



MSD

*Louisville and Jefferson County Metropolitan Sewer District
700 West Liberty Street
Louisville Kentucky 40203-1911
502-540-6000
www.msdlouky.org*

October 24, 2007

Ms. Kathy Thurman
Kentucky Division of Water
14 Reilly Road
Frankfort, Kentucky 40601

RE: Jeffersontown Treatment Plant, KPDES No: KY0025194
Discharge Monitoring Report
September 2007

Dear Ms. Thurman:

Attached are the Discharge Monitoring Report (DMR) and the Monthly Operating Report (MOR) report for the Jeffersontown Wastewater Treatment Plant, for the month of September 2007. There were four exceptions for exceeding fecal limits due to a controls problem with the UV system. It has since been corrected by the maintenance staff. Also enclosed is the quarterly Biomonitoring DMR for Jeffersontown Treatment Plant. If you have any questions concerning the attached DMR's, please contact me at (502) 239-7695.

Sincerely,

James E. Porter Jr.
Process Supervisor Central Region

JEP/Jeffersontown 0907.doc

Enclosures

cc: M. Roth (DOW Louisville)
E. Brady
R. Shaw
P. Burgin
T. Singleton



*Beneficial Use of Louisville's Biosolids
www.louisvillegreen.com*

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

MAJOR
(SUBR LV)
F - FINAL

JEFFE

BIDMONITORING/ONCE PER QUARTER
EFFLUENT

*** NO DISCHARGE [] ***

NOTE: Read Instructions before completing this form.

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME MSD JEFFERSONTOWN STP

ADDRESS 8405 CEDAR CREEK RD
LOUISVILLE KY 40291

KY 40291

PERMIT NUMBER
KY0025174

DISCHARGE NUMBER
001 Y

FACILITY MSD JEFFERSONTOWN STP

LOCATION JEFFERSONTOWN

KY 40299

ATTN: DEBBIE NEWTON

MONITORING PERIOD

FROM	YEAR	MO	DAY	TO	YEAR	MO	DAY

PARAMETER	SAMPLE MEASUREMENT	QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
AMMONIA, TOTAL (AS CAOD3) 00900 1 0 1 EFFLUENT GROSS VALUE						242	242	(17)	0	Y91	CONK
	PERMIT REQUIREMENT					MD AVG	DAILY MX	MG/L			
AMMONIUM, DISSOLVED (AS CD) 01025 1 0 1 EFFLUENT GROSS VALUE						<0.0001	<0.0001	(17)	0	Y91	CONK
	PERMIT REQUIREMENT					MD AVG	DAILY MX	MG/L			
COPPER, DISSOLVED (AS CU) 01040 1 0 1 EFFLUENT GROSS VALUE						0.011	0.011	(17)	0	Y91	CONK
	PERMIT REQUIREMENT					MD AVG	DAILY MX	MG/L			
LEAD, DISSOLVED (AS PB) 01049 1 0 1 EFFLUENT GROSS VALUE						<0.005	<0.005	(17)	0	Y91	CONK
	PERMIT REQUIREMENT					MD AVG	DAILY MX	MG/L			
CINCO, DISSOLVED (AS ZN) 01090 1 0 1 EFFLUENT GROSS VALUE						0.0249	0.0249	(17)	0	Y91	CONK
	PERMIT REQUIREMENT					MD AVG	DAILY MX	MG/L			
CINCO, TOTAL RECOVERABLE 01094 1 0 1 EFFLUENT GROSS VALUE						0.0526	0.0526	(17)	0	Y91	CONK
	PERMIT REQUIREMENT					MD AVG	DAILY MX	MG/L			
CADMIUM, TOTAL RECOVERABLE 01113 1 0 1 EFFLUENT GROSS VALUE						<0.0001	<0.0001	(17)	0	Y91	CONK
	PERMIT REQUIREMENT					MD AVG	DAILY MX	MG/L			

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
H. S. SCHROEDER JR.
EXECUTIVE DIRECTOR
TYPED OR PRINTED

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT
James E. Bost

TELEPHONE: 502-510-6000
DATE: 07 10 95
AREA CODE: NUMBER: YEAR: MO: DAY:

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

MAJOR
(SUBR LV)
F - FINAL
BIDMONITORING/ONCE PER QUARTER
EFFLUENT

*** NO DISCHARGE [] ***

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PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME MSD JEFFERSONTOWN STP
ADDRESS 8405 CEDAR CREEK RD
LOUISVILLE KY 40291

KY0025174
PERMIT NUMBER

001 Y
DISCHARGE NUMBER

FACILITY MSD JEFFERSONTOWN STP
LOCATION JEFFERSONTOWN KY 40297
ATTN: DEBBIE NEWTON

MONITORING PERIOD						
YEAR	MO.	DAY	TO	YEAR	MO.	DAY
07	07	01		07	07	01

PARAMETER	SAMPLE MEASUREMENT / PERMIT REQUIREMENT	QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
LEAD TOTAL RECOVERABLE 01114 1 0 1 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT PERMIT REQUIREMENT	*****	*****	*****	*****	<0.005 REPORT MD AVG	<0.005 REPORT DAILY MX	(17) MG/L	0	1/91	Drink
COPPER TOTAL RECOVERABLE 01119 1 0 1 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT PERMIT REQUIREMENT	*****	*****	*****	*****	0.011 REPORT MD AVG	0.011 REPORT DAILY MX	(17) MG/L	0	1/91	Drink
TOXICITY, FINAL CONC TOXICITY UNITS 01406 1 0 1 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT PERMIT REQUIREMENT	*****	*****	*****	*****	*****	<1.00 1.00 CHRONC DAILY MX TOXCT	(20)	0	1/91	Drink
	SAMPLE MEASUREMENT PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
H.E. SCHUBERT JR.
EXECUTIVE DIRECTOR
TYPED OR PRINTED

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James E. Porter
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE
502-600-0710
AREA CODE NUMBER
DATE
07 10 25
YEAR MO DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME HSO JEFFERSONTOWN STP

ADDRESS 8405 CEDAR CREEK RD
LOUISVILLE KY 40291

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

RY0025174
PERMIT NUMBER

001 2
DISCHARGE NUMBER

MAJOR
(SUBR LV)

F - FINAL
FLOW BOD TSS DO PH
EFFLUENT

JEFFE

FACILITY HSO JEFFERSONTOWN STP

LOCATION JEFFERSONTOWN KY 40299

ATTN: DEBBIE NEWTON

MONITORING PERIOD						
YEAR	MO.	DAY	TO	YEAR	MO.	DAY

FROM

TO

*** NO DISCHARGE [] ***

NOTE: Read Instructions before completing this form.

PARAMETER	SAMPLE MEASUREMENT	QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
OXYGEN, DISSOLVED (DO) 00300 1 0 0 EFFLUENT GROSS VALUE		*****	*****		7.6	*****	*****	(17)		3/1	GRAB
	PERMIT REQUIREMENT	*****	*****	****	INST MIN	*****	*****	MG/L		WEEK	
	SAMPLE MEASUREMENT	*****	*****		7.0	*****	8.0	(12)		3/1	GRAB
	PERMIT REQUIREMENT	*****	*****	****	MINIMUM	*****	MAXIMUM	SU		WEEK	
SOLIDS, TOTAL SUSPENDED 00530 0 0 0 RAW SEW/INFLUENT		5903	8284	(25)		268	405	(17)		3/1	GRAB
	PERMIT REQUIREMENT	REPORT	REPORT	LBS/DY		REPORT	REPORT	MG/L		WEEK	
		MO AVG	MX WK AV			MO AVG	MX WK AV				
SOLIDS, TOTAL SUSPENDED 00530 1 0 0 EFFLUENT GROSS VALUE		179	209	(25)		8	9	(17)		3/1	GRAB
	PERMIT REQUIREMENT	1000	1501	LBS/DY		30	45	MG/L		WEEK	
		MO AVG	MX WK AV			MO AVG	MX WK AV				
NITROGEN, AMMONIA TOTAL (AS N) 00610 0 0 0 RAW SEW/INFLUENT		535	596	(25)		24.1	25.63	(17)		3/1	GRAB
	PERMIT REQUIREMENT	REPORT	REPORT	LBS/DY		REPORT	REPORT	MG/L		WEEK	
		MO AVG	MX WK AV			MO AVG	MX WK AV				
NITROGEN, AMMONIA TOTAL (AS N) 00610 1 1 0 EFFLUENT GROSS VALUE		24.60	52.02	(25)		1.12	2.30	(17)		3/1	GRAB
	PERMIT REQUIREMENT	1.33	2.00	LBS/DY		1.12	2.30	MG/L		WEEK	
		MO AVG	MX WK AV			MO AVG	MX WK AV				
PHOSPHORUS, TOTAL (AS P) 00665 1 1 1 EFFLUENT GROSS VALUE		13.30	20.08	(25)		0.62	0.97	(17)		3/1	GRAB
	PERMIT REQUIREMENT	35	50	LBS/DY		1.0	1.1	MG/L		WEEK	
		MO AVG	MX WK AV			MO AVG	MX WK AV				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
H. J. SCHULZIN JR
EXECUTIVE DIRECTOR
TYPED OR PRINTED

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SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT
James E. Burt

TELEPHONE DATE
502-540-6000 07 10 22
AREA CODE NUMBER YEAR MO DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

USE MO AVG FOR BOD/TSS SEMV/REPT IN MINIMUM COLUMN.

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME MSD JEFFERSONTOWN STP

ADDRESS 8405 CEDAR CREEK RD
LOUISVILLE KY 40291

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

KY0025194
PERMIT NUMBER

001 2
DISCHARGE NUMBER

MAJOR (SUBR LV)
F -- FINAL
FLOW BOD TSS DO PH
EFFLUENT

JEFFE

FACILITY MSD JEFFERSONTOWN STP

LOCATION JEFFERSONTOWN KY 40297

ATTN: DEBBIE NEWTON

MONITORING PERIOD						
YEAR	MO.	DAY	TO	YEAR	MO.	DAY
07	07	01		07	07	05

FROM

TO

*** NO DISCHARGE [] ***

NOTE: Read Instructions before completing this form.

PARAMETER	SAMPLE MEASUREMENT	QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
FLOW, IN CONDUIT OR THRU TREATMENT PLANT 50050 1 0 0 EFFLUENT GROSS VALUE	2.54	3.64	(US)	*****	*****	*****	*****	*****	4	3/1	CONTIN
	PERMIT REQUIREMENT	REPORT MD AVG	REPORT MX WK AV	MOD	*****	*****	*****	*****		CONTIN	CONTIN
COLIFORM, FECAL GENERAL 74055 1 0 0 EFFLUENT GROSS VALUE	*****	*****	*****	*****	*****	*****	*****	*****	4	3/1	CONTIN
	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	*****	*****		CONTIN	CONTIN
BOD, CARBONACEOUS 05 DAY, 200 40062 2 0 0 RAW SEW/INFLUENT	4966	7843	(20)	*****	*****	*****	*****	*****	4	3/1	CONTIN
	PERMIT REQUIREMENT	REPORT MD AVG	REPORT MX WK AV	LBS/DY	*****	*****	*****	*****		CONTIN	CONTIN
BOD, CARBONACEOUS 05 DAY, 200 30082 1 0 0 EFFLUENT GROSS VALUE	51	72	(20)	*****	*****	*****	*****	*****	4	3/1	CONTIN
	PERMIT REQUIREMENT	REPORT MD AVG	REPORT MX WK AV	LBS/DY	*****	*****	*****	*****		CONTIN	CONTIN
BOD, CARB-5, DAY, 20 20091 1 0 0 PERCENT REMOVAL	*****	*****	*****	*****	*****	*****	*****	*****	4	3/1	CONTIN
	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	*****	*****		CONTIN	CONTIN
SOLIDS, SUSPENDED 21011 1 0 0 PERCENT REMOVAL	*****	*****	*****	*****	*****	*****	*****	*****	4	3/1	CONTIN
	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	*****	*****		CONTIN	CONTIN

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
H. J. ...
EXECUTIVE DIRECTOR
TYPED OR PRINTED

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SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT
James E. ...

TELEPHONE
502 ...
DATE
10 22

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
USE MD AVG FOR BOD/TSS REMV; REPT IN MINIMUM COLUMN.

NAME OF TREATMENT PLANT JEFFERSONTOWN WTP

COUNTY JEFFERSON

MONTH OF: September 2007

KPDES PERMIT NUMBER KY0025194

PLANT CAPACITY 4.0 MGD

RECEIVING STREAM CHENOWETH RUN

DATE	TOTAL FLOW (MILLION GALLONS)	RAW SEWAGE		pH			SETTLABLE SOLIDS (mg/L)			DISSOLVED OXYGEN (mg/L)			SUSPENDED SOLIDS (mg/L)			5 DAY CBOD (mg/L)			ACTIVATED SLUDGE			AERATION BASIN						SLUDGE HANDLING				FINAL				
		GRIT REMOVED (CUBIC FEET)	SCREENINGS (CUBIC FEET)	RAW	FINAL	RAW	PRIMARY EFFLUENT	FINAL EFFLUENT	STREAM ABOVE	FINAL EFFLUENT	STREAM BELOW	RAW	PRIMARY EFFLUENT	FINAL EFFLUENT	RAW	PRIMARY EFFLUENT	FINAL EFFLUENT	GAL/DAY X 1000	MLSS X 1000	MLVSS X 1000	WAST ED	DISSOLVED OXYGEN (mg/L)	MLSS (mg/L) x 1000	MLVSS (mg/L) X 1000	SETTLED SLUDGE VOLUME		RAW		HAULED		TOTAL PHOS. (mg/L)	NH3-N (mg/L)	FECAL COLIFORM (COLONIES/100ML)			
																									30 MIN.	60 MIN.	GALLONS X 1000	% DRY SOLIDS	% VOLATILE SOLIDS	% DRY SOLIDS				% VOLATILE SOLIDS	WITHDRAWN GALLONS X 1000	
																														30 MIN.	60 MIN.	GALLONS X 1000	% DRY SOLIDS	% VOLATILE SOLIDS	% DRY SOLIDS	% VOLATILE SOLIDS
1	2.42																1.52		34				200	190	19											
2	2.25																1.47		34				200	190	19											
3	2.76									254		9	174		2	1.3		26				190	180	19								1.40	0.39	40		
4	2.24			6.8	7.7				7.6	268		10	182		2	1.33	3.49	34	6	2.64	2.01	180	160	19							0.90	0.39	1495			
5	2.24			7.2	7.5				8.0	310		7	201		2	1.53	4.35	34	6.4	3.09	2.08	150	150	19							0.60	0.95	1120			
6	2.37	5	5	7.0	7.6				7.8							1.32	3.86	36	6.4	2.8	2.07	150	140	19												
7	2.34															1.29	4.85	38	6.2	3.03	2.07	160	150	19												
8	2.30															1.33		34				170	140	19												
9	3.08									210		9	125		2	1.63		38				160	130	19								0.40	1.20	1190		
10	3.11			7.0	7.8				8.0	266		8	115		2	1.53	5.37	34	6.4	2.7	1.81	180	170	19							0.58	1.10	107			
11	2.49			7.1	7.6				9.0	90		9	163		2	1.46	6.72	36	6.2	2.48	1.88	160	160	25							0.67	1.30	12			
12	2.28	5	5	7.2	8.0				8.4							1.27	4.68	36	6	2.63	2.18	180	160	19												
13	2.59															1.35	4.03	45	6.2	3.12	2.4	150	140	19											3	
14	2.41															1.3	5.29	38	6	2.9	1.92	160	150	19												
15	2.50															1.36		38				170	150	19												
16	2.69									210		11	150		6	1.53		38				150	150									0.85	0.10	3		
17	2.37			6.8	7.6				8.6	414		8	649		2	1.47	5.15	34	6	2.89	1.91	170	160	44							0.40	0.28	5			
18	2.43			6.7	7.7				8.0	590		9	362		2	1.4	5.17	32	6.2	2.92	2.55	160	150	19							0.50	0.84	3			
19	2.41	5	5	6.8	7.7				8.2							1.58	4.99	43	5.8	3.24	2.43	150	140	19												
20	2.35															1.58	4.4	34	5.8	1.82	1.62	150	150	19												
21	2.24															1.33	4.05	32	5.8	2.79	1.92	160	160	19												
22	2.34															1.34		34				150	150	19												
23	2.67									312		7	238		2	1.45		36				160	150	19							0.30	3.60	3			
24	2.48			7.2	7.2				8.0	260		6	290		2	1.49	5.49	36	5.8	3.12	2.13	160	150	19							0.40	1.10	3			
25	2.57			7.1	7.0				7.8	184		6	257		2	1.4	4.35	47	5.6	2.95	1.94	150	150	19							0.40	2.20	123			
26	2.58	5	5	7.3	7.8				8.2							1.37	5.57	34	5.8	3.13	2.11	170	160	25												
27	3.64									248			180			1.36	8.28	38	6.2	3.2	2.09	170	170	19												
28	2.57															1.62	6.82	38	5.8	2.66	2.39	180	170	19												
29	2.58															1.31		42				150	150													
30	2.77									138			130			1.36		42				150	150	38												
31																																				
Tot.	76.07	20	20													42.58																				
Avg.	2.54	5	5	7.0	7.6				8.1	268		8	230		2	1.419	5.101	36.5	6.032	2.848	2.079	164.7	155.7	21							0.62	1.12	30			

RESIDENTIAL
COMMERCIAL
INDUSTRIAL

INDUSTRIAL WASTE POPULATION EQUIVALENT
24149 FLOW
28571 CBOD
27003 TSS

OPERATOR

CERT. NO.

TOTAL NUMBER OF SEWER CONNECTIONS

0

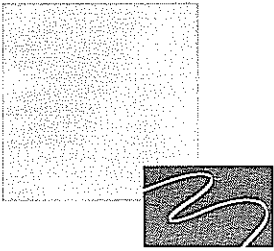
SEWER CONNECTIONS

0 X 4 =

0

SEWERED POPULATION

PLANT TELEPHONE



**Chronic Toxicity Evaluation
for the
MSD-Jeffersontown
Wastewater Treatment Plant**

September 2007

Prepared by:

Beckmar Environmental Laboratory
Biomonitoring Department
3251 Ruckriegel Parkway
Louisville, KY. 40299
(502) 266-6533

Submitted to:

Mr. Jim Porter
Jeffersontown Wastewater Treatment Plant
700 West Liberty St.
Louisville, KY 40203

Released by: *Amanda Y. Spalding*
Biomonitoring QA Officer 10-23-07



Summary

Chronic, definitive, toxicity testing was performed on final effluent samples collected September 17 through 22, 2007 from the MSD-Jeffersontown Wastewater Treatment Plant. Testing was performed September 19 through 26, 2007 and upon termination, the following conclusions were reached:

For the 7 day *Pimephales promelas* survival and growth test, the IC₂₅ for reproduction was greater than 100%, yielding less than 1.0 chronic toxicity units (TU_c=100/IC₂₅).

Introduction

At the request of Mr. Jim Porter, chronic definitive toxicity testing was performed on 24 hour composite effluent samples collected September 17 through 22, 2007 from the MSD-Jeffersontown Wastewater Treatment Plant in Louisville, KY. Metals analyses were also performed on effluent samples collected during the same period. Information concerning plant and laboratory conditions can be found on the following pages.

The chronic toxicity testing was performed in accordance with the US EPA methodology as defined in the US EPA manual "Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms" fourth edition, 2002 (EPA-821-R-02-013). The actual methods used were "Fathead Minnow, *Pimephales promelas*, Larval Survival and Growth Test Method 1000.0". The chronic toxicity test was performed in order to ascertain the IC₂₅ values for *Pimephales promelas* growth.



Date of Issue: October 05, 2007

Page 1 of 1

Metropolitan Sewer District c/o Mr. Jim Porter
700 West Liberty St.
Louisville, KY 40203-1913

RE: Analysis results for: J'town WWTP: Biomonitoring metals/hardness.

BECKMAR CERTIFICATE OF ANALYSIS # 189821

Sample Date: 9/18/2007

Sample Time: 8:00

Sampled by: Client

Parameter	Results	Units	Type	Method	Analyzed Date / Time	Analyst
Hardness (T)	243	mg/l	C	EPA 130.2	10/2/2007 11:30	PJB
Cadmium (gfaa)	< 0.0001	mg/l	C	SM3113b	9/28/2007 14:00	ALS
Copper (TR)	0.011	mg/l	C	EPA 200.7	9/27/2007 15:45	ALS
Copper (D)	0.011	mg/l	C	EPA 200.7	9/27/2007 15:45	ALS
Lead (TR)	< 0.005	mg/l	C	EPA 200.7	9/27/2007 15:45	ALS
Lead (D)	< 0.005	mg/l	C	EPA 200.7	9/27/2007 15:45	ALS
Zinc (TR)	0.0536	mg/l	C	EPA 200.7	9/27/2007 15:45	ALS
Zinc (D)	0.0349	mg/l	C	EPA 200.7	9/27/2007 15:45	ALS

Remarks:

If you have any questions please call.

Thank you,

Joe P. Carney
Quality Control Officer

JPC:dwt

ENVIRONMENTAL
LABORATORY

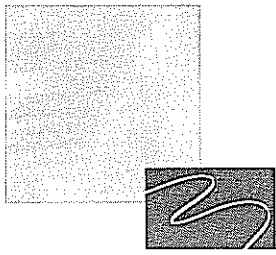
Jeffersontown Business Park

3251 Ruckriegel Parkway

Jeffersontown, KY 40299

502.266.6533

FAX 502.266.6446



Materials and Methods

Sampling

Composite effluent samples were collected once every other 24 hours (Table I) and delivered to Beckmar Environmental Laboratory. Upon receipt, each sample went through standard log in procedures.

Control/Dilution Water

All chemicals used are reagent grade, obtained from Aldrich. 1.20 grams of CaSO_4 , 1.2 grams of MgSO_4 , 1.92 grams of NaHCO_3 , and 0.080 grams of KCl were dissolved in distilled water provided by a Barnstead Thermolyne distillation system and aerated for a minimum of 24 hours.

Test Containers

P. promelas tests were performed in 600 mL plastic cups obtained from Liquor Outlet (Louisville, KY).

Toxicity Testing

Samples were allowed to warm to room temperature (25°C) and were tested for residual chlorine immediately prior to dilution. Testing was then performed in accordance with US EPA methodology. Data was recorded on Beckmar generated lab sheets (Appendix I).

Chemical Analysis

All test dilutions as well as control/dilution water were tested to determine initial dissolved oxygen, temperature, and pH. At the end of 24 hours, the control/dilution water and test dilutions were again tested to determine final dissolved oxygen, temperature and pH. Also, specific conductance, hardness, and alkalinity analyses were performed on the initial control/dilution water and 100% effluent samples. Data was recorded on Beckmar generated lab sheet (Appendix I).

Statistical Analysis

Statistical data was generated using ToxCalc 5.0[®] (Tidepool Scientific software, McKinleyville, CA) and ToxStat[®] (USEPA, Cincinnati, OH) on a Pentium IV[®], computer using Windows 98[®] Operating System.



Additional Toxicity Test Information

1) Submit copies of all bench sheets and statistical calculations/printouts obtained during the test(s). Data must be presented in tabular form and must include all physical and/or chemical measurements recorded during the test (e.g. temperature, conductivity, total residual chlorine, dissolved oxygen, etc.).

2) Methods/Instrumentation used in chemical analysis:

Dissolved Oxygen:	YSI Model 52
PH:	Thermo-Orion 720
Conductivity:	Cole-Palmer Conductivity Meter 1481-60
Alkalinity:	Standard Methods Titration
Hardness:	Standard Methods Titration
Total Chlorine Residual:	Fisher-Porter Titration
EPA Acute/Chronic Manual:	4 th Chronic Edition, 2002

3) Indicate below any other relevant information that may aid in the evaluation of this report. Include any deviations from EPA methodology that was necessary for these tests as well as any sample manipulations that were performed, such as aeration, dechlorination with sodium thiosulfate, etc., and the justification for such manipulations or deviations. Attach additional pages as needed.

4) Sample temperature upon receipt may be greater than 4°C. Samples are picked up immediately after the 24 hours composite is completed. The sampler is cooled and the samples are refrigerated, however it may be impossible to rapidly drop the effluent to 4°C.

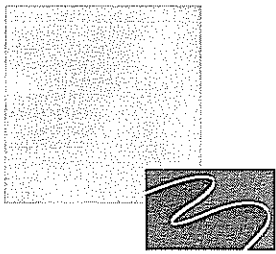
TABLE I
Sampling Summary

Outfall	Sample Type	Volume	Collection Period	Rainfall	Sample Temp
1	Composite	2 gallons	09/17/07 @ 8:00 a.m. = 09/18/07 @ 8:00 a.m.	0.00"	6.0 degrees C
	Composite	2 gallons	09/19/07 @ 7:30 a.m. = 09/20/07 @ 7:30 a.m.	0.00"	4.0 degrees C
	Composite	3 gallons	09/21/07 @ 6:00 a.m. = 09/22/07 @ 6:00 a.m.	0.00"	4.0 degrees C

Dates/Times of Test Performance

Species #1: *Pimephales promelas*

Initiated: 09/19/07 @ 3:00 P.M.
Renewed Daily @ 3:00 P.M.
Terminated 09/26/07 @ 3:00 P.M.



Results

Pimephales promelas exhibited 95% survival in the control, 82.5% survival in the 20% dilution, 75% survival in the 40% dilution, 85% survival in the 60% dilution, 87.5% survival in the 80% dilution, and 87.5% survival in the 100% dilution.

For the 7-day *Pimephales promelas* survival and growth test, the IC₂₅ for growth was greater than 100%, generating a chronic toxicity value of less than 1.0 TUc.



Appendix I

Pimephales promelas Data Sheets

Larval Fish Growth and Survival Test-7 Day Growth

Start Date: 9/19/2007 Test ID: jtown0907 Sample ID: jtown0907
 End Date: 9/26/2007 Lab ID: 0044:beckmar environmental Sample Type: EFF1-POTW
 Sample Date: 9/18/2007 Protocol: EPAF 94-EPA Freshwater Test Species: PP-Pimephales promelas
 Comments: jeffersontown fhm chronic sept 2007

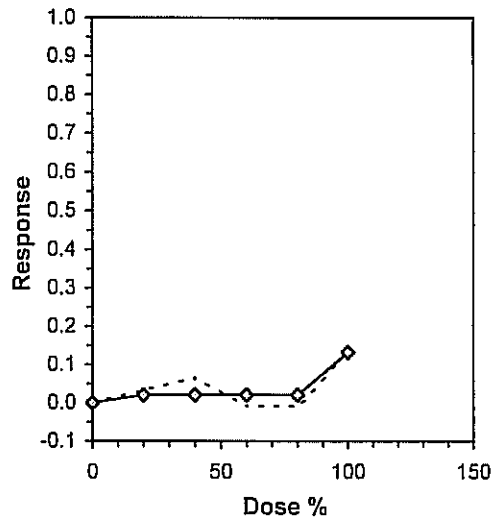
Conc-%	1	2	3	4
B-Control	0.2900	0.2700	0.3000	0.3500
20	0.4100	0.3100	0.2000	0.2500
40	0.3300	0.3000	0.2500	0.2500
60	0.3900	0.3300	0.2700	0.2300
80	0.3000	0.3300	0.2900	0.3000
100	0.2500	0.2800	0.3000	0.2200

Conc-%	Mean	N-Mean	Transform: Untransformed					Isotonic	
			Mean	Min	Max	CV%	N	Mean	N-Mean
B-Control	0.3025	1.0000	0.3025	0.2700	0.3500	11.251	4	0.3025	1.0000
20	0.2925	0.9669	0.2925	0.2000	0.4100	30.880	4	0.2963	0.9793
40	0.2825	0.9339	0.2825	0.2500	0.3300	13.974	4	0.2963	0.9793
60	0.3050	1.0083	0.3050	0.2300	0.3900	22.951	4	0.2963	0.9793
80	0.3050	1.0083	0.3050	0.2900	0.3300	5.679	4	0.2963	0.9793
100	0.2625	0.8678	0.2625	0.2200	0.3000	13.333	4	0.2625	0.8678

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates normal distribution (p > 0.01)	0.97172	0.884	0.45598	0.69411
Bartlett's Test indicates equal variances (p = 0.15)	8.16862	15.0863		

Linear Interpolation (200 Resamples)

Point	%	SD	95% CL(Exp)	Skew
IC05	85.259			
IC10	94.222			
IC15	>100			
IC20	>100			
IC25	>100			
IC40	>100			
IC50	>100			



Grab #

Toxicity Test Results

Results of *Pimephales promelas* 7 day chronic definitive Toxicity Test
 (Genus) (Species) (Type / Duration)

Conducted: 09/19/07 -- 09/26/07 Using Effluent from Outfall # 1
 (mm/dd/yy) (mm/dd/yy)

Test Solution	Percent Survival (time intervals used:- DAY)								# of Young		Dry Weight	
	1	2	3	4	5	6	7	8	Total	Mean	Total	Mean
Control	100	100	100	97.5	97.5	97.5	95				12.1	0.3
20% Effluent	100	100	97.5	97.5	92.5	85	82.5				11.7	0.29
40% Effluent	100	100	100	100	97.5	90	75				11.3	0.28
60% Effluent	100	100	100	100	100	95	85				12.2	0.31
80% Effluent	100	100	100	100	97.5	97.5	87.5				12.2	0.31
100% Effluent	100	100	100	100	97.5	92.5	87.5				10.5	0.26
LC ₅₀ / IC ₂₅ Value: <u>>100%</u> 95% Confidence Limits UL: <u>NA</u> LL: <u>NA</u> UL = Upper Limit LL = Lower Limit								Calculated TU Estimate * <u>less than 1.0 TUc</u> (indicate Acute / Chronic) Permit Limits: <u>1.0 TUc</u> (Indicate TU _a / TU _c)				
								If acute test, method used to determine LC50 and Confidence Limit Valued: <u> </u>				

Note: TU_a = 100/LC₅₀; TU_c = 100/IC₂₅

Reference Toxicant Test Results

Species	Date	Time	Duration	Toxicant	Results (LC ₅₀ / IC ₂₅)
<i>Pimephales promelas</i>	09/12/07	9:00 A.M.	<u>7 days</u>	<u>NaCl</u>	<u>IC25=1.8971g/l</u>

Weight Data for FATHEAD MINNOW LARVAL
survival and growth test



Client: JEFFERSONTOWN
Location: _____

Analyst: B. Baker
Test Date(s): 9-19-26-07 3pm
Weight Date: 9-27-07

Drying Temperature (Deg C.): 60°
Drying Time: 24 hr

	Replicate Number	A Weight of Boat <small>grams</small>	B Dry Wgt foil & Larvae <small>grams</small>	B-A Total Dry Wgt of Larvae <small>grams</small>	C Number of Larvae	(B-A)/C Mean Dry Wgt of Larvae <small>grams</small>	Remarks
Control	1 A	1.5356	1.5385	2.9	9	.29	
	2 C	1.5444	1.5471	2.7	9	.27	
	3 F	1.3142	1.3172	3.0	10	.30	
	4 H	1.2997	1.3032	3.5	10	.35	.30
Conc: 20%	1 NA	1.3162	1.3203	4.1	10	.41	
	2 1A	1.6186	1.6217	3.1	9	.31	
	3 1B	1.6139	1.6159	2.0	6	.20	
	4 1C	1.5117	1.5142	2.5	8	.25	.29
Conc: 40%	1 1	1.3463	1.3496	3.3	9	.33	
	2 2 blk	1.5544	1.5574	3.0	8	.30	
	3 2 blk	1.5826	1.5851	2.5	6	.25	
	4 3 blk	1.5382	1.5407	2.5	7	.25	.28
Conc: 60%	1 3 blk	1.5338	1.5377	3.9	10	.39	
	2 4 blk	1.3408	1.3441	3.3	8	.33	
	3 4 blk	1.5343	1.5370	2.7	9	.27	
	4 5	1.3298	1.3321	2.3	7	.23	.31
Conc: 80%	1 8	1.3509	1.3539	3.0	9	.30	
	2 blk 9	1.5972	1.6005	3.3	8	.33	
	3 blk 9	1.3320	1.3349	2.9	9	.29	
	4 10	1.5305	1.5335	3.0	9	.30	.31
Conc: 100%	1 11 blk	1.3182	1.3207	2.5	7	.25	
	2 11 blk	1.3035	1.3063	2.8	10	.28	
	3 12	1.3190	1.3220	3.0	9	.30	
	4 14	1.3050	1.3072	2.2	9	.22	.26

Blank 15 1.6031

1.6031

-

Survival data for FATHEAD MINNOW LARVAL
Survival and Growth Test

BECKMAR
Jeffersontown Business Park
3251 Ruckriegel Parkway
Louisville, Ky 40299
Phone: (502) 266-6533



Number of Survivors

Discharge : Jeffersontown Test Date(s) : 9-19-2007 3pm

Location : _____ Analyst : R. Baker

SURVIVAL AT END OF THE DAY

Replicate		1	2	3	4	5	6	7	% SURV	Remarks
Number:										
Control	1	10	10	10	9	9	9	9		
	2				10	10	10	9		
	3				10	10	10	10		
	4			10	10 975	10 975	10 975	10	95%	
Conc : 20%	1				10	10	10	10		
	2			10	10	10	10	9		
	3			9	9	8	6	6		
	4			10 975	10 975	9 925	8 85	8	82.5%	
Conc : 40%	1			10	10	10	10	9		
	2			10	10	10	9	8		
	3			10	10	9	7	6		
	4			10	10	10 975	10 90	7	75%	
Conc : 60%	1					10	10	10		
	2					10	9	8		
	3					10	10	9		
	4					10 100	9 95	7	85%	
Conc : 80%	1					10	10	9		
	2					9	9	8		
	3					10	10	9		
	4					10 975	10 975	9	87.5%	
Conc : 100%	1					9	8	7		
	2					10	10	10		
	3					10	10	9		
	4	10	10	10	10	10 975	9 925	9	87.5%	



Data form for the Fathead Minnow survival and growth test.
Routine chemical and physical determinations.

Client: JEFFERSONVILLE, KY
 Test Start: 9-19-07 3P
 Test Stop: 9-26-07 3P

Analyst: B. Barber
 Analyst: M. Sch
 Analyst: _____

Control:	Day							Remarks	
	1	2	3	4	5	6	7		
Temp. Degree C.	Initial	24.0	24.0	24.0	24.1	24.2	25.5	24.0	
	Final	24.0	24.2	24.1	24.2	24.0	25.0	24.5	
D. O. mg/l	Initial	8.2	8.0	8.0	8.2	7.9	8.1	8.3	
	Final	5.0	5.8	6.4	6.4	5.2	5.8	5.0	
pH S.U.	Initial	7.91	7.92	7.80	7.77	7.46	7.49	7.70	
	Final	7.33	7.43	7.40	7.36	6.99	7.53	7.24	
Alkalinity (mg/l)		82.8	92.8	101.2	96.4	87.6	88.8	114	
Hardness (mg/l)		157.2	132.8	152	132.4	110	111.2	118	
Conductivity (µmhos)		354	407	405	411	415	419	419	
Chlorine (mg/l)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Analyst (init.)		MB/MS	MB/MS	MB/MS	MB/MS	MB/MS	MB/MS	MB/MS	

Conc. <u>20%</u>	Day							Remarks	
	1	2	3	4	5	6	7		
Temp. Degree C.	Initial	24.0	24.0	24.0	24.1	24.2	26.0	24.0	
	Final	24.0	24.2	24.1	24.2	24.0	25.0	24.5	
D. O. mg/l	Initial	8.5	8.3	8.3	8.4	8.1	8.2	8.3	
	Final	5.0	5.8	6.4	6.4	5.1	6.0	5.0	
pH S.U.	Initial	7.90	7.88	7.76	7.73	7.53	7.63	7.36	
	Final	7.31	7.50	7.45	7.39	7.18	7.57	7.44	
Analyst (init.)		MB/MS	MS	MS	MS	MS	MS	MS	

Conc. <u>40%</u>	Day							Remarks	
	1	2	3	4	5	6	7		
Temp. Degree C.	Initial	24.0	24.0	24.0	24.2	24.2	26.0	24.9	
	Final	24.0	24.2	24.2	24.2	24.0	25.0	24.5	
D. O. mg/l	Initial	8.7	8.8	8.5	8.6	8.3	8.5	8.3	
	Final	5.0	5.7	6.3	6.4	5.1	6.0	5.1	
pH S.U.	Initial	7.88	7.88	7.73	7.71	7.57	7.63	7.48	
	Final	7.34	7.54	7.47	7.48	7.19	7.55	7.55	
Analyst (init.)		MB/MS	MS	MS	MS	MS	MS	MS	



Data form for the Fathead Minnow survival and growth test.
Routine chemical and physical determinations.

Client: JEFFERSON^{Town} HILLS, KY
Test Start: 9-19-07 3P
Test Stop: 9-26-07 3P

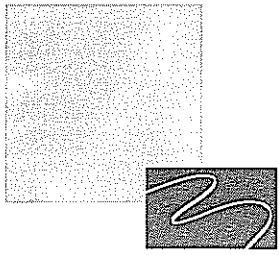
Analyst: B. Barker
Analyst: W. Baker
Analyst: _____

Conc. <u>60%</u>	Day							Remarks
	1	2	3	4	5	6	7	
Temp. Initial	24.0	24.0	24.0	24.1	24.2	26.0	25.2	
Degree C. Final	24.0	24.2	24.1	24.2	24.0	25.0	24.5	
D. O. Initial ^{BB}	8.9.0	9.0	8.6	8.7	8.5	8.7	8.3	
mg/l Final	5.0	5.8	6.4	6.4	5.2	5.8	5.1	
pH Initial	7.87	7.91	7.70	7.69	7.57	7.62	7.45	
S.U. Final	7.40	7.60	7.51	7.59	7.33	7.51	7.53	
Analyst (init.)	BB	BB	BB	BB	BB	BB	BB	

Conc. <u>80%</u>	Day							Remarks
	1	2	3	4	5	6	7	
Temp. Initial	24.0	24.4	24.0	24.1	24.2	26.0	25.9	
Degree C. Final	24.0	24.2	24.1	24.2	24.0	25.0	24.5	
D. O. Initial	9.3	9.1	8.7	8.8	8.6	8.6	8.4	
mg/l Final	5.0	5.7	6.2	6.4	5.1	5.7	5.0	
pH Initial	7.84	7.92	7.66	7.68	7.55	7.60	7.40	
S.U. Final	7.46	7.59	7.50	7.70	7.41	7.50	7.57	
Analyst (init.)	BB	BB	BB	BB	BB	BB	BB	

Conc. <u>100%</u>	Day							Remarks
	1	2	3	4	5	6	7	
Temp. Initial	24.0	24.9	24.0	24.1	24.2	26.0	25.9	
Degree C. Final	24.0	24.2	24.1	24.2	24.0	25.0	24.5	
D. O. Initial	9.7	9.2	8.8	8.9	8.7	8.8	8.5	
mg/l Final	5.5	5.7	6.0	6.0	5.2	5.8	5.2	
pH Initial	7.82	7.90	7.62	7.65	7.52	7.54	7.43	
S.U. Final	7.49	7.57	7.50	7.70	7.52	7.47	7.20	
Alkalinity (mg/l)	150.0	175.6	154.0	165.6	163.2	15.8	204.0	
Hardness (mg/l)	265.9	227.7	238.6	213.1	230.0	213.1	239.7	
Conductivity (umhos)	963	970	1018	1015	961	970	968	
Chlorine (mg/l)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Analyst (init.)	BB	BB	BB	BB	BB	BB	BB	

Beckman Syll # 189820 189820 189992 189992 190084 190084 190084



Appendix II

Chain of Custody Data Sheets

Beckmar Environmental Laboratory
 3251 Ruckriegel Parkway
 Louisville, KY 40299
 (502) 266-6533
 Fax: (502) 266-6446
 www.beckmarlab.com

CHAIN OF CUSTODY

PAGE _____ OF _____



Client / Company Name: MSD - J-TOWN					Number of Containers	Sample Matrix	Tests / Analysis Requested											
Sampled by (print name): TOM VIERLING																		
Signature: <i>[Signature]</i>			P/O#:															
Beckmar ID #	Collection		Sample Type	Sample Point / Description	Number of Containers	Sample Matrix	Tests / Analysis Requested											
	Date	Time																
189992	9-20-07	7:30	C	EFF CHANNEL	2	WW	<div style="position: absolute; top: 0; left: 0; transform: rotate(-45deg); font-weight: bold;">Bio-monitoring</div>											
Relinquished by: <i>[Signature]</i>			Received by: <i>[Signature]</i>		Date: 9-20-07	Time: 11:30	FIELD DATA				LABORATORY DATA							
Relinquished by: <i>[Signature]</i>			Received by: <i>[Signature]</i>		Date: 9-20-07	Time: 11:45	Calibration ID:	pH	Temperature Received									
Relinquished by:			Received by:		Date:	Time:	D.O.	Total Chlorine	HNO ₃	H ₂ NO ₄								
Relinquished by:			Received by:		Date:	Time:			PH	SU		PH		SU				
Relinquished by:			Received by:		Date:	Time:	Temperature	Free Chlorine	NaOH	UNP		PH		SU				
Relinquished by:			Received by:		Date:	Time:			PH	SU		PH		SU				
Comments:							Sample Types: Composite (C), Grab (G)											
40 plw							Matrix Codes: DW = Drinking Water WW = Wastewater											
							GW = Ground Water SW = Surface Water											
							S = Soil SL = Sludge											

CHAIN OF CUSTODY

PAGE _____ OF _____



Beckmar

Client / Company Name: MSP J-Tow				Number of Containers	Sample Matrix	Tests / Analysis Requested <i>Big mac water</i>															
Sampled by (print name): THOMAS VIOLING																					
Signature: <i>[Signature]</i>		P/O#:																			
Beckmar ID #	Collection		Sample Type	Sample Point / Description	Preservative																
	Date	Time																			
190084	9-22-07	6:00	C	ETP effluent	3	WW															
Relinquished by: <i>[Signature]</i>		Received by: <i>Paul Burke (LMA)</i>		Date: 9-22-07	Time: 9:50	FIELD DATA				LABORATORY DATA											
Relinquished by: <i>[Signature]</i>		Received by: <i>[Signature]</i>		Date: 9-22-07	Time: 1:18	Calibration ID:	pH	Temperature Received				SU		4 °C							
						D.O.	Total Chlorine	HNO ₃	SU		PH		SU								
						mg/l	mg/l	PH	SU		PH		SU								
						Temperature	Free Chlorine	NaOH	UNP		PH		SU								
						°C	mg/l	PH	SU		PH		SU								
Comments:						Sample Types: Composite (C), Grab (G)															
						Matrix Codes: DW = Drinking Water				WW = Wastewater											
						GW = Ground Water				SW = Surface Water											
						S = Soil				SL = Sludge											