



State of Ohio Environmental Protection Agency

Southeast District Office

2195 Front Street
Logan, Ohio 43138

TELE: (740) 385-8501 FAX: (740) 385-6490
www.epa.state.oh.us

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

November 21, 2007

Re: Washington County
City of Marietta
Compliance Sampling Inspection (CSI)
Correspondence (PWW)

Mayor and Council
City of Marietta
301 Putnam Street
Marietta, Ohio 45750

Dear Mayor and Council:

On September 24 and 25, 2007, a Compliance Sampling Inspection (CSI) was conducted at the City of Marietta's wastewater treatment plant. The purpose of the inspection was to determine the City's compliance with its National Pollutant Discharge Elimination System (NPDES) Permit. Present for the inspection was Steve Elliott and Christy King, representing the City of Marietta and Joann Montgomery, Randy Spencer and Stephen Wells representing the Ohio EPA, Division of Surface Water, Southeast District Office. Wastewater samples were collected as part of the inspection. A copy of my inspection report and sample results are attached.

As a result of my inspection, I have the following comments:

1. Primary clarifier # 2 was out of service during the inspection. The City had ordered the parts to put the clarifier back into service. The plant has had problems with these clarifiers this past year being out of service. The City needs to look at upgrading all of the primary clarifiers.
2. The City has been working on an upgrade of the wastewater treatment plant. According to Mr. Elliott, the City is planning on starting construction sometime in 2009. The City needs to move forward with the upgrade of the wastewater treatment as soon as possible. Failure to upgrade the plant may cause effluent limitation violations in the future and result in enforcement action by Ohio EPA. The enforcement action could limit connections to the City's sewage collection system. Please update this office on the status of upgrading the wastewater treatment plant.
3. The City has completed the BOD study on the collection system. Ohio EPA is currently reviewing the study.

4. The City needs to continue working on the removal of inflow/infiltration from the collection system. Please update this office on the I/I removal progress.
5. The sampling results showed the plant effluent to be non-toxic. Ohio EPA's and City's analytical data were comparable for the NPDES Permit parameters.
6. In June, 2007, the City reported a NPDES Permit reporting violation for Nitrogen Ammonia. The City is required to perform sampling for Nitrogen Ammonia, three time per week. During last week (21-28) of June, the City only performed two sampling events. The City did run the additional sample on June 29, 2007. The plant staff reported this NPDES Permit violation and submitted an explanation to Ohio EPA. No further response is requested.

The Ohio EPA strongly encourages pollution prevention as the preferred approach for waste management. The first priority of pollution prevention is to eliminate the generation of wastes and pollutants at the source (source reduction). For those wastes or pollutants that are generated, the second priority is to recycle or reuse them in an environmentally sound manner. You can benefit economically, help preserve the environment, and improve your public image by implementing pollution prevention programs. For more information about pollution prevention, including fact sheets or U.S. EPA's "*Facility Pollution Prevention Guide*" (EPA/600/R-92.008), please contact the Ohio EPA Pollution Prevention Section at (614) 644-3469.

In conclusion, the City of Marietta appeared to be in compliance with its NPDES Permit at the time of inspection.

Please respond to the above comments in writing to this office within 15 days of receipt of this letter.

If you have any questions, feel free to contact me at (740) 380-5434.

Sincerely,



Stephen Wells
District Representative
Division of Surface Water

SW/dh

Enclosure

c: Steve Elliott, City of Marietta

NPDES
Compliance Inspection Report

A. NATIONAL DATA SYSTEM CODING

Permit No.	NPDES No.	Date	Inspection Type	Inspector	Facility Type
0PD00016*PD	OH0026344	September 24 & 25, 2007	S	S	1

B. FACILITY DATA

Name and Location of Facility Inspected	Entry Time	Permit Effective Date
City of Marietta Wastewater Treatment Plant 440 East 8 th Street Marietta, OH 45750		March 1, 2005
	Exit Time	Permit Expiration Date
		January 31, 2009

Name(s) and Title(s) of On-Site Representative(s)	Phone Number(s)
Steve Elliott, Wastewater Superintendent	(740) 373-3858
Name, Address and Title of Responsible Official	Phone Number
Mayor and Council City of Marietta 301 Putnam Street Marietta, OH 45750	(740) 373-1387

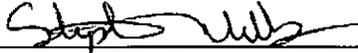
C. AREAS EVALUATED DURING INSPECTION

<u>S</u> Permit	<u>S</u> Flow Measurement	<u>N</u> Pretreatment
<u>S</u> Records/Reports	<u>N</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>S</u> Collection System		

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

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

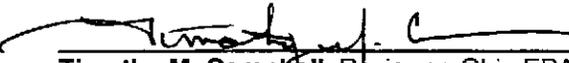
See attached letter.



Stephen Wells, Inspector, Ohio EPA, Southeast District Office

11/21/07

Date



Timothy M. Campbell, Reviewer, Ohio EPA, Southeast District Office

11/21/07

Date

Sections E through K: Complete on all inspections as appropriate (N/A = Not Applicable N/E = Not Evaluated)

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: <u>NPDES Permit</u>				
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 <u>3</u> Days/Week <u>7</u>	X			
e. Operator holds unexpired license of class required by permit Class: <u>IV</u>	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: _____ on MORS _____ 800 Number			X	
k. Any hydraulic and/or organic overloads experienced since last inspection		X		

Comments: *Primary clarifier #2 was out service during the inspection.

Collection System	Yes	No	N/A	N/E
a. Percent combined system: 0%				
b. Any collection system overflows since last inspection (CSO ____ SSO <u>X</u>)	X*			
c. Regulatory agency notified of overflow (SSOs)	X			
d. CSO O and M plan provided and implemented			X	
e. CSOs monitored and reported in accordance with permit			X	
f. Portable pumps used to relieve system		X		
g. Lift station alarm systems provided and maintained	X			
h. Are lift stations equipped with permanent standby power or equivalent	X			
i. Is there an inflow/infiltration problem (separate sewer system), or were there any major repairs to collection system since last inspection	X			
j. Any complaints received since last inspection of basement flooding	X			
k. Are any portions of the sewer system at or near capacity		X		

Comments: *Harmar Hill area had a sewer backup due to tree roots.

I. SLUDGE MANAGEMENT

- a. Sludge Management Plan (SMP): _____ Submitted Date
 _____ Approval Number
 _____ Not submitted
 _____ N/A

	Yes	No	N/A	N/E
b. Sludge Management Plan current	X			
c. Sludge adequately disposed (Method: <u>Landfill or Land Application</u>)	X			
d. If sludge is incinerated, where is ash disposed of? _____		X		
e. Is sludge disposal contracted (Name: _____)		X		
f. Has amount of sludge generated changed significantly since last inspection		X		
g. Adequate sludge storage provided at plant		X*		
h. Land application sites monitored and inspected per SMP	X			
i. Records kept in accordance with state and federal law	X			
j. Any complaints received in last year regarding sludge		X		
k. Is sludge adequately processed (digestion, dewatering, pathogen control)	X			

Comments: *The City will need to address sludge storage issues, if land application is only option used for disposal.

Part 3, Laboratory - Quality Control/Quality Assurance		Yes	No	N/A	N/E
f.	Quality assurance manual provided and maintained				X
g.	Satisfactory calibration and maintenance of instruments and equipment				X
h.	Adequate records maintained				X
i.	Results of latest U.S. EPA quality assurance performance sampling program: Date: _____ * _____ Satisfactory _____ Marginal _____ Unsatisfactory				

Comments: *City has regularly participates in the DMR-QA Study.

J. EFFLUENT/RECEIVING WATER OBSERVATIONS

Outfall #	Oil Sheen	Grease	Turbidity	Visible Foam	Visible Float Solids	Color	Other
001	None	None	None	None	None	None	--

Comments:

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		X		
b.	Do you notice staining or discoloration of soils, pavement, or floors		X		
c.	Do you notice distressed (unhealthy, discolored, dead) vegetation		X		
d.	Do you see unidentified dark smoke or dustclouds coming from sources		X		
e.	Do you notice any unusual odors or strong chemical smells		X		
f.	Do you see any open or unmarked drums, unsecured liquids, or damaged containment facilities		X		

If any of the above are observed, ask the following questions:

1. What is the cause of the conditions?
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:

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: 250 ml/15 minutes Preservation: Ice
- _____ 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:

TABLE I

OHIO EPA FIELD DATA

FACILITY: Marietta WWTP

DATES SAMPLED: September 24 & 25, 2007

<u>Station</u>	<u>Date</u>	<u>Time</u>	<u>Parameter</u>	<u>Units</u>	<u>Value</u>	<u>Permit Limits</u>
001	9/24	0935	pH	S.U.	7.20	6.0-9.0
			Temperature	°C	24.06	-
			Dissolved oxygen	mg/l	5.42	-
			Conductivity	umhos/cm	770	-
001	9/25	0945	pH	S.U.	7.30	6.0-9.0
			Temperature	°C	24.20	-
			Dissolved oxygen	mg/l	5.25	-
			Conductivity	umhos/cm	818	-

TABLE II

COMPLIANCE SAMPLING DATA

FACILITY: Marietta WWTP

DATES SAMPLED: September 24-25, 2007

STATION	T*	PARAMETER	UNITS	<u>OHIO EPA</u>		<u>ENTITY</u>		<u>PERMIT LIMITS</u>	
				CONC.	(KG/D) LOAD.	CONC.	(KG/D) LOAD.	CONC.	(KG/D) LOAD.
001	C	Susp. solids	mg/l	<5.0	ND	6.0	45.2	45	570.6
	C	CBOD ₅	mg/l	<2.0	ND	AA	ND	40	507.2
	G	Cyanide, total	ug/l	<10	-	<10	-	-	-
	G	Cyanide, free	ug/l	<5	-	-	-	-	-
	C	Ammonia	mg/l	0.18	-	<0.05	-	-	-
	C	Nitrate-nitrite	mg/l	11.4	-	11.2	-	-	-
	C	TKN	mg/l	1.61	-	1.8	-	-	-
	C	Phosphorus	mg/l	10.7	-	-	-	-	-
	G	Oil & Grease	mg/l	<2.0	-	<1.0	-	10 max.	-
	G	Fecal coliform	#/100 ml	<10	-	33	-	400	-
	C	Nickel, tot.	ug/l	<40	-	<5	-	-	-
	C	Copper, tot.	ug/l	<10	ND	<10	ND	42	0.53
	C	Cadmium, tot.	ug/l	<0.2	-	<10	-	-	-
	C	Lead, tot.	ug/l	<2.0	-	<10	-	-	-
	C	Chromium, tot.	ug/l	<30	-	<10	-	-	-
	C	Mercury, tot.	ug/l	<0.2	-	<0.2	-	-	-
	C	Zinc, tot.	ug/l	37	-	32	-	-	-
	G	Chrom. hex.	ug/l	<10	-	<20	-	-	-
		Flow, tot.	MGD			1.99			

*SAMPLE TYPE: G=grab; C=composite; ND (or AA)=non-detectable

A Report on the Acute Toxicity of Marietta WWTP
Outfall 001 Effluents to *Pimephales promelas* and *Ceriodaphnia dubia*

Bioassay Report Number:
07-3712-SE

Reviewed By
Ohio EPA - DES
QA Staff

OCT 01 2007

Sample Number:
97487

Reviewer SR

Jonathan C. McLaughlin

Bioassay Section
Division of Environmental Services
Ohio Environmental Protection Agency

INTRODUCTION

Two grab samples and a composite sample of Marietta WWTP outfall 001 effluents were collected by Joann Montgomery, Steve Wells and Randy Spencer, DSW, SEDO, Ohio EPA for use in screening bioassays as part of a toxics evaluation in conjunction with permit reissuance. Grab samples were also collected from the receiving stream, the Ohio River, upstream from the discharge. The effluent grab samples were collected on 24 September 2007 at 0935 hours and on 25 September 2007 at 0945 hours. The composite sample was collected on 24-25 September 2007 between 0930-0935 hours. The Ohio River upstream water was collected on 24 September 2007 at 0945 hours. A mixing zone sample was manually prepared in the field by combining equal aliquots of upstream and effluent on 24 September 2007 at 0950 hours. The fathead minnow, *Pimephales promelas*, and *Ceriodaphnia dubia* were used as test organisms in these 48-hour screening bioassays.

PREVIOUS RESULTS

Bioassays of Marietta WWTP outfall 001 effluents were previously conducted by the Ohio EPA within the last ten years in April 1997, and March 2003 and 2007 (Bioassay Numbers 97-1862-SE, 03-2729-SE, and 07-3647-SE, respectively). The 1997 effluents were acutely toxic to *P. promelas* and *C. dubia* (Appendix 1). Fathead minnow and daphnia mortality ranged from 10 to 50 percent and 25 to 65 percent, respectively. Definitive bioassays were not initiated because toxicity was not evident until after the 24-hour test inspection. The 2003 effluents were not acutely toxic to either test species. The 2007 effluents were acutely toxic to *P. promelas*. Fathead minnow mortalities plus other adverse acute effects ranged from 5 to 85 percent.

RESULTS AND CONCLUSIONS

Details of the tests may be found on the attached bioassay report forms. The effluents were not acutely toxic. Fathead minnow mortality was 5 and 15 percent in the Ohio River upstream water and composite effluent, respectively. One daphnid died in the 24 September effluent grab. No other mortality or other adverse effects were observed in the remaining samples tested for either *P. promelas* or *C. dubia*. Survival in the laboratory controls was 100 percent for *P. promelas* and *C. dubia*.

Screening bioassays are utilized to determine if an effluent is acutely toxic to the test organisms and to indicate if more extensive bioassays should be conducted to estimate median lethal concentrations or persistence of toxicity. The results of these and the 2003 bioassays indicate that Marietta WWTP outfall 001 effluents were not acutely toxic to either *P. promelas* or *C. dubia*. This is in contrast to the 1997 and March 2007 results in which the effluents were acutely toxic to one or both test species. Additional bioassays should be conducted to better determine variability in effluent quality and, if present, the magnitude of toxicity associated with this discharge.

These tests did not address the possibility of chronic toxicity. Discharge data for Marietta WWTP outfall 001 and the Ohio River should be evaluated to determine if chronic toxicity is of concern. Chronic tests may be required to adequately evaluate the possibility of toxicity in this discharge.

OHIO ENVIRONMENTAL PROTECTION AGENCY
Screening Bioassay Report Form

Report Date: 27 September 2007

Bioassay Report Number: 07-3712-SE

Investigators: Jonathan C. McLaughlin

Effluent tested and source: Marietta WWTP, 440 East Eighth Street, Marietta, Washington County, Ohio, outfall 001

NPDES Number: OH0026344

Ohio EPA Permit Number: OPD00016*PD

Business/Process: Wastewater treatment facility

Collector(s): Joann Montgomery, Steve Wells and Randy Spencer, DSW, SEDO, Ohio EPA

Test Organisms: Fathead minnow (*Pimephales promelas*) and *Ceriodaphnia dubia* from Ohio EPA Bioassay Section rearing units

Fathead Minnow Data: n = 20. Number of fish used in estimating mean standard length and mean weight

	Mean	Standard Deviation	Range
Standard Length (millimeters):	6.1	0.49	5.5-7.0
Weight (milligrams):	0.9	0.39	0.4-1.7

Hatched: 15-16 September 2007; 9-10 days old at test initiation

Rearing unit water and reconstituted water were used in the controls for this static bioassay. Adverse effects measured in the test are death, immotility, and loss of equilibrium. Death is the cessation of all visible movement with no response to gentle prodding (fish) or to gentle test container agitation (*Ceriodaphnia*). An immotile organism is paralyzed or stunned with only occasional slight movements and cannot maintain its normal position in the water column. Loss of equilibrium is the organism's inability to maintain normal swimming posture in the water column and may be characterized by periods of quiescence followed by bursts of uncontrolled swimming. The effluent is considered to be acutely toxic if 20 percent, or more, of either species of test organism exhibits any combination of the adverse effects in the 100 percent effluent. Test results are invalid if more than ten percent of either species of test organism exhibits the adverse effects in the control.

Results of screening bioassays of Marietta WWTP outfall 001 effluent

Bioassay Number: 07-3712-SE

Sample	Time Collected Date: Time: (hours)	Test Start Date: Time: (hours)	Cumulative percent mortality (plus those lethargic)			
			<i>P. promelas</i> Time (hours)		<i>C. dubia</i> Time (hours)	
			24	48	24	48
Ohio River upstream	24 September 2007 0945	25 September 2007 1340	0	5	0	0
Manual mixing Zone (1:1)	24 September 2007 0950	25 September 2007 1340	0	0	0	0
Grab 001	24 September 2007 0935	25 September 2007 1340	0	0	0	5
Grab 001	25 September 2007 0945	25 September 2007 1340	0	0	0	0
Composite 001 effluent	24-25 September 2007 0930-0935	25 September 2007 1340	0	15	0	0
Rearing unit water control		25 September 2007 1340	0	0	-	-
Reconstituted water control		25 September 2007 1340	-	-	0	0

Relevant information: A mixing zone sample was manually prepared in the field by combining equal aliquots of upstream water and effluent. The ambient waters were clear with a yellow tinge. The effluents were clear yellow. The effluent grabs contained settleable solids. The plant uses ultra-violet disinfection. After warming to the 25°C test temperature, the composite effluent was shaken vigorously for approximately 15 seconds to release supersaturated dissolved oxygen. Physicochemical parameters measured prior to test initiation and at test end are on the next page.

Results of screening bioassays of Marietta WWTP outfall 001 effluent

Bioassay Number: 07-3712-SE

Relevant information (cont.): Physicochemical parameters recorded prior to test initiation were:

Sample	Temperature (°C)		Dissolved Oxygen (mg/L) Initial-Adjusted	pH (S.U.)	Conductivity (µmhos/cm)
	Upon Rept.	Test Init.			
Ohio River upstream	4.9	25.1	8.1	8.01	442
Manual mixing zone (1:1)	4.3	25.2	7.7	7.43	606
Grab 001, 24 September 2007	4.0	25.2	7.4	7.31	763
Grab 001, 25 September 2007	11.0	25.0	6.9	7.23	804
Composite 001 effluent	9.8	25.2	9.6-7.9	7.24	776
Rearing unit water control	22.5	24.3	8.1	8.32	340
Reconstituted water control	25.3	25.3	7.7	7.73	579

Appendix 1.

Results of previous bioassays of Marietta WWTP outfall 001 effluent

Screening Results

Bioassay Number	Date (mm/yy)	Acutely Toxic (Y/N)	<i>Pimephales promelas</i> mortality (plus/or exhibiting other adverse effects)			<i>Ceriodaphnia dubia</i> mortality (plus/or exhibiting other adverse effects)		
			Day 1 Grab	Day 2 Grab	Composite	Day 1 Grab	Day 2 Grab	Composite
97-1862-SE	04/97	Y	15	10	50	30	25	65
03-2729-SE	03/03	N	5	0	5	0	0	0
07-3647-SE	03/07	Y	5	70(85)	65(75)	0	0	0

¹ Organisms lethargic in behavior.

* All previous results are available electronically upon request.

Definitive Results

Bioassay Number	<i>Pimephales promelas</i>			<i>Ceriodaphnia dubia</i>		
	LC50 (95 percent confidence limits)	EC50 (95 percent confidence limits)	LC50 TUa (EC50 TUa)	LC50 (95 percent confidence limits)	EC50 (95 percent confidence limits)	LC50 TUa (EC50 TUa)
97-1862-SE*	-	-	-	-	-	-
-	-	-	-	-	-	-

* A definitive bioassays was not initiated because toxicity was not evident until after the 24-hour test inspection.

Definitions

- The LC50s and EC50s are reported as percent by volume effluent (%).
- The LC50 is the effluent concentration that is lethal to 50 percent of a species of test organism in a stated exposure period. The EC50 includes mortality plus data on other adverse effects. Both are usually obtained by statistical or graphical methods.
- The TUa is calculated by dividing 100 by the LC50 or EC50.

OHIO EPA, DES, BIOASSAY SECTION, SAMPLE SUBMISSION FORM

Name of Entity and Outfall Tested: Marietta WWTP-Outfall 001	OEPA Permit #: OPD00016*PD
Facility Address: 440 East Eighth Street, Marietta OH	NPDES #: OH0026344
Receiving Stream (R.M.): Ohio River (RM 810.38)	County: Washington
Collector(s) [Print Full Name]: Joann Montgomery Steve Wells Randy Spencer	
Collector(s) Signature: <i>Randy Spencer</i>	

Upstream control samples shall be collected upstream from any discharge/receiving stream interactions. Generally, acute (near field) samples should be collected in the center of the effluent plume 5 times the stream depth downstream from the outfall and chronic (far field) samples should be collected midplume, or if a plume no longer exists midstream 5 times the stream width downstream from the outfall. If atypical mixing characteristics exist, samples can be collected at closer distances than the above guidelines to insure the samples are within the effluent plume. If a mixing zone sample cannot be safely collected, one can be prepared using equal aliquots of the day 1 effluent grab and upstream dilution water (be sure to write "manual" in the "Location of Sample Collection" space provided below).

Sample Identification	Effluent Day 1 Grab	Effluent Day 2 Grab	Effluent Composite	Upstream/ Dilution- Grab	Acute Mixing Zone-Grab	Chronic Mixing Zone-Grab
Location of Sample Collection	001 outfall	001 outfall	001 outfall	Ohio River*	50-50 manually mixed	--
If Composite, Sample Volume and Frequency	---	---	230 ml/15 min.	---	---	---
Collection Containers, Types and Number	1 cubitaner	1 cubitaner	2 cubitaners/ glass jar	3 cubitaners	1 cubitaner	--
Volume Collected	1 gallon	1 gallon	2 gallons	3 gallons	1 gallon	--
Date of Sample Collection	9/24/07	9/25/07	9/24-25/07	9/24/07	9/24/07	--
Time of Sample Collection, beginning-Ending Time	0935	945	0930- 935	0945	0950	--
Flow (in MGD)	--	--	--	--	--	---
Temperature (°C)	24.06	24.20	12.73	24.26	24.13	---
Dissolved Oxygen (mg/L)	5.42	5.25	10.15	7.04	6.82	--
pH (S.U.)	7.20	7.30	8.01	7.80	7.40	---
Conductivity (µmhos/cm)	770	818	780	448	614	---
Total Residual Chlorine (mg/L)	---	---	---	---	---	---

Place a check mark next to all the appropriate characteristics of the outfall/mixing zone:

- | | | | |
|---|--|---|-----------------------------------|
| <input type="checkbox"/> Turbulent Mixing | <input checked="" type="checkbox"/> Onshore Pipe | <input checked="" type="checkbox"/> Shore hugging Plume | <input type="checkbox"/> Flume |
| <input checked="" type="checkbox"/> Nonturbulent Mixing | <input type="checkbox"/> Offshore Pipe | <input type="checkbox"/> Rapid Complete Mixing | <input type="checkbox"/> Diffuser |

NO Cl₂ UV disinfection

97487

Notes:

UV disinfection.....no chlorine is being used.

Name and Title	Year	Month	Day	Hour	Minute
Received from: <i>Randy [Signature]</i>	07	09	25	13	00
Received by: <i>[Signature]</i>	07	09	25	13	00
Received from:					
Received by:					
Received from:					
Received by:					
Received from:					
Received by:					
Received from:					
Received by:					

In the vicinity of the discharge: Steam Depth _____ Stream Width _____

CHEMISTRY SAMPLE NUMBERS

97481-86

Location Map Drawing

Describe and map the upstream control and any mixing zone sampling sites so someone else could sample at the exact same points (include landmarks if possible). Stream depth should be recorded for any acute (near field) mixing zone sample and stream width for any chronic (far field) mixing zone sample. For the mixing zone sample location, delineate the distance downstream from the outfall and map the effluent plume. Be specific on discharge and receiving stream characteristics.

Laboratory Inorganic Analysis Data Report

Sample 97481			
Date Received 09/25/2007 1:32 PM	Matrix WW	Collected by SPENCER, RANDY	
Begin	End	Sample Type COMPLIANCE	
Date Collected 09/24/2007 9:30 AM	09/25/2007 9:35 AM	Station ID C01S13	
Program SEDO-DSW		Customer ID JWM0925	
Client DSW_C		External ID	
OEPA Division DSW			
Location Marietta WWTP Outfall 001			

Analysis	Parameter	Storet	Result	RL	Units	Date	Qualifier
CBOD-5	CBOD5	P80082	<2.0	2	mg/L	09/27/2007	
Solids_Diss	Total Dissolved Solids	P70300	468	10	mg/L	09/27/2007	
Solids_Susp	Total Suspended Solids	P530	<5	5	mg/L	09/27/2007	
ICPMS_(WAT)	Arsenic	P1002	<2.0	2	ug/L	10/03/2007	
ICPMS_(WAT)	Cadmium	P1027	<0.20	0.2	ug/L	10/03/2007	
ICPMS_(WAT)	Lead	P1051	<2.0	2	ug/L	10/03/2007	
ICPMS_(WAT)	Selenium	P1147	<2.0	2	ug/L	10/03/2007	
ICP_(WAT)	Aluminum	P1105	<200	200	ug/L	10/03/2007	
ICP_(WAT)	Barium	P1007	<15	15	ug/L	10/03/2007	
ICP_(WAT)	Calcium	P916	25	2	mg/L	10/03/2007	
ICP_(WAT)	Chromium	P1034	<30	30	ug/L	10/03/2007	
ICP_(WAT)	Copper	P1042	<10	10	ug/L	10/03/2007	
ICP_(WAT)	Hardness, Total	P900	124	10	mg/L	10/03/2007	
ICP_(WAT)	Iron	P1045	67	50	ug/L	10/03/2007	
ICP_(WAT)	Magnesium	P927	15	1	mg/L	10/03/2007	
ICP_(WAT)	Manganese	P1055	132	10	ug/L	10/03/2007	
ICP_(WAT)	Nickel	P1067	<40	40	ug/L	10/03/2007	
ICP_(WAT)	Potassium	P937	18	2	mg/L	10/03/2007	
ICP_(WAT)	Sodium	P929	95	5	mg/L	10/03/2007	
ICP_(WAT)	Strontium	P1082	116	30	ug/L	10/03/2007	
ICP_(WAT)	Zinc	P1092	37	10	ug/L	10/03/2007	
Mercury_(WAT)	Mercury	P71900	<0.20	0.2	ug/L	10/03/2007	
Alkalinity	Alkalinity	P410	63.1	5	mg/L	09/27/2007	
Ammonia	Ammonia	P610	0.180	0.05	mg/L	10/09/2007	
COD	COD	P340	33	10	mg/L	10/09/2007	
Chloride	Chloride	P940	93.4	5	mg/L	10/02/2007	
Conductivity	Conductivity	P95	739	1	umhos/cm	10/11/2007	
Nitrate	Nitrate+nitrite	P630	11.4	0.5	mg/L	10/09/2007	
TKN	TKN	P625	1.61	0.2	mg/L	10/01/2007	
TP	Total Phosphorus	P665	10.7	0.2	mg/L	10/01/2007	

Field Comments small solid slight turbid 96 sample

Lab Comments

QC / Sample Comments

Approved By SROBERTS **On** 10/25/2007

Laboratory Inorganic Analysis Data Report

Sample 97482			
Date Received 09/25/2007 1:32 PM	Matrix WW	Collected by SPENCER, RANDY	
Begin	End	Sample Type COMPLIANCE	
Date Collected	09/25/2007 10:00 AM	Station ID C01S13	
Program SEDO-DSW		Customer ID JWM0925	
Client DSW_C		External ID	
OEPA Division DSW			
Location Marietta WWTP outfall 001			

Analysis	Parameter	Storet	Result	RL	Units	Date	Qualifier
CR+6	Hexavalent Chromium	P1220	<10	10	ug/L	09/25/2007	
Fecal Coliform	Fecal Coliform	P31616	<10	10	#/100ml	09/25/2007	

Field Comments

Lab Comments

QC / Sample Comments

Approved By **On**

Laboratory Inorganic Analysis Data Report

Sample 97483		
Date Received 09/25/2007 1:32 PM	Matrix WW	Collected by SPENCER, RANDY
Begin	End	Sample Type COMPLIANCE
Date Collected	09/24/2007 9:35 AM	Station ID C01S13
Program SEDO-DSW		Customer ID JWM0925
Client DSW_C		External ID
OEPA Division DSW		
Location Marietta WWTP outfall 001		

Analysis	Parameter	Storet	Result	RL	Units	Date	Qualifier
<i>Oil&Grease</i>	Oil & Grease	P556	<2.0	2	mg/L	10/19/2007	
<i>Cyanide_Free</i>	Cyanide, Free	P718	<5	5	ug/L	09/28/2007	
<i>Cyanide_Total</i>	Cyanide, Total	P720	<10	10	ug/L	09/28/2007	
<i>Phenolics_MD</i>	Phenolics	P32730	11.6	10	ug/L	10/05/2007	

Field Comments

Lab Comments

QC / Sample Comments

Approved By **On**

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample 97484	Matrix WW	Collected by MONTGOMERY, JOANN
Date Received 09/25/2007 1:32 PM	Begin	Sample Type COMPLIANCE
Date Collected 09/24/2007 9:30 AM	End 09/25/2007 9:35 AM	Station ID C01S13
Program SEDO-DSW		Customer ID JWM0925
Client DSW_C		External ID
OEPA Division DSW		
Location Marietta WWTP outfall 001		

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
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USEPA 608

ug/L

Aldrin	000309-00-2	<0.0020	0.002	10/09/2007	
a-BHC	000319-84-6	<0.0020	0.002	10/09/2007	
b-BHC	000319-85-7	<0.0020	0.002	10/09/2007	
d-BHC	000319-86-8	0.0061	0.002	10/09/2007	
γ-BHC	000058-89-9	<0.0020	0.002	10/09/2007	
4,4'-DDD	000072-54-8	<0.0061	0.0061	10/09/2007	
4,4'-DDE	000072-55-9	<0.0020	0.002	10/09/2007	
4,4'-DDT	000050-29-3	<0.0061	0.0061	10/09/2007	
Dieldrin	000060-57-1	<0.0020	0.002	10/09/2007	
Endosulfan I	000959-98-8	<0.0020	0.002	10/09/2007	
Endosulfan II	033213-65-9	<0.0020	0.002	10/09/2007	
Endosulfan sulfate	001031-07-8	<0.020	0.02	10/09/2007	
Endrin	000072-20-8	<0.0020	0.002	10/09/2007	
Endrin aldehyde	007421-93-4	<0.0061	0.0061	10/09/2007	
Heptachlor	000076-44-8	<0.0020	0.002	10/09/2007	
Heptachlor epoxide	001024-57-3	<0.0020	0.002	10/09/2007	
Methoxychlor	000072-43-5	<0.010	0.01	10/09/2007	
Mirex	002385-85-5	<0.010	0.01	10/09/2007	
Hexachlorobenzene	000118-74-1	<0.0020	0.002	10/09/2007	
PCB-1016	012674-11-2	<0.10	0.1	10/09/2007	
PCB-1221	011104-28-2	<0.10	0.1	10/09/2007	
PCB-1232	011141-16-5	<0.10	0.1	10/09/2007	
PCB-1242	053469-21-9	<0.10	0.1	10/09/2007	
PCB-1248	012672-29-6	<0.10	0.1	10/09/2007	
PCB-1254	011097-69-1	<0.10	0.1	10/09/2007	
PCB-1260	011096-82-5	<0.10	0.1	10/09/2007	

USEPA 625

ug/L

Acenaphthene	000083-32-9	<5.1	5.1	10/16/2007	
Acenaphthylene	000208-96-8	<5.1	5.1	10/16/2007	
Anthracene	000120-12-7	<2.0	2	10/16/2007	
Benzo[a]anthracene	000056-55-3	<2.0	2	10/16/2007	
Benzo[a]pyrene	000050-32-8	<2.0	2	10/16/2007	
Benzo[b]fluoranthene	000205-99-2	<2.0	2	10/16/2007	
Benzo[g,h,i]perylene	000191-24-2	<2.0	2	10/16/2007	
Benzo[k]fluoranthene	000207-08-9	<2.0	2	10/16/2007	
bis(2-Chloroethoxy)methane	000111-91-1	<5.1	5.1	10/16/2007	
bis(2-Chloroethyl)ether	000111-44-4	<2.0	2	10/16/2007	
bis(2-Chloroisopropyl)ether	000108-60-1	<2.0	2	10/16/2007	
bis(2-Ethylhexyl)phthalate	000117-81-7	<10.2	10.2	10/16/2007	
4-Bromophenyl-phenylether	000101-55-3	<5.1	5.1	10/16/2007	
Butylbenzylphthalate	000085-68-7	<2.0	2	10/16/2007	
4-Chloro-3-methylphenol	000059-50-7	<10.2	10.2	10/16/2007	
2-Chloronaphthalene	000091-58-7	<5.1	5.1	10/16/2007	
2-Chlorophenol	000095-57-8	<2.0	2	10/16/2007	
4-Chlorophenyl-phenylether	007005-72-3	<2.0	2	10/16/2007	
Chrysene	000218-01-9	<2.0	2	10/16/2007	
Di-n-butylphthalate	000084-74-2	<5.1	5.1	10/16/2007	
Di-n-octylphthalate	000117-84-0	<2.0	2	10/16/2007	
Dibenz[a,h]anthracene	000053-70-3	<2.0	2	10/16/2007	
1,3-Dichlorobenzene	000541-73-1	<2.0	2	10/16/2007	

Laboratory Organic Analysis Data Report

Sample 97484			
Date Received 09/25/2007 1:32 PM	Matrix WW	Collected by MONTGOMERY, JOANN	
Begin	End	Sample Type COMPLIANCE	
Date Collected 09/24/2007 9:30 AM	09/25/2007 9:35 AM	Station ID C01S13	
Program SEDO-DSW		Customer ID JWM0925	
Client DSW_C		External ID	
OEPA Division DSW			
Location Marietta WWTP outfall 001			

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 625	ug/L					
1,4-Dichlorobenzene		000106-46-7	<2.0	2	10/16/2007	
1,2-Dichlorobenzene		000095-50-1	<2.0	2	10/16/2007	
2,4-Dichlorophenol		000120-83-2	<2.0	2	10/16/2007	
Diethylphthalate		000084-66-2	<5.1	5.1	10/16/2007	
2,4-Dimethylphenol		000105-67-9	<10.2	10.2	10/16/2007	
Dimethylphthalate		000131-11-3	<5.1	5.1	10/16/2007	
4,6-Dinitro-2-methylphenol		000534-52-1	<5.1	5.1	10/16/2007	
2,4-Dinitrophenol		000051-28-5	<20.3	20.3	10/16/2007	
2,6-Dinitrotoluene		000606-20-2	<2.0	2	10/16/2007	
2,4-Dinitrotoluene		000121-14-2	<2.0	2	10/16/2007	
Fluoranthene		000206-44-0	<2.0	2	10/16/2007	
Fluorene		000086-73-7	<2.0	2	10/16/2007	
Hexachlorobenzene		000118-74-1	<2.0	2	10/16/2007	
Hexachlorobutadiene		000087-68-3	<2.0	2	10/16/2007	
Hexachlorocyclopentadiene		000077-47-4	<2.0	2	10/16/2007	
Hexachloroethane		000067-72-1	<5.1	5.1	10/16/2007	
Indeno[1,2,3-cd]pyrene		000193-39-5	<2.0	2	10/16/2007	
Isophorone		000078-59-1	<2.0	2	10/16/2007	
N-Nitroso-di-n-propylamine		000621-64-7	<2.0	2	10/16/2007	
N-Nitrosodiphenylamine		000086-30-6	<5.1	5.1	10/16/2007	
Naphthalene		000091-20-3	<2.0	2	10/16/2007	
Nitrobenzene		000098-95-3	<2.0	2	10/16/2007	
2-Nitrophenol		000088-75-5	<2.0	2	10/16/2007	
4-Nitrophenol		000100-02-7	<20.3	20.3	10/16/2007	
Pentachlorophenol		000087-86-5	<10.2	10.2	10/16/2007	
Phenanthrene		000085-01-8	<2.0	2	10/16/2007	
Phenol		000108-95-2	<2.0	2	10/16/2007	
Pyrene		000129-00-0	<2.0	2	10/16/2007	
1,2,4-Trichlorobenzene		000120-82-1	<2.0	2	10/16/2007	
2,4,6-Trichlorophenol		000088-06-2	<5.1	5.1	10/16/2007	

Field Comments

Lab Comments

QC / Sample
Comments

Approved By

On

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample 97485	Matrix WW	Collected by MONTGOMERY, JOANN
Date Received 09/25/2007 1:32 PM	End	Sample Type COMPLIANCE
Begin	Date Collected 09/24/2007 9:35 AM	Station ID C01S13
Program SEDO-DSW		Customer ID JWM0925
Client DSW_C		External ID
OEPA Division DSW		
Location Marietta WWTP outfall 001		

EPA Method	Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 624		ug/L					
	Benzene		000071-43-2	<0.50	0.5	09/26/2007	
	Bromobenzene		000108-86-1	<0.50	0.5	09/26/2007	
	Bromochloromethane		000074-97-5	<0.50	0.5	09/26/2007	
	Bromodichloromethane		000075-27-4	<0.50	0.5	09/26/2007	
	Bromoform		000075-25-2	<0.50	0.5	09/26/2007	
	Bromomethane		000074-83-9	<0.50	0.5	09/26/2007	
	n-Butylbenzene		000104-51-8	<0.50	0.5	09/26/2007	
	sec-Butylbenzene		000135-98-8	<0.50	0.5	09/26/2007	
	tert-Butylbenzene		000098-06-6	<0.50	0.5	09/26/2007	
	Carbon tetrachloride		000056-23-5	<0.50	0.5	09/26/2007	
	Chlorobenzene		000108-90-7	<0.50	0.5	09/26/2007	
	Chloroethane		000075-00-3	<0.50	0.5	09/26/2007	
	Chloroform		000067-66-3	<0.50	0.5	09/26/2007	
	Chloromethane		000074-87-3	<0.50	0.5	09/26/2007	
	2-Chlorotoluene		000095-49-8	<0.50	0.5	09/26/2007	
	4-Chlorotoluene		000106-43-4	<0.50	0.5	09/26/2007	
	Dibromochloromethane		000124-48-1	<0.50	0.5	09/26/2007	
	1,2-Dibromo-3-chloropropane		000096-12-8	<0.50	0.5	09/26/2007	
	1,2-Dibromoethane		000106-93-4	<0.50	0.5	09/26/2007	
	Dibromomethane		000074-95-3	<0.50	0.5	09/26/2007	
	1,2-Dichlorobenzene		000095-50-1	<0.50	0.5	09/26/2007	
	1,3-Dichlorobenzene		000541-73-1	<0.50	0.5	09/26/2007	
	1,4-Dichlorobenzene		000106-46-7	<0.50	0.5	09/26/2007	
	Dichlorodifluoromethane		000075-71-8	<0.50	0.5	09/26/2007	
	1,1-Dichloroethane		000075-34-3	<0.50	0.5	09/26/2007	
	1,2-Dichloroethane		000107-06-2	<0.50	0.5	09/26/2007	
	1,1-Dichloroethene		000075-35-4	<0.50	0.5	09/26/2007	
	cis-1,2-Dichloroethene		000156-59-2	<0.50	0.5	09/26/2007	
	trans-1,2-Dichloroethene		000156-60-5	<0.50	0.5	09/26/2007	
	1,2-Dichloropropane		000078-87-5	<0.50	0.5	09/26/2007	
	1,3-Dichloropropane		000142-28-9	<0.50	0.5	09/26/2007	
	2,2-Dichloropropane		000594-20-7	<0.50	0.5	09/26/2007	
	1,1-Dichloropropene		000563-58-6	<0.50	0.5	09/26/2007	
	cis-1,3-Dichloropropene		010061-01-5	<0.50	0.5	09/26/2007	
	trans-1,3-Dichloropropene		010061-02-6	<0.50	0.5	09/26/2007	
	Ethylbenzene		000100-41-4	<0.50	0.5	09/26/2007	
	Hexachlorobutadiene		000087-68-3	<0.50	0.5	09/26/2007	
	Isopropylbenzene		000098-82-8	<0.50	0.5	09/26/2007	
	4-Isopropyltoluene		000099-87-6	<0.50	0.5	09/26/2007	
	Methylene chloride		000075-09-2	<0.50	0.5	09/26/2007	
	Naphthalene		000091-20-3	<0.50	0.5	09/26/2007	
	n-Propylbenzene		000103-65-1	<0.50	0.5	09/26/2007	
	Styrene		000100-42-5	<0.50	0.5	09/26/2007	
	1,1,1,2-Tetrachloroethane		000630-20-6	<0.50	0.5	09/26/2007	
	1,1,2,2-Tetrachloroethane		000079-34-5	<0.50	0.5	09/26/2007	
	Tetrachloroethene		000127-18-4	<0.50	0.5	09/26/2007	
	Toluene		000108-88-3	<0.50	0.5	09/26/2007	
	1,2,3-Trichlorobenzene		000087-61-6	<0.50	0.5	09/26/2007	
	1,2,4-Trichlorobenzene		000120-82-1	<0.50	0.5	09/26/2007	
	1,1,1-Trichloroethane		000071-55-6	<0.50	0.5	09/26/2007	
	1,1,2-Trichloroethane		000079-00-5	<0.50	0.5	09/26/2007	

Laboratory Organic Analysis Data Report

Sample 97485			
Date Received 09/25/2007 1:32 PM	Matrix WW	Collected by MONTGOMERY, JOANN	
Begin	End	Sample Type COMPLIANCE	
Date Collected	09/24/2007 9:35 AM	Station ID C01S13	
Program SEDO-DSW		Customer ID JWM0925	
Client DSW_C		External ID	
OEPA Division DSW			
Location Marietta WWTP outfall 001			

EPA Method	Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 624		ug/L					
	Trichloroethene		000079-01-6	<0.50	0.5	09/26/2007	
	Trichlorofluoromethane		000075-69-4	<0.50	0.5	09/26/2007	
	1,2,3-Trichloropropane		000096-18-4	<0.50	0.5	09/26/2007	
	1,2,4-Trimethylbenzene		000095-63-6	<0.50	0.5	09/26/2007	
	1,3,5-Trimethylbenzene		000108-67-8	<0.50	0.5	09/26/2007	
	Vinyl chloride		000075-01-4	<0.50	0.5	09/26/2007	
	o-Xylene		000095-47-6	<0.50	0.5	09/26/2007	
	Total m&p-xylenes		000108-38-3	<0.50	0.5	09/26/2007	

Field Comments

Lab Comments

QC / Sample Comments

Approved By **On**