Vernon produces a class B sludge and usually meets vector attraction by demonstrating at least 38% volatile reduction. If they cannot get the 38% reduction, Burch Hydro will inject or incorporate the sludge.

Compliance Schedule

The compliance schedule in the current NPDES permit called for the submission of a "No Feasible Alternatives Analysis" report which would eliminate the bypass of secondary treatment. This report was submitted on time in June 2006. The City of Mount Vernon is proceeding to follow the recommendations in this report.

Self-Monitoring and Laboratory

Review of monthly self-monitoring discharge reports in SWIMS indicated that there was a dissolved oxygen violation in August 2007. Also, several violations in September 2008 were due to a power outage for several days caused by strong winds from a Gulf of Mexico hurricane. These violations were 7-day concentration violations for suspended solids and CBOD5 and three daily dissolved oxygen violations. The actual violation dates and sample concentrations versus permit limits are listed on an attached page.

Ohio EPA took a number of grab samples on the Mount Vernon STP effluent throughout the summer of 2007 for the TMDL study for the Kokosing River. A table of these results is attached to this report. Twenty four hour composite samples were also taken on August 15-16, 2007 and December 17-18, 2007. The latter sampling was in conjunction with a bioassay test which Ohio EPA conducted. These results are also attached. All samples taken by Ohio EPA of the effluent, whether grab or composite, were within any limits in the Mount Vernon NPDES permit.

The results of the DMRQA 28 study which Mount Vernon participated in revealed that all tests which the Mount Vernon STP lab performed were judged acceptable. The only not-acceptable test was for lead and was performed by the contract lab Stantec.

"Check" or "known" samples are received from a commercial lab quarterly as a quality assurance practice. Daily logs are kept of temperature for incubators for fecal coliform and CBOD5, oven temperature for suspended solids, and refrigerator for storing samples.

Spot checking of bench sheets and commercial lab test results with the data entered on the monthly self-monitoring reports found that all results were correctly transposed.

Flow Measurement

Final effluent flow meter is calibrated twice a year by an outside firm. Monthly "stick" calibrations are also done to ensure reliability of flow measurement.

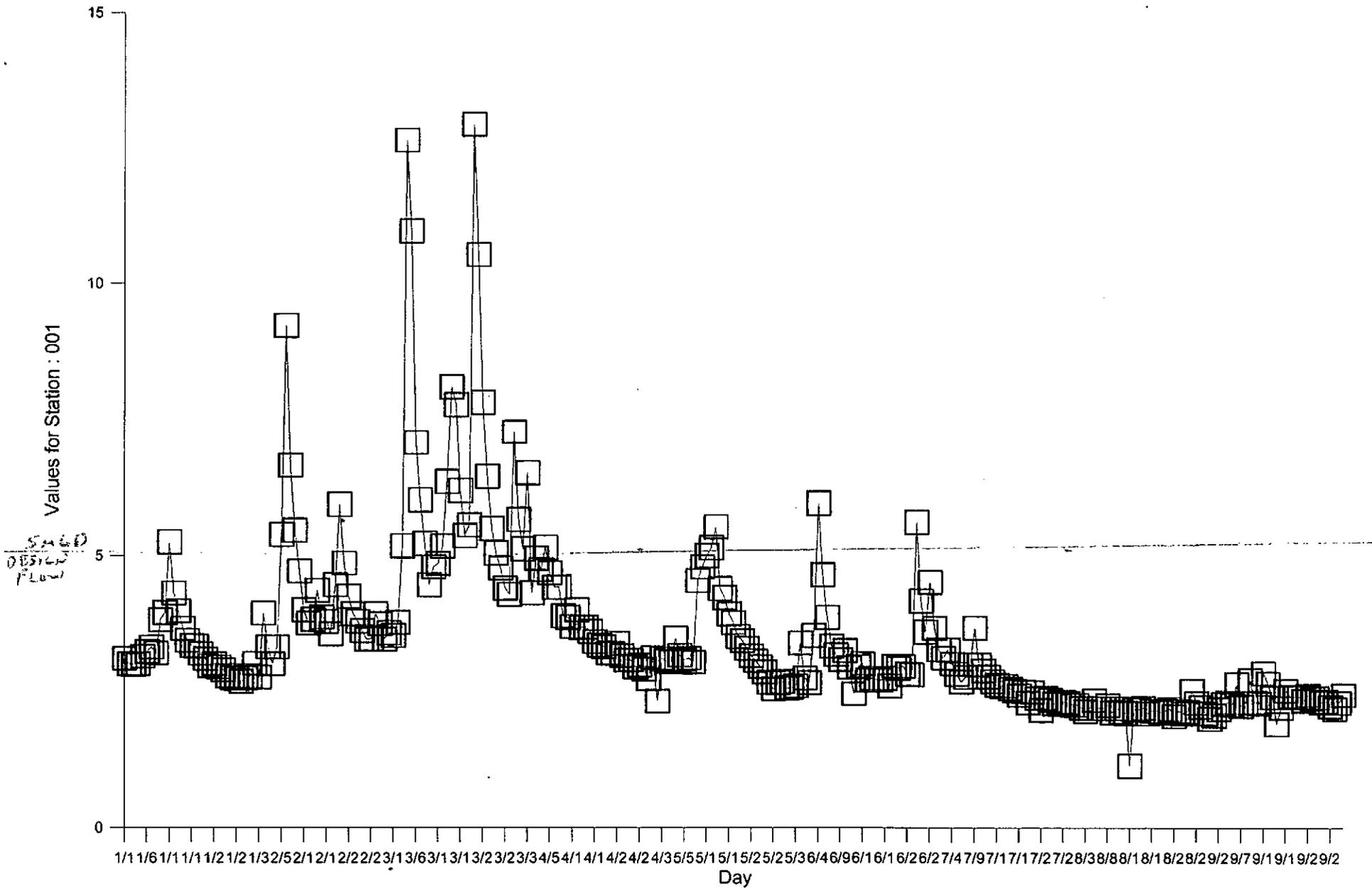
MT. VERNON STP

~~Get New Data~~

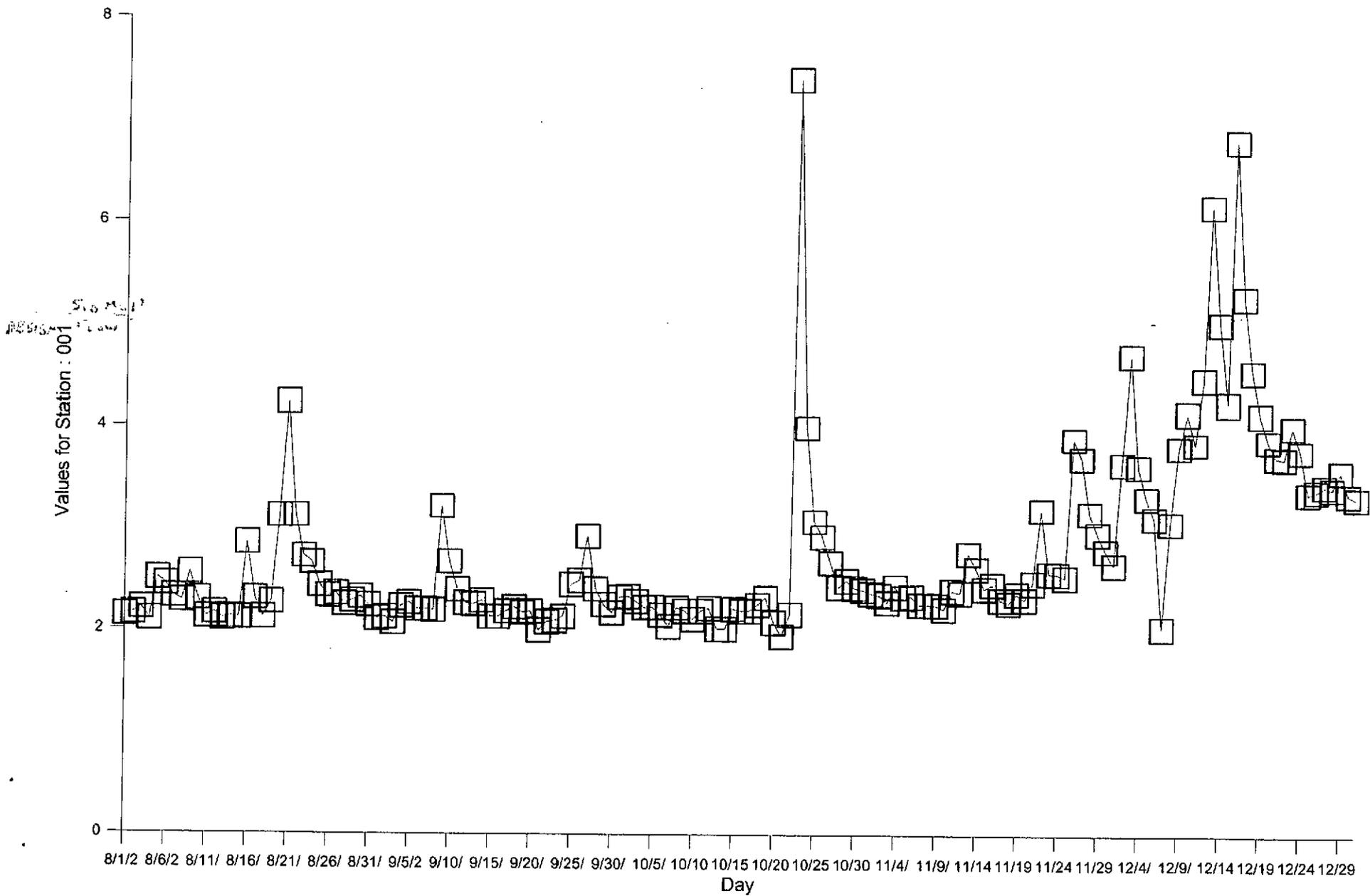
VIOLATIONS AUGUST 2007 THROUGH OCTOBER 2008

Permit No	Reporting Period	Station	Reporting Code	Parameter	Limit Type	Limit	Reported Value	Violation Date
4PD00100*JD	August 2007	001	00300	Dissolved Oxygen	1D Conc	5.0	3.4	8/9/2007
4PD00100*JD	September 2008	001	00530	Total Suspended Solids	7D Conc	23	34.3333	9/15/2008
4PD00100*JD	September 2008	001	80082	CBOD 5 day	7D Conc	23	30.6666	9/15/2008
4PD00100*JD	September 2008	001	00300	Dissolved Oxygen	1D Conc	5.0	4.	9/14/2008
4PD00100*JD	September 2008	001	00300	Dissolved Oxygen	1D Conc	5.0	3.7	9/15/2008
4PD00100*JD	September 2008	001	00300	Dissolved Oxygen	1D Conc	5.0	3.5	9/16/2008

Mount Vernon WWTP 4PD00100*JD :
Period : 01/01/2008 to 10/31/2008 Parameter : Flow Rate (MGD)



Mount Vernon WWTP 4PD00100*JD :
Period : 08/01/2007 to 12/31/2007 Parameter : Flow Rate (MGD)



Mount Vernon STP

Grab samples of effluent- analyzed by Ohio EPA Lab

Parameter	6-26-07	7-10- 07	7-24-07	8-7-07	8-21-07
Temp C	18.93	19.68	19.51	20.92	20.50
Spec Conduct	767	769	754	740	595
Dissolved Oxygen (mg/l)	9.72	8.47	8.48	8.34	8.22
pH	7.44	7.32	7.21	7.28	7.19
Arsenic, T (ug/l)	<2	<2	<2	<2	<2
Cadmium,T (ug/l)	<0.2	<0.2	<0.2	<0.2	<0.2
Calcium (mg/l)	52	50	50	49	51
Chromium,T (ug/l)	<30	<30	<30	<30	<30
Copper,T (ug/l)	<10	<10	<10	<10	<10
Iron,T (ug/l)	102	170	151	138	147
Lead,T (ug/l)	<2	<2	<2	<2	<2
Magnesium (mg/l)	20	19	19	19	17
Manganese,T (ug/l)	11	16	18	16	23
Mercury,T (ug/l)	<0.2	<0.2	<0.2	<0.2	<0.2
Nickel,T (ug/l)	<40	<40	<40	<40	<40
Potassium (mg/l)	9	9	10	9	6
Selenium (ug/l)	<2	<2	<2	<2	<2
Sodium (mg/l)	61	62	61	61	52
Zinc,T (ug/l)	72	90	70	67	38
Hardness, T (mg/l)	212	203	203	200	197
COD (mg/l)	45	26	18	21	39
Chloride (mg/l)	84.6	84.7	83.2	81.9	71.8
NO2 + NO3 (mg/l)	18.4	19.9	22.5	21.1	10.0
NO2 (mg/l)	0.37	0.17	0.17	0.31	0.29
Ammonia (mg/l)	0.57	0.27	0.28	0.60	2.17
TKN (mg/l)	2.56	2.27	2.0	1.50	3.38
Phosphorus,T (mg/l)	3.1	3.0	3.6	2.8	1.7
Total Dissolved Solids (mg/l)	456	466	472	448	390
Total Suspended Solids(mg/l)	<5	<5	<5	<5	12
E. Coli	20	10	<10	<10	10
Aluminum (ug/l)	<200	<200	<200	<200	<200
Barium (ug/l)	44	43	44	43	46
Strontium (ug/l)	472	509	515	503	407

Laboratory Inorganic Analysis Data Report

Sample 95820			
Date Received 08/16/2007 1:12 PM	Matrix WW	Collected by VANDERMEER, PAUL	
Begin	End	Sample Type COMPLIANCE	
Date Collected 08/15/2007 10:55 AM	08/16/2007 10:55 AM	Station ID R12S01	
Program CDO-DSW		Customer ID PLV0816	
Client DSW_C		External ID	
OEPA Division DSW			
Location Mt Vernon WWTP 001 C			

Analysis	Parameter	Storet	Result	RL	Units	Date	Qualifier
CBOD-5	CBOD5	P80082	4.3	2	mg/L	08/16/2007	
Solids_Diss	Total Dissolved Solids	P70300	476	10	mg/L	08/22/2007	
Solids_Susp	Total Suspended Solids	P530	7	5	mg/L	08/22/2007	
ICPMS_(WAT)	Arsenic	P1002	<2.0	2	ug/L	08/27/2007	
ICPMS_(WAT)	Cadmium	P1027	<0.20	0.2	ug/L	08/27/2007	
ICPMS_(WAT)	Lead	P1051	<2.0	2	ug/L	08/27/2007	
ICPMS_(WAT)	Selenium	P1147	<2.0	2	ug/L	08/27/2007	
ICP_(WAT)	Aluminum	P1105	<200	200	ug/L	08/27/2007	
ICP_(WAT)	Barium	P1007	46	15	ug/L	08/27/2007	
ICP_(WAT)	Calcium	P916	51	2	mg/L	08/27/2007	
ICP_(WAT)	Chromium	P1034	<30	30	ug/L	08/27/2007	
ICP_(WAT)	Copper	P1042	<10	10	ug/L	08/27/2007	
ICP_(WAT)	Hardness, Total	P900	210	10	mg/L	08/27/2007	
ICP_(WAT)	Iron	P1045	194	50	ug/L	08/27/2007	
ICP_(WAT)	Magnesium	P927	20	1	mg/L	08/27/2007	
ICP_(WAT)	Manganese	P1055	26	10	ug/L	08/27/2007	
ICP_(WAT)	Nickel	P1067	<40	40	ug/L	08/27/2007	
ICP_(WAT)	Potassium	P937	9	2	mg/L	08/27/2007	
ICP_(WAT)	Sodium	P929	59	5	mg/L	08/27/2007	
ICP_(WAT)	Strontium	P1082	592	30	ug/L	08/27/2007	
ICP_(WAT)	Zinc	P1092	68	10	ug/L	08/27/2007	
Alkalinity	Alkalinity	P410	123	5	mg/L	08/20/2007	
Ammonia	Ammonia	P610	2.28	0.05	mg/L	08/17/2007	
COD	COD	P340	33	10	mg/L	08/22/2007	
Chloride	Chloride	P940	85.9	5	mg/L	09/07/2007	
Conductivity	Conductivity	P95	737	1	umhos/cm	08/20/2007	
Nitrate	Nitrate+nitrite	P630	20.4	0.5	mg/L	08/17/2007	
TKN	TKN	P625	4.13	0.2	mg/L	08/20/2007	
TP	Total Phosphorus	P665	3.23	0.05	mg/L	08/20/2007	

Field Comments

Lab Comments

QC / Sample Comments

Approved By **On**

Laboratory Inorganic Analysis Data Report

Sample 95821	Matrix WW	Collected by VANDERMEER, PAUL
Date Received 08/16/2007 1:12 PM	Begin	Sample Type COMPLIANCE
Date Collected	End 08/16/2007 11:00 AM	Station ID R12S01
Program CDO-DSW		Customer ID PLV0816
Client DSW_C		External ID
OEPA Division DSW		
Location Mt Vernon WWTP 001 G		

Analysis	Parameter	Storet	Result	RL	Units	Date	Qualifier
Oil&Grease	Oil & Grease	P556	2.8	2	mg/L	09/05/2007	
pH	pH	P403	7.30		s.u.	08/17/2007	
E.coli	E.coli	P31648	<10	10	#/100ml	08/16/2007	
Fecal Coliform	Fecal Coliform	P31616	20	10	#/100ml	08/16/2007	JL

Field Comments

Lab Comments

QC / Sample Comments

Approved By **On**