

Wickson Co. (11-11-09)
City of Jackson
correspondence



State of Ohio Environmental Protection Agency

Southeast District Office

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

April 1, 2009

Re: Jackson County
Jackson WWTP
Bioassay Report

Mr. Greg Wilson, Supt.
Jackson Wastewater Department
1000 Water Street
Jackson, Ohio 45640

Dear Mr. Wilson:

Please find, enclosed, a copy of the bioassay report. This report reflects the results of the sampling which was conducted on February 9-10, 2009, at the Jackson Wastewater Treatment Plant. The effluent from this facility was not acutely toxic. Some abnormal effects were noted in grabs from both days, in 5% of both species (*Ceriodaphnia dubia* and *P. promelas*).

If you have any questions concerning this report, or the sampling which was done, please don't hesitate to call me at (740) 380-5433. Specific questions concerning the bioassay procedures or the contents of the attached report can be directed to Jon McLaughlin at (614) 644-4228 at Ohio EPA's lab.

Sincerely,

Joann Montgomery
Water Quality Group
Division of Surface Water

JM/dh

Enclosure

c: Aaron Pennington, DSW, SEDO
c: Mike Gambino, Supt.

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

Bioassay Report Number:
09-3854-SE

Reviewed By
Ohio EPA - DES
QA Staff

FEB 20 2009

Sample Number:
110040

Reviewer JD

Jonathan C. McLaughlin
G. Duane Davis

Bioassay Section
Division of Environmental Services
Ohio Environmental Protection Agency

INTRODUCTION

Two grab samples and a composite sample of Jackson WWTP outfall 001 effluents were collected by Joann Montgomery, DSW, SEDO, Ohio EPA for use in screening bioassays as part of a toxics evaluation in conjunction with permit reissuance. A grab sample was also collected from the receiving stream, Salt Lick Creek, upstream from the discharge. The effluent grab samples were collected on 9 February 2009 at 1042 hours and on 10 February 2009 at 0945 hours. The composite sample was collected on 9-10 February 2009 between 1015-1000 hours. The Salt Lick Creek upstream water was collected on 9 February 2009 at 1100 hours. A mixing zone sample was manually prepared in the field by combining equal aliquots of upstream water and effluent on 9 February 2009 at 1105 hours. The fathead minnow, *Pimephales promelas*, and *Ceriodaphnia dubia* were used as test organisms in these 48-hour screening bioassays.

PREVIOUS RESULTS

Bioassays of Jackson WWTP outfall 001 effluents were previously conducted by the Ohio EPA within the last ten years in January 2003 and 2004 (Bioassay Numbers 03-2720-SE and 04-2917-SE, respectively). The previously tested effluents were not acutely toxic to either *P. promelas* or *C. dubia* (Appendix 1).

RESULTS AND CONCLUSIONS

Details of the tests may be found on the attached bioassay report forms. The effluents were not acutely toxic. Organisms displaying adverse effects were five percent for both species in both effluent grabs. No other mortality or adverse effects were observed in the ambient waters and remaining effluents for either *P. promelas* or *C. dubia*. Survival in the laboratory controls was 100 percent for both species.

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 previous bioassays indicate that Jackson WWTP outfall 001 effluents were not acutely toxic to either *P. promelas* or *C. dubia*. Additional bioassays should be conducted to further demonstrate the absence of unacceptable toxic conditions associated with this discharge.

These tests did not address the possibility of chronic toxicity. Discharge data for Jackson WWTP outfall 001 and the Salt Lick Creek 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: 17 February 2009

Bioassay Report Number: 09-3854-SE

Investigators: Jonathan C. McLaughlin and G. Duane Davis

Effluent tested and source: Jackson WWTP, 225 Wood Ave., Jackson, Jackson County, Ohio, outfall 001

NPDES Number: OH0020834

Ohio EPA Permit Number: OPD00008*HD

Business/Process: Wastewater treatment facility

Collector(s): Joann Montgomery, 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):	6.2	0.73	5.0-7.5
Weight (milligrams):	1.0	0.70	0.3-2.9

Hatched: 1-2 February 2009; 8-9 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 immobile 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 Jackson WWTP outfall 001 effluent

Bioassay Number: 09-3854-SE

Sample	Time Collected Date: Time: (hours)	Test Start Date: Time: (hours)	Cumulative percent mortality (plus those displaying a loss of equilibrium)			
			<i>P. promelas</i> Time (hours)		<i>C. dubia</i> Time (hours)	
			24	48	24	48
Salt Lick Creek upstream	9 February 2009 1100	10 February 2009 1338	0	0	0	0
Manual mixing zone (1:1)	9 February 2009 1105	10 February 2009 1338	0	0	0	0
Grab 001	9 February 2009 1042	10 February 2009 1338	0	5	0	5
Grab 001	10 February 2009 0945	10 February 2009 1338	0	0 (5)	0	5
Composite 001	9-10 February 2009 1015-1000	10 February 2009 1338	0	0	0	0
Rearing unit water control		10 February 2009 1338	0	0	-	-
Reconstituted water control		10 February 2009 1338	-	-	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 yellow. The effluents were clear with a yellow tinge. All field samples contained settleable solids. After warming to the 25°C test temperature, the ambient waters and effluents were 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.

Appendix 1.

Results of previous bioassays of Jackson 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
03-2720-SE	01/03	N	0	0	0	0	0	0
04-2917-SE	01/04	N	0	0	0	0	0	0

* 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)
-	-	-	-	-	-	-
-	-	-	-	-	-	-

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: Jackson WWTP 001 outfall	OEPA Permit #: OPD00008*HD
Facility Address: 225 Wood Avenue, Jackson, OH	NPDES #: OH0020834
Receiving Stream (R.M.): Salt Lick Creek	County: Jackson
Collector(s) [Print Full Name]: Joann Montgomery	STORET #: V12S01
Collector(s) Signature: <i>Joann Montgomery</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	Salt Lick Creek	50-50 manually mixed	--
If Composite, Sample Volume and Frequency	---	---	400 ml/20 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	2/9/09	2/10/09	2/9-10/09	2/9/09	2/9/09	--
Time of Sample Collection, beginning-Ending Time	1042	0945	1015 - 1020	1100	1105	--
Flow (in MGD)	--	--	2.962 *	--	---	---
Temperature (°C)	9.30	10.87	-	1.60	5.82	---
Dissolved Oxygen (mg/L)	11.36	6.94	-	13.97	12.79	---
pH (S.U.)	7.59	7.14	-	7.46	7.57	---
Conductivity (µmhos/cm)	996	1163	-	199	614	---
Total Residual Chlorine (mg/L)	----	----	---	---	---	---

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

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

* includes 0.532 mg of bypass flow

110.040

Notes:

Facility is under construction for an upgrade to the WWTP. The bypass was occurring, so a sampler was set up at the manhole where bypass flow and treated effluent mix. Grab samples were collected at the end of the pipe where it was being discharged to Salt Lick Creek. Snow melt had been occurring, and flow in the creek was elevated above normal flow level. Some rain occurred overnight during the sample collection. *2nd day*
grab was collected at post aeration tank since bypass had ceased.

Name and Title	Year	Month	Day	Hour	Minute
Received from: <i>Joann Montgomery</i>	<i>09</i>	<i>02</i>	<i>10</i>	<i>12</i>	<i>40</i>
Received by: <i>[Signature]</i>	<i>09</i>	<i>02</i>	<i>10</i>	<i>12</i>	<i>40</i>
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

110,034 *110,035* *110,036* *110,037-38* *110,039*
110,048

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 110035			
Date Received 02/10/2009 2:05 PM	Matrix WW	Collected by MONTGOMERY, JOANN	
Begin	End	Sample Type COMPLIANCE	
Date Collected 02/09/2009 8:00 AM	02/10/2009 8:00 AM	Station ID V12S01	
Program SEDO-DSW		Customer ID JWM0209	
Client DSW_C		External ID	
OEPA Division DSW			
Location Jackson WWTP Facility Sampler			

Analysis	Parameter	Storet	Result	RL	Units	Date	Qualifier
CBOD-5	CBOD5	P80082	3.8	2	mg/L	02/11/2009	
Solids_Diss	Total Dissolved Solids	P70300	640	10	mg/L	02/12/2009	
Solids_Susp	Total Suspended Solids	P530	10	5	mg/L	02/12/2009	
ICPMS_(WAT)	Antimony	P1097	<2.0	2	ug/L	02/12/2009	
ICPMS_(WAT)	Arsenic	P1002	<2.0	2	ug/L	02/12/2009	
ICPMS_(WAT)	Cadmium	P1027	<0.20	0.2	ug/L	02/12/2009	
ICPMS_(WAT)	Chromium	P1034	<2.0	2	ug/L	02/12/2009	
ICPMS_(WAT)	Copper	P1042	3.9	2	ug/L	02/12/2009	
ICPMS_(WAT)	Lead	P1051	<2.0	2	ug/L	02/12/2009	
ICPMS_(WAT)	Nickel	P1067	2.3	2	ug/L	02/12/2009	
ICPMS_(WAT)	Selenium	P1147	2.0	2	ug/L	02/12/2009	
ICPMS_(WAT)	Silver	P1077	0.27	0.2	ug/L	02/12/2009	
ICPMS_(WAT)	Thallium	P1059	<1.5	1.5	ug/L	02/12/2009	
ICP_(WAT)	Aluminum	P1105	<200	200	ug/L	02/12/2009	
ICP_(WAT)	Barium	P1007	41	15	ug/L	02/12/2009	
ICP_(WAT)	Calcium	P916	41	2	mg/L	02/12/2009	
ICP_(WAT)	Hardness, Total	P900	201	10	mg/L	02/12/2009	
ICP_(WAT)	Iron	P1045	119	50	ug/L	02/12/2009	
ICP_(WAT)	Magnesium	P927	24	1	mg/L	02/12/2009	
ICP_(WAT)	Manganese	P1055	13	10	ug/L	02/12/2009	
ICP_(WAT)	Potassium	P937	11	2	mg/L	02/12/2009	
ICP_(WAT)	Sodium	P929	126	5	mg/L	02/12/2009	
ICP_(WAT)	Strontium	P1082	171	30	ug/L	02/12/2009	
ICP_(WAT)	Zinc	P1092	23	10	ug/L	02/12/2009	
Mercury_(WAT)	Mercury	P71900	<0.20	0.2	ug/L	02/18/2009	
Alkalinity	Alkalinity	P410	164	5	mg/L	02/13/2009	
Ammonia	Ammonia	P610	1.55	0.05	mg/L	02/13/2009	
COD	COD	P340	37	20	mg/L	03/04/2009	
Chloride	Chloride	P940	146	5	mg/L	02/18/2009	
Conductivity	Conductivity	P95	1070	1	umhos/cm	02/11/2009	
Nitrate	Nitrate+nitrite	P630	7.84	0.1	mg/L	02/13/2009	
TKN	TKN	P625	3.83	0.2	mg/L	02/12/2009	
TP	Total Phosphorus	P665	1.37	0.05	mg/L	02/12/2009	

Field Comments

Lab Comments

QC / Sample Comments

Approved By

SROBERTS

On

03/09/2009

OhioEPA Division of Environmental Services
Laboratory Inorganic Analysis Data Report

Sample 110036		
Date Received 02/10/2009 2:05 PM	Matrix WW	Collected by MONTGOMERY, JOANN
Begin	End	Sample Type COMPLIANCE
Date Collected	02/09/2009 10:42 AM	Station ID V12S01
Program SEDO-DSW		Customer ID JWM0209
Client DSW_C		External ID
OEPA Division DSW		
Location Jackson WWTP outfall 001		

Analysis	Parameter	Storet	Result	RL	Units	Date	Qualifier
<i>Oil&Grease</i>	Oil & Grease	P556	3.3	2	mg/L	02/23/2009	
<i>Cyanide_Free</i>	Cyanide, Free	P718	<5	5	ug/L	02/19/2009	
<i>Cyanide_Total</i>	Cyanide, Total	P720	<10	10	ug/L	02/19/2009	
<i>Phenolics_MD</i>	Phenolics	P32730	16.1	10	ug/L	03/04/2009	

Field Comments

Lab Comments

QC / Sample Comments

Approved By **On**

Laboratory Inorganic Analysis Data Report

Sample 110048			
Date Received 02/10/2009 2:51 PM	Matrix WW	Collected by MONTGOMERY, JOANN	
Begin	End	Sample Type COMPLIANCE	
Date Collected 02/09/2009 10:15 AM	02/10/2009 10:00 AM	Station ID V12S01	
Program SEDO-DSW		Customer ID JWM0209	
Client DSW_C		External ID	
OEPA Division DSW			
Location Jackson WWTP outfall 001			

Analysis	Parameter	Storet	Result	RL	Units	Date	Qualifier
CBOD-5	CBOD5	P80082	7.0	2	mg/L	02/11/2009	
Solids_Diss	Total Dissolved Solids	P70300	684	10	mg/L	02/12/2009	
Solids_Susp	Total Suspended Solids	P530	20	5	mg/L	02/12/2009	
ICPMS_(WAT)	Antimony	P1097	<2.0	2	ug/L	02/12/2009	
ICPMS_(WAT)	Arsenic	P1002	<2.0	2	ug/L	02/12/2009	
ICPMS_(WAT)	Cadmium	P1027	<0.20	0.2	ug/L	02/12/2009	
ICPMS_(WAT)	Chromium	P1034	<2.0	2	ug/L	02/12/2009	
ICPMS_(WAT)	Copper	P1042	4.7	2	ug/L	02/12/2009	
ICPMS_(WAT)	Lead	P1051	<2.0	2	ug/L	02/12/2009	
ICPMS_(WAT)	Nickel	P1067	3.2	2	ug/L	02/12/2009	
ICPMS_(WAT)	Selenium	P1147	2.1	2	ug/L	02/12/2009	
ICPMS_(WAT)	Silver	P1077	0.44	0.2	ug/L	02/12/2009	
ICPMS_(WAT)	Thallium	P1059	<1.5	1.5	ug/L	02/12/2009	
ICP_(WAT)	Aluminum	P1105	<200	200	ug/L	02/12/2009	
ICP_(WAT)	Barium	P1007	48	15	ug/L	02/12/2009	
ICP_(WAT)	Calcium	P916	44	2	mg/L	02/12/2009	
ICP_(WAT)	Hardness, Total	P900	221	10	mg/L	02/12/2009	
ICP_(WAT)	Iron	P1045	208	50	ug/L	02/12/2009	
ICP_(WAT)	Magnesium	P927	27	1	mg/L	02/12/2009	
ICP_(WAT)	Manganese	P1055	24	10	ug/L	02/12/2009	
ICP_(WAT)	Potassium	P937	12	2	mg/L	02/12/2009	
ICP_(WAT)	Sodium	P929	142	5	mg/L	02/12/2009	
ICP_(WAT)	Strontium	P1082	186	30	ug/L	02/12/2009	
ICP_(WAT)	Zinc	P1092	29	10	ug/L	02/12/2009	
Mercury_(WAT)	Mercury	P71900	<0.20	0.2	ug/L	02/18/2009	
Alkalinity	Alkalinity	P410	179	5	mg/L	02/13/2009	
Ammonia	Ammonia	P610	2.10	0.05	mg/L	02/13/2009	
COD	COD	P340	35	20	mg/L	03/04/2009	
Chloride	Chloride	P940	155	5	mg/L	02/18/2009	
Conductivity	Conductivity	P95	1120	1	umhos/cm	02/11/2009	
Nitrate	Nitrate+nitrite	P630	7.97	0.1	mg/L	02/13/2009	
TKN	TKN	P625	4.90	0.2	mg/L	02/12/2009	
TP	Total Phosphorus	P665	1.52	0.05	mg/L	02/12/2009	

Field Comments

Lab Comments

QC / Sample Comments

Approved By

SROBERTS

On

03/09/2009

Laboratory Organic Analysis Data Report

Sample 110037			
Date Received 02/10/2009 2:05 PM	Matrix WW	Collected by MONTGOMERY, JOANN	
Begin	End	Sample Type COMPLIANCE	
Date Collected 02/09/2009 8:00 AM	02/10/2009 8:00 AM	Station ID V12S01	
Program SEDO-DSW		Customer ID JWM0209	
Client DSW_C		External ID	
OEPA Division DSW			
Location Jackson WWTP Facility Sampler			

EPA Method	Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 625		ug/L					
	Acenaphthene		000083-32-9	<5.2	5.2	02/25/2009	
	Acenaphthylene		000208-96-8	<5.2	5.2	02/25/2009	
	Anthracene		000120-12-7	<2.1	2.1	02/25/2009	
	Benzo[a]anthracene		000056-55-3	<2.1	2.1	02/25/2009	
	Benzo[a]pyrene		000050-32-8	<2.1	2.1	02/25/2009	
	Benzo[b]fluoranthene		000205-99-2	<2.1	2.1	02/25/2009	
	Benzo[g,h,i]perylene		000191-24-2	<2.1	2.1	02/25/2009	
	Benzo[k]fluoranthene		000207-08-9	<2.1	2.1	02/25/2009	
	bis(2-Chloroethoxy)methane		000111-91-1	<5.2	5.2	02/25/2009	
	bis(2-Chloroethyl)ether		000111-44-4	<2.1	2.1	02/25/2009	
	bis(2-Chloroisopropyl)ether		000108-60-1	<2.1	2.1	02/25/2009	
	bis(2-Ethylhexyl)phthalate		000117-81-7	<10.5	10.5	02/25/2009	
	4-Bromophenyl-phenylether		000101-55-3	<5.2	5.2	02/25/2009	
	Butylbenzylphthalate		000085-68-7	<2.1	2.1	02/25/2009	
	4-Chloro-3-methylphenol		000059-50-7	<10.5	10.5	02/25/2009	
	2-Chloronaphthalene		000091-58-7	<5.2	5.2	02/25/2009	
	2-Chlorophenol		000095-57-8	<2.1	2.1	02/25/2009	
	4-Chlorophenyl-phenylether		007005-72-3	<2.1	2.1	02/25/2009	
	Chrysene		000218-01-9	<2.1	2.1	02/25/2009	
	Di-n-butylphthalate		000084-74-2	<5.2	5.2	02/25/2009	
	Di-n-octylphthalate		000117-84-0	<2.1	2.1	02/25/2009	
	Dibenz[a,h]anthracene		000053-70-3	<2.1	2.1	02/25/2009	
	1,3-Dichlorobenzene		000541-73-1	<2.1	2.1	02/25/2009	
	1,4-Dichlorobenzene		000106-46-7	<2.1	2.1	02/25/2009	
	1,2-Dichlorobenzene		000095-50-1	<2.1	2.1	02/25/2009	
	2,4-Dichlorophenol		000120-83-2	<2.1	2.1	02/25/2009	
	Diethylphthalate		000084-66-2	<5.2	5.2	02/25/2009	
	2,4-Dimethylphenol		000105-67-9	<10.5	10.5	02/25/2009	
	Dimethylphthalate		000131-11-3	<5.2	5.2	02/25/2009	
	4,6-Dinitro-2-methylphenol		000534-52-1	<5.2	5.2	02/25/2009	
	2,4-Dinitrophenol		000051-28-5	<20.9	20.9	02/25/2009	
	2,6-Dinitrotoluene		000606-20-2	<2.1	2.1	02/25/2009	
	2,4-Dinitrotoluene		000121-14-2	<2.1	2.1	02/25/2009	
	Fluoranthene		000206-44-0	<2.1	2.1	02/25/2009	
	Fluorene		000086-73-7	<2.1	2.1	02/25/2009	
	Hexachlorobenzene		000118-74-1	<2.1	2.1	02/25/2009	
	Hexachlorobutadiene		000087-68-3	<2.1	2.1	02/25/2009	
	Hexachlorocyclopentadiene		000077-47-4	<2.1	2.1	02/25/2009	
	Hexachloroethane		000067-72-1	<5.2	5.2	02/25/2009	
	Indeno[1,2,3-cd]pyrene		000193-39-5	<2.1	2.1	02/25/2009	
	Isophorone		000078-59-1	<2.1	2.1	02/25/2009	
	N-Nitroso-di-n-propylamine		000621-64-7	<2.1	2.1	02/25/2009	
	N-Nitrosodiphenylamine		000086-30-6	<5.2	5.2	02/25/2009	
	Naphthalene		000091-20-3	<2.1	2.1	02/25/2009	
	Nitrobenzene		000098-95-3	<2.1	2.1	02/25/2009	
	2-Nitrophenol		000088-75-5	<2.1	2.1	02/25/2009	
	4-Nitrophenol		000100-02-7	<20.9	20.9	02/25/2009	
	Pentachlorophenol		000087-86-5	<10.5	10.5	02/25/2009	
	Phenanthrene		000085-01-8	<2.1	2.1	02/25/2009	
	Phenol		000108-95-2	<2.1	2.1	02/25/2009	
	Pyrene		000129-00-0	<2.1	2.1	02/25/2009	

Laboratory Organic Analysis Data Report

Sample 110037		
Date Received 02/10/2009 2:05 PM	Matrix WW	Collected by MONTGOMERY, JOANN
Begin	End	Sample Type COMPLIANCE
Date Collected 02/09/2009 8:00 AM	02/10/2009 8:00 AM	Station ID V12S01
Program SEDO-DSW		Customer ID JWM0209
Client DSW_C		External ID
OEPA Division DSW		
Location Jackson WWTP Facility Sampler		

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
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USEPA 625	ug/L					
1,2,4-Trichlorobenzene		000120-82-1	<2.1	2.1	02/25/2009	
2,4,6-Trichlorophenol		000088-06-2	<5.2	5.2	02/25/2009	

Field Comments

Lab Comments

QC / Sample Comments

Approved By **On**

Laboratory Organic Analysis Data Report

Sample	110039	Matrix	WW	Collected by	MONTGOMERY, JOANN
Date Received	02/10/2009 2:05 PM	Begin		Sample Type	COMPLIANCE
Date Collected		End	02/09/2009 10:42 AM	Station ID	V12S01
Program	SEDO-DSW	Customer ID	JWM0209	External ID	
Client	DSW_C				
OEPA Division	DSW				
Location	Jackson 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	02/12/2009	
Bromobenzene		000108-86-1	<0.50	0.5	02/12/2009	
Bromochloromethane		000074-97-5	<0.50	0.5	02/12/2009	
Bromodichloromethane		000075-27-4	<0.50	0.5	02/12/2009	
Bromoform		000075-25-2	<0.50	0.5	02/12/2009	
Bromomethane		000074-83-9	<0.50	0.5	02/12/2009	
n-Butylbenzene		000104-51-8	<0.50	0.5	02/12/2009	
sec-Butylbenzene		000135-98-8	<0.50	0.5	02/12/2009	
tert-Butylbenzene		000098-06-6	<0.50	0.5	02/12/2009	
Carbon tetrachloride		000056-23-5	<0.50	0.5	02/12/2009	
Chlorobenzene		000108-90-7	<0.50	0.5	02/12/2009	
Chloroethane		000075-00-3	<0.50	0.5	02/12/2009	
Chloroform		000067-66-3	<0.50	0.5	02/12/2009	
Chloromethane		000074-87-3	<0.50	0.5	02/12/2009	
2-Chlorotoluene		000095-49-8	<0.50	0.5	02/12/2009	
4-Chlorotoluene		000106-43-4	<0.50	0.5	02/12/2009	
Dibromochloromethane		000124-48-1	<0.50	0.5	02/12/2009	
1,2-Dibromo-3-chloropropane		000096-12-8	<0.50	0.5	02/12/2009	
1,2-Dibromoethane		000106-93-4	<0.50	0.5	02/12/2009	
Dibromomethane		000074-95-3	<0.50	0.5	02/12/2009	
1,2-Dichlorobenzene		000095-50-1	<0.50	0.5	02/12/2009	
1,3-Dichlorobenzene		000541-73-1	<0.50	0.5	02/12/2009	
1,4-Dichlorobenzene		000106-46-7	<0.50	0.5	02/12/2009	
Dichlorodifluoromethane		000075-71-8	<0.50	0.5	02/12/2009	
1,1-Dichloroethane		000075-34-3	<0.50	0.5	02/12/2009	
1,2-Dichloroethane		000107-06-2	<0.50	0.5	02/12/2009	
1,1-Dichloroethene		000075-35-4	<0.50	0.5	02/12/2009	
cis-1,2-Dichloroethene		000156-59-2	<0.50	0.5	02/12/2009	
trans-1,2-Dichloroethene		000156-60-5	<0.50	0.5	02/12/2009	
1,2-Dichloropropane		000078-87-5	<0.50	0.5	02/12/2009	
1,3-Dichloropropane		000142-28-9	<0.50	0.5	02/12/2009	
2,2-Dichloropropane		000594-20-7	<0.50	0.5	02/12/2009	
1,1-Dichloropropene		000563-58-6	<0.50	0.5	02/12/2009	
cis-1,3-Dichloropropene		010061-01-5	<0.50	0.5	02/12/2009	
trans-1,3-Dichloropropene		010061-02-6	<0.50	0.5	02/12/2009	
Ethylbenzene		000100-41-4	<0.50	0.5	02/12/2009	
Hexachlorobutadiene		000087-68-3	<0.50	0.5	02/12/2009	
Isopropylbenzene		000098-82-8	<0.50	0.5	02/12/2009	
4-Isopropyltoluene		000099-87-6	<0.50	0.5	02/12/2009	
Methylene chloride		000075-09-2	<0.50	0.5	02/12/2009	
Naphthalene		000091-20-3	<0.50	0.5	02/12/2009	
n-Propylbenzene		000103-65-1	<0.50	0.5	02/12/2009	
Styrene		000100-42-5	<0.50	0.5	02/12/2009	
1,1,1,2-Tetrachloroethane		000630-20-6	<0.50	0.5	02/12/2009	
1,1,2,2-Tetrachloroethane		000079-34-5	<0.50	0.5	02/12/2009	
Tetrachloroethene		000127-18-4	<0.50	0.5	02/12/2009	
Toluene		000108-88-3	0.96	0.5	02/12/2009	
1,2,3-Trichlorobenzene		000087-61-6	<0.50	0.5	02/12/2009	
1,2,4-Trichlorobenzene		000120-82-1	<0.50	0.5	02/12/2009	
1,1,1-Trichloroethane		000071-55-6	<0.50	0.5	02/12/2009	
1,1,2-Trichloroethane		000079-00-5	<0.50	0.5	02/12/2009	

Laboratory Organic Analysis Data Report

Sample 110039	Matrix WW	Collected by MONTGOMERY, JOANN
Date Received 02/10/2009 2:05 PM	Begin	Sample Type COMPLIANCE
Date Collected	End 02/09/2009 10:42 AM	Station ID V12S01
Program SEDO-DSW		Customer ID JWM0209
Client DSW_C		External ID
OEPA Division DSW		
Location Jackson 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	02/12/2009	
Trichlorofluoromethane		000075-69-4	<0.50	0.5	02/12/2009	
1,2,3-Trichloropropane		000096-18-4	<0.50	0.5	02/12/2009	
1,2,4-Trimethylbenzene		000095-63-6	<0.50	0.5	02/12/2009	
1,3,5-Trimethylbenzene		000108-67-8	<0.50	0.5	02/12/2009	
Vinyl chloride		000075-01-4	<0.50	0.5	02/12/2009	
o-Xylene		000095-47-6	<0.50	0.5	02/12/2009	
Total m&p-xylenes		000108-38-3	<0.50	0.5	02/12/2009	

Field Comments

Lab Comments

**QC / Sample
Comments**

Approved By **On**