



MSD

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

July 7, 2007

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

RE: West County Treatment Plant, KPDES No: KY0078956
Discharge Monitoring Report
June 2007

Dear Ms. Thurman:

Attached are the Discharge Monitoring Report (DMR) for the West County Wastewater Treatment Plant, for the month of June 2007. Also enclosed is the Whole Effluent Toxicity (WET) test for the second quarter. Additionally, the discharge spreadsheet for the West County WTP system is enclosed with this letter.

If you have any questions concerning the attached DMR's, please contact me at (502)540-6031.

Sincerely,

Kevin D. Ries
Process Supervisor, West Region

KDR/West County 0307.doc

Enclosures

cc: P. Burgin
T. Singleton
R. Shaw



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



MSD

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

July 7, 2007

Mr. Michael Mudd
Kentucky Division of Water
9116 Leesgate Rd.
Louisville, Kentucky 40222

RE: West County Treatment Plant, KPDES No: KY0078956
Discharge Monitoring Report
June 2007

Dear Mr. Mudd:

Attached are the Discharge Monitoring Report (DMR) and the Monthly Operating Report (MOR) report for the West County Wastewater Treatment Plant, for the month of June 2007. Also enclosed is the Whole Effluent Toxicity (WET) test for the second quarter. Additionally, the discharge spreadsheet for the West County WTP system is enclosed with this letter.

If you have any questions concerning the attached DMR's, please contact me at (502)540-6031.

Sincerely,

Kevin D. Ries
Process Supervisor, West Region

KDR/West County 1206.doc



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

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

NAME MSD WEST COUNTY STP
ADDRESS C/O LOUISVILLE/JEFF CO MSD
4522 ALCONQUIN PKWY
LOUISVILLE KY 40211-2497
FACILITY MSD WEST COUNTY STP
LOCATION LOUISVILLE KY 40272

ATTN: ALEX E NOVAK, OPER MGR

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

KY0078956

PERMIT NUMBER

001 2

DISCHARGE NUMBER

MAJOR
(SUBR LV)
F - FINAL

MUNICIPAL WASTEWATER
EFFLUENT

JEFFE

MONITORING PERIOD						
YEAR	MO	DAY	TO	YEAR	MO	DAY
07	06	01		07	06	30

FROM

TO

*** NO DISCHARGE 1 ***

NOTE: Read Instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
OXYGEN, DISSOLVED (DO)	SAMPLE MEASUREMENT	*****	*****		5.0	*****	*****	(19)		Daily	Grab
00300 1 0 0	PERMIT REQUIREMENT	*****	*****	***	2	*****	*****			DAILY	GRAB
EFFLUENT GROSS VALUE				***	INST MIN			MG/L			
BOD, 5-DAY (20 DEG. C)	SAMPLE MEASUREMENT	45992	49541	(26)	*****	328.7	344.0	(19)		Daily	Comp.
00310 9 0 0	PERMIT REQUIREMENT	REPORT	REPORT		*****	REPORT	REPORT			DAILY	COMPOS
RAW SEW/INFLUENT		MD AVG	MX WK AV	LBS/DY		MD AVG	MX WK AV	MG/L			
BOD, 5-DAY (20 DEG. C)	SAMPLE MEASUREMENT	2440	3408	(26)	*****	16.9	20.7	(19)		Daily	Comp.
00310 1 0 0	PERMIT REQUIREMENT	7506	11259		*****	30	45			DAILY	COMPOS
EFFLUENT GROSS VALUE		MD AVG	MX WK AV	LBS/DY		MD AVG	MX WK AV	MG/L			
PH	SAMPLE MEASUREMENT	*****	*****		7.1	*****	7.4	(12)		Daily	Grab
00400 1 0 0	PERMIT REQUIREMENT	*****	*****	***	5.0	*****	9.0			DAILY	GRAB
EFFLUENT GROSS VALUE				***	MINIMUM		MAXIMUM	SU			
SOLIDS, TOTAL SUSPENDED	SAMPLE MEASUREMENT	39009	46640	(26)	*****	276	339	(19)		Daily	Comp.
00500 9 0 0	PERMIT REQUIREMENT	REPORT	REPORT		*****	REPORT	REPORT			DAILY	COMPOS
RAW SEW/INFLUENT		MD AVG	MX WK AV	LBS/DY		MD AVG	MX WK AV	MG/L			
SOLIDS, TOTAL SUSPENDED	SAMPLE MEASUREMENT	973	1262	(26)	*****	6.8	7.9	(19)		Daily	Comp.
00500 1 0 0	PERMIT REQUIREMENT	7506	11259		*****	30	45			DAILY	COMPOS
EFFLUENT GROSS VALUE		MD AVG	MX WK AV	LBS/DY		MD AVG	MX WK AV	MG/L			
NITROGEN, AMMONIA TOTAL (AS N)	SAMPLE MEASUREMENT	2673	2792	(26)	*****	19.2	20.6	(19)		Daily	Comp.
00610 9 0 0	PERMIT REQUIREMENT	REPORT	REPORT		*****	REPORT	REPORT			DAILY	COMPOS
RAW SEW/INFLUENT		MD AVG	MX WK AV	LBS/DY		MD AVG	MX WK AV	MG/L			
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER		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.			TELEPHONE				DATE		
H.J. Schardein Exec. Director					502.540-6000				07 07 16		
TYPED OR PRINTED					SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT				AREA CODE NUMBER YEAR MO DAY		

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

USE MD AVG FOR BOD/TSS REMV; REPT IN MINIMUM COLUMN.

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

NAME MSD WEST COUNTY STP
 ADDRESS C/O LOUISVILLE/JEFF CO MSD
 4522 ALGONQUIN PKWY
 LOUISVILLE KY 40211-2497
 FACILITY MSD WEST COUNTY STP
 LOCATION LOUISVILLE KY 40272
 ATTN: ALEX E NOVAK, OPER MGR

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

KY0078956
 PERMIT NUMBER

001 2
 DISCHARGE NUMBER

MAJOR
 (SUBR LV)
 F - FINAL

JEFFE

MUNICIPAL WASTEWATER
 EFFLUENT

*** NO DISCHARGE 1 1 ***

NOTE: Read Instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
NITROGEN, AMMONIA TOTAL (AS N) 00810 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	1105	1328	(26)	*****	7.8	8.4	(19)	Ø	Daily	Comp.
	PERMIT REQUIREMENT	EQ04 MD AVG	7506 MX WK AV	LBS/DY	*****	20 MD AVG	30 MX WK AV	MG/L		DAILY	COMPOS
NITROGEN, NITRATE TOTAL (AS N) 00625 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	1412	2119	(26)	*****	9.81	11.00	(19)	Ø	WK	Comp.
	PERMIT REQUIREMENT	REPORT MD AVG	REPORT MX WK AV	LBS/DY	*****	REPORT MD AVG	REPORT MX WK AV	MG/L		WEEKLY	COMPOS
PHOSPHORUS, TOTAL (AS P) 00665 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	264.6	361.7	(26)	*****	1.92	2.58	(19)	Ø	WK	Comp.
	PERMIT REQUIREMENT	REPORT MD AVG	REPORT MX WK AV	LBS/DY	*****	REPORT MD AVG	REPORT MX WK AV	MG/L		WEEKLY	COMPOS
FLOW, IN CONDUIT OR THRU TREATMENT PLANT 00050 0 0 0 RAW SEW/INFLUENT	SAMPLE MEASUREMENT	17.8	25.5	(03)	*****	*****	*****	*****	Ø	C/N	C/N
	PERMIT REQUIREMENT	REPORT MD AVG	REPORT DAILY MX	MGD	*****	*****	*****	*****		CONTIN	CONTIN
FLOW, IN CONDUIT OR THRU TREATMENT PLANT 00050 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	16.9	23.1	(03)	*****	*****	*****	*****	Ø	C/N	C/N
	PERMIT REQUIREMENT	REPORT MD AVG	REPORT DAILY MX	MGD	*****	*****	*****	*****		CONTIN	CONTIN
CHLORINE, TOTAL RESIDUAL 00060 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.010	0.019	(19)	Ø	Daily	Grab
	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	DAILY MX	MG/L		DAILY	GRAB
COLIFORM, FECAL GENERAL 74055 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	*****	*****	*****	*****	5.5	10.2	(13)	Ø	Daily	Grab
	PERMIT REQUIREMENT	*****	*****	*****	*****	200	400 #/	100ML		DAILY	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
 H.J. Schardein
 Exec. 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
 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE
 502 540-6000
 DATE
 07 07 16
 AREA CODE NUMBER YEAR MO DAY

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

USE MD AVG FOR BOD/TSS REMV/REPT IN MINIMUM COLUMN.

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

NAME MSD WEST COUNTY STP
ADDRESS C/O LOUISVILLE/JEFF CO MSD
4522 ALDOUNGWIN PKWY

LOUISVILLE KY 40211-2497

FACILITY MSD WEST COUNTY STP

LOCATION LOUISVILLE KY 40272

ATTN: ALEX E NOVAK, OPER MGR

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

KY0078956
PERMIT NUMBER

001 2
DISCHARGE NUMBER

MAJOR
(SUBR LV)
F - FINAL

JEFFE

MUNICIPAL WASTEWATER
EFFLUENT

*** NO DISCHARGE 1/1 ***

NOTE: Read Instructions before completing this form.

MONITORING PERIOD						
YEAR	MO	DAY	TO	YEAR	MO	DAY
07	06	01		07	06	30

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
BOD, 5-DAY PERCENT REMOVAL	SAMPLE MEASUREMENT	*****	*****		95	*****	*****	(23)	0	1/30	Calc.
BOD, 5-DAY PERCENT REMOVAL	PERMIT REQUIREMENT	*****	*****	****	NO AVG	*****	*****	PER-CENT		ONCE/MONTH	CALCULATED
SOLIDS, SUSPENDED PERCENT REMOVAL	SAMPLE MEASUREMENT	*****	*****		97	*****	*****	(23)	0	1/30	Calc.
SOLIDS, SUSPENDED PERCENT REMOVAL	PERMIT REQUIREMENT	*****	*****	****	NO MIN	*****	*****	PER-CENT		ONCE/MONTH	CALCULATED
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
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	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

H.J. Scharlein
Exec. Director

TYPED OR PRINTED

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Kew D. Res

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE

DATE

502 540-6000 07 07 16
AREA CODE NUMBER YEAR MO DAY

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

USE NO AVG FOR BOD/TSS REMV/REPT IN MINIMUM COLUMN.

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

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 FACILITY MSD WEST COUNTY STP
 LOCATION LOUISVILLE KY 40272
 ATTN: ALEX E NOVAK, OPER MGR

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

KY0078956
 PERMIT NUMBER
 001 R
 DISCHARGE NUMBER

MAJOR (SUBR LV)
 F - FINAL JEFFE

MONITORING PERIOD
 YEAR MO DAY YEAR MO DAY
 FROM 07 06 01 TO 07 06 30

REASONABLE POTENTIAL
 EFFLUENT

*** NO DISCHARGE 1 1 ***

NOTE: Read Instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
CHROMIUM, HEXAVALENT (AS CR)	SAMPLE MEASUREMENT	*****	*****		*****	0.010	0.010	(19)		1/30	Comp.
DISSOLVED SOLIDS	PERMIT REQUIREMENT	*****	*****	***	*****	REPORT MD AVG	REPORT DAILY MX	MG/L		ONCE/ MONTH	COMPOSE
EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
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	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

H.J. Schardein
Exec. Director

TYPED OR PRINTED

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SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

Keith D. Rie

TELEPHONE

502 540-6000

DATE

07 07 16

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

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

NAME MSD WEST COUNTY STP
 ADDRESS C/O LOUISVILLE/JEFF CD MSD
 4522 ALCONQUIN PKWY
 LOUISVILLE KY 40211-2497
 FACILITY MSD WEST COUNTY STP
 LOCATION LOUISVILLE KY 40272
 ATTN: ALEX E NOVAK, OPER MGR

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

KY0078956
 PERMIT NUMBER
 001 Y
 DISCHARGE NUMBER

MAJOR (SUBR LV)
 F - FINAL JEFFE
 BIOMONITORING/METALS/QUARTERLY
 EFFLUENT
 *** NO DISCHARGE 1 ***

NOTE: Read Instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
HARDNESS, TOTAL (AS CaCO3) 00900 1 0 0	SAMPLE MEASUREMENT	*****	*****		*****	237	237	(19)	Ø	Qtrly	Grab
EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	*****	*****	REPORT MD AVG	REPORT DAILY MX	MG/L		QTRLY	GRAB-2
ZINC TOTAL RECOVERABLE 01094 1 0 0	SAMPLE MEASUREMENT	*****	*****		*****	0.045	0.045	(19)	Ø	Qtrly	Grab
EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	*****	*****	REPORT MD AVG	REPORT DAILY MX	MG/L		QTRLY	GRAB-2
CADMIUM TOTAL RECOVERABLE 01113 1 0 0	SAMPLE MEASUREMENT	*****	*****		*****	<0.001	<0.001	(19)	Ø	Qtrly	Grab
EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	*****	*****	REPORT MD AVG	REPORT DAILY MX	MG/L		QTRLY	GRAB-2
LEAD TOTAL RECOVERABLE 01114 1 0 0	SAMPLE MEASUREMENT	*****	*****		*****	<0.004	<0.004	(19)	Ø	Qtrly	Grab
EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	*****	*****	REPORT MD AVG	REPORT DAILY MX	MG/L		QTRLY	GRAB-2
COPPER TOTAL RECOVERABLE 01119 1 0 0	SAMPLE MEASUREMENT	*****	*****		*****	0.013	0.013	(19)	Ø	Qtrly	Grab
EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	*****	*****	REPORT MD AVG	REPORT DAILY MX	MG/L		QTRLY	GRAB-2
TOXICITY, FINAL CONC TOXICITY UNITS 01406 1 0 0	SAMPLE MEASUREMENT	*****	*****		*****		< 1.00	(2F)	Ø	Qtrly	Grab
EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	*****	*****		1.00 ACUTE	MG/L TOXCTY		QTRLY	GRAB-2
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

H.J. Schardein
 Exec. Director

TYPED OR PRINTED

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SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE

502 540-6000

AREA CODE

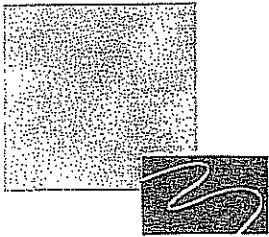
NUMBER

DATE

07 07 16

YEAR MO DAY

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



**Acute Toxicity Evaluation
for the
MSD – West County
Wastewater Treatment Plant**

May 2007

Prepared by:

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

Submitted to:

Mr. Kevin Ries
West County Wastewater Treatment Plant
700 West Liberty St.
Louisville, KY. 40203

Released by:

Aminda L. Spalding
Biomonitoring QA Officer

6-13-07



Summary

Acute toxicity testing was performed on final effluent samples collected May 21 and 22, 2007 from the MSD West County Wastewater Treatment Plant. Testing was performed May 22 through 24, 2007 and upon termination, the following conclusions were reached:

For the 48-hour *Ceriodaphnia dubia* survival test, the LC50 for survival for samples "A" and "B" was greater than 100% effluent, generating an acute toxicity value of less than 1.00 TUa ($TUa=100/LC50$).

For the 48-hour *Pimephales promelas* survival test, the LC50 for survival for samples "A" and "B" was greater than 100% effluent, generating an acute toxicity value of less than 1.00 TUa ($TUa=100/LC50$).

Introduction

At the request of Mr. Kevin Ries, acute toxicity testing was performed on two grab effluent samples collected May 21 and 22, 2007 from the MSD West County Wastewater Treatment Plant in Louisville, KY. Metals analyses were also performed on effluent samples collected during the same time period. Information concerning plant and laboratory conditions can be found on the following pages.

The acute toxicity testing was performed in accordance with the US EPA methodology as defined in the US EPA manual "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms" fifth edition, 2002 (EPA-821-R-02-012). The acute toxicity tests were performed in order to ascertain the LC50 values for *Ceriodaphnia dubia* and *Pimephales promelas* survival.



Date of Issue: June 14, 2007

Page 1 of 1

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

RE: Analysis results for: West County WWTP: Biomonitoring metals/hardness.

BECKMAR CERTIFICATE OF ANALYSIS # 184817

Sample Date: 5/22/2007

Sample Time: 8:00

Sampled by: Ibn Green

Parameter	Results	Units	Type	Method	Analized Date / Time	Analyst
Hardness (T)	237	mg/l	C	EPA 130.2	5/29/2007 10:45	PJB
Cadmium (TR)	< 0.001	mg/l	C	EPA 200.7	5/30/2007 15:00	ALS
Cadmium (D)	< 0.001	mg/l	C	EPA 200.7	5/30/2007 15:00	ALS
Copper (TR)	0.013	mg/l	C	EPA 200.7	5/30/2007 15:00	ALS
Copper (D)	0.011	mg/l	C	EPA 200.7	5/30/2007 15:00	ALS
Lead (TR)	< 0.004	mg/l	C	EPA 200.7	6/5/2007 13:30	ALS
Lead (D)	< 0.004	mg/l	C	EPA 200.7	6/5/2007 13:30	ALS
Zinc (TR)	0.0448	mg/l	C	EPA 200.7	5/30/2007 15:00	ALS
Zinc (D)	0.0441	mg/l	C	EPA 200.7	5/30/2007 15:00	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

Test Type: Acute X Screen
Chronic Definitive X

TOXICITY TEST REPORT SHEET


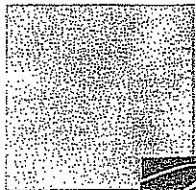
- 1) Facility/Discharger: MSD West County WWTP Report Date: 6/4/2007
- 2) Address: 11601 Lower River Rd. Louisville, KY. 40272
- 3) NPDES Permit #: KY0078956 4) Receiving Stream: Ohio River @ mile 358.1
- 5) Facility Contact: Mr. Kevin Ries
- 6) Phone #: (502)-540-6031
- 7) Consultant/Testing Lab Name: Beckmar Environmental Laboratory
- 8) Lab Contact: Becky Barker Phone #: (502) 266-6533
- 9) Outfall(s) Tested: 1
- 10) Average Daily flow on day sampled (MGD) 1) na 2) na
3) 4) 5) 6) 7)
- 11) Test Species: 1) Ceriodaphnia dubia 2) Pimephales promelas
- 12) Species Age: 1) < 24 hours 2) 14 days old
- 13) Organism Source: 1) lab culture 2) fish hatch 050807
- 14) Acclimation Procedures: 1) Reared at test conditions in synthetic water
2) Reared at test conditions in synthetic water
- 15) Test Conditions: Static: X Static-Renewal:
- 16) Dilution Water Type (Synthetic, Receiving Stream) synthetic - mhs
- 17) Aeration? (Before Test/During Test/None): no
- 18) Dechlorination? no Original Chlorine Level: <0.01 m

Rhonda Baker
(Signature of person filling out form)

Rhonda Baker
Name (Typed or Printed)

6/4/2007
Date

Biologist
Title



Materials and Methods

Sampling

Two effluent samples were collected 12 hours apart (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

C. dubia tests were performed in 1 ounce plastic cups obtained from Plastics Inc. (St. Paul, MN). *Pimephales promelas* tests were performed in 600 mL plastic cups obtained from Liquor Outlet (Louisville, KY).

Toxicity Testing

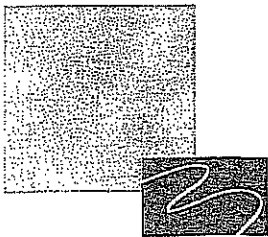
Samples were allowed to warm to room temperature (25°C) and were tested for residual chlorine immediately prior to dilution. Testing was then performed in accordance with US EPA methodology. Data was recorded on Beckmar generated lab sheets (Appendix I).

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 48 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/temperature:	YSI Model 52
PH:	Orion Model 720A
Conductivity:	Oakton CON 100 Series
Alkalinity:	Standard Methods Titration
Hardness:	Standard Methods Titration
Total Chlorine Residual:	Fisher-Porter Titration
EPA Acute/Chronic Manual:	5th Acute 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 final grab sample is collected. 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	Grab	1 gallon	05/21/07 @ 8:00 P.M.	NA	5.0 degrees C
	Grab	2 gallon	05/22/07 @ 8:00 A.M.	NA	5.0 degrees C

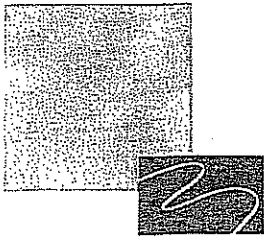
Dates/Times of Test Performance

Species #1: *Ceriodaphnia dubia*

Initiated: 05/22/07 @ 5:00 P.M.
Terminated 05/24/07 @ 5:00 P.M.

Species #2: *Pimephales promelas*

Initiated: 05/22/07 @ 5:00 P.M.
Terminated 05/24/07 @ 5:00 P.M.



Results

In sample "A", *Ceriodaphnia dubia* test exhibited 100% survival in the control, 100% survival in the 20% dilution, 100% survival in the 40% dilution, 100% survival in the 60% dilution, 100% survival in the 80% dilution, and 100% survival in the 100% dilution.

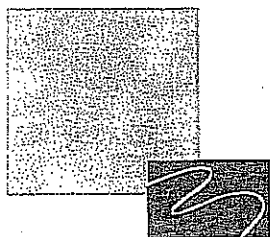
In sample "B", *Ceriodaphnia dubia* test ran exhibited 100% survival in the control, 100% survival in the 20% dilution, 100% survival in the 40% dilution, 100% survival in the 60% dilution, 100% survival in the 80% dilution, and 100% survival in the 100% dilution.

For the 48-hour *Ceriodaphnia dubia* survival test, the LC50s for survival for samples "A" and "B" were greater than 100% effluent, generating an acute toxicity value of less than 1.00 TUa.

In sample "A", the *Pimephales promelas* test ran exhibited 100% survival in the control, 100% survival in the 20% dilution, 95% survival in the 40% dilution, 100% survival in the 60% dilution, 100% survival in the 80% dilution, and 100% survival in the 100% dilution.

In sample "B", the *Pimephales promelas* test exhibited 100% survival in the control, 100% survival in the 20% dilution, 100% survival in the 40% dilution, 100% survival in the 60% dilution, 100% survival in the 80% dilution, and 100% survival in the 100% dilution.

For the 48-hour *Pimephales promelas* survival test, the LCs0s for survival for samples "A" and "B" were greater than 100% effluent, generating an acute toxicity value of less than 1.00 TUa.



Appendix I

Ceriodaphnia dubia
Data Sheets

Ceriodaphnia Survival and Reproduction Test-48 Hr Survival

Start Date: 5/22/2007	Test ID: westa0507	Sample ID: westa0507
End Date: 5/24/2007	Lab ID: 0044:beckmar environmental	Sample Type: EFF1-POTW
Sample Date: 5/21/2007	Protocol: EPAF 94-EPA Freshwater	Test Species: CD-Ceriodaphnia dubia
Comments: westco a cerio acute may 2007		

Conc-%	2	3	4
B-Control	1.0000	1.0000	1.0000
20	1.0000	1.0000	1.0000
40	1.0000	1.0000	1.0000
60	1.0000	1.0000	1.0000
80	1.0000	1.0000	1.0000
100	1.0000	1.0000	1.0000

Transform: Arcsin Square Root							
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N
B-Control	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4
20	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4
40	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4
60	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4
80	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4
100	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates normal distribution ($p > 0.01$)	1	0.884		
Equality of variance cannot be confirmed				

Grab # A

Toxicity Test Results

Results of *Ceriodaphnia dubia* 48 HR. ACUTE Toxicity Test
(Genus) (Species) (Type / Duration)

Conducted: 05/22/07 -- 05/24/07 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										
20% Effluent	100	100										
40% Effluent	100	100										
60% Effluent	100	100										
80% Effluent	100	100										
100% Effluent	100	100										
LC ₅₀ / IC ₂₅ Value: <u>>100%</u>					Calculated TU Estimate * <u>< 1.00 Tua</u> (indicate Acute/Chronic)							
95% Confidence Limits					Permit Limits: <u>1.00 Tua</u> (Indicate TU _a / TU _c)							
UL: <u>na</u>					If acute test, method used to determine LC50 and Confidence Limit Valued:							
LL: <u>na</u>												
UL = Upper Limit LL = Lower Limit												

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

Reference Toxicant Test Results

Species	Date	Time	Duration	Toxicant	Results (LC ₅₀ / IC ₂₅)
<i>Ceriodaphnia dubia</i>	05/09/07	1:00 P.M.	<u>48 hrs.</u>	<u>NaCl</u>	LC50=2.6698g/l

Client: WEST COUNTY. Lou, KYBeckmar Sample Number 184915

Client Contact: _____

NPDES Permit No: _____

Sample Collector: _____

Persons Conducting Test: B. BarkerTest Period: Beginning Date: 5-22-07 Time: 5PEnding Date: 5-24-07 Time: 5PTest Species: C. dubiaAge / Source: <24 hrs.; lab cultureDilution Water Used: MHSWGrab Sample Collected: (1) 2000 am/pm; 5/21/07 (Date)(2) _____ am/pm; 1/1 (Date)

Sample ID	Test Container Number	Number of Live Organisms			Dissolved Oxygen (mg/l) / Temp C		pH		Total Alkalinity (mg/l as CaCO ₃)	Total Hardness (mg/l as CaCO ₃)	Conductivity (umhos/cm)	Total Residual Chlorine (mg/L)
		0	24	48	0	48	0	48				
C	1	5	5	5	8.0 / 24.0	8.5 / 24.0	7.89	8.34	86.4	116.6	410	20.01
	2			5								
	3			5								
	4			5								
20%	1			5	8.2 / 24.1	8.7 / 24.0	7.66	8.60				
	2			5								
	3			5								
	4			5								
40%	1			5	8.2 / 24.2	8.7 / 24.0	7.51	8.64				
	2			5								
	3			5								
	4			5								
60%	1			5	8.2 / 24.4	8.8 / 24.0	7.40	8.62				
	2			5								
	3			5								
	4			5								
80%	1			5	8.2 / 24.6	8.7 / 24.0	7.33	8.60				
	2			5								
	3			5								
	4			5								
100%	1			5	8.2 / 24.9	8.7 / 24.0	7.24	8.61	176	248.0	824	20.01
	2			5								
	3			5								
	4	5	5	5								

Ceriodaphnia Survival and Reproduction Test-48 Hr Survival

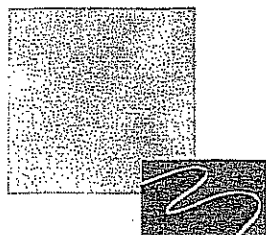
Start Date: 5/22/2007	Test ID: westb0507	Sample ID: westb0507
End Date: 5/24/2007	Lab ID: 0044:beckmar environmental	Sample Type: EFF1-POTW
Sample Date: 5/22/2007	Protocol: EPAF 94-EPA Freshwater	Test Species: CD-Ceriodaphnia dubia
Comments: westco b cerio acute may 2007		

Conc-%	1	2	3	4
B-Control	1.0000	1.0000	1.0000	1.0000
20	1.0000	1.0000	1.0000	1.0000
40	1.0000	1.0000	1.0000	1.0000
60	1.0000	1.0000	1.0000	1.0000
80	1.0000	1.0000	1.0000	1.0000
100	1.0000	1.0000	1.0000	1.0000

Transform: Arcsin Square Root

Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N
B-Control	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4
20	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4
40	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4
60	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4
80	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4
100	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates normal distribution (p > 0.01)	1	0.884		
Equality of variance cannot be confirmed				



Grab # B

Toxicity Test Results

Results of *Ceriodaphnia dubia* 48 HR. ACUTE Toxicity Test
(Genus) (Species) (Type / Duration)

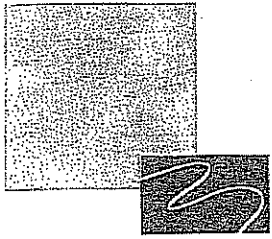
Conducted: 05/22/07 -- 05/24/07 Using Effluent from Outfall # 1
(mm/dd/yy) (mm/dd/yy)

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										
20% Effluent	100	100										
40% Effluent	100	100										
60% Effluent	100	100										
80% Effluent	100	100										
100% Effluent	100	100										
LC ₅₀ / IC ₂₅ Value: >100% 95% Confidence Limits UL: na LL: na UL = Upper Limit LL = Lower Limit								Calculated TU Estimate * < 1.00 T _{ua} (indicate Acute/Chronic) Permit Limits: 1.00 T _{ua} (Indicate T _{ua} / T _{uc})				
								If acute test, method used to determine LC50 and Confidence Limit Valued:				

Note: T_{ua} = 100/LC₅₀; T_{uc} = 100/IC₂₅

Reference Toxicant Test Results

Species	Date	Time	Duration	Toxicant	Results (LC ₅₀ / IC ₂₅)
<i>Ceriodaphnia dubia</i>	05/09/07	1:00 P.M.	48 hrs.	NaCl	LC50=2.6698g/l



Appendix II

Pimephales promelas
Data Sheets

Larval Fish Growth and Survival Test-48 Hr Survival

Start Date: 5/22/2007 Test ID: westfha57 Sample ID: westfha0507
 End Date: 5/24/2007 Lab ID: 0044:beckmar environmental Sample Type: EFF1-POTW
 Sample Date: 5/21/2007 Protocol: EPAF 94-EPA Freshwater Test Species: PP-Pimephales promelas
 Comments: westfha0507 a fin acute may 2007

Conc-%	Mean	N
B-Control	1.0000	1.0000
20	1.0000	1.0000
40	1.0000	0.9000
60	1.0000	1.0000
80	1.0000	1.0000
100	1.0000	1.0000

Transform: Arcsin Square Root							
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N
B-Control	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2
20	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2
40	0.9500	0.9500	1.3305	1.2490	1.4120	8.661	2
60	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2
80	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2
100	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

Grab # A

Toxicity Test Results

Results of *Pimephales* *promelas* 48 HR. ACUTE Toxicity Test
(Genus) (Species) (Type / Duration)

Conducted: 05/22/07 -- 05/24/07 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										
20% Effluent	100	100										
40% Effluent	100	95										
60% Effluent	100	100										
80% Effluent	100	100										
100% Effluent	100	100										
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>< 1.0 Tua</u> (indicate Acute/Chronic) Permit Limits: <u>1.00 Tua</u> (Indicate TU _a / TU _c)				
								If acute test, method used to determine LC50 and Confidence Limit Valued:				

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</i>	05/09/07	5:00 P.M.	<u>48 hrs.</u>	<u>NaCl</u>	LC50=7.0079g/l
<i>promelas</i>					

[illegible]

Larval Fish Growth and Survival Test-48 Hr Survival

Start Date: 5/22/2007 Test ID: westfhb57 Sample ID: westfhb0507
 End Date: 5/24/2007 Lab ID: 0044:beckmar environmental Sample Type: EFF1-POTW
 Sample Date: 5/22/2007 Protocol: EPAF 94-EPA Freshwater Test Species: PP-Pimephales promelas
 Comments: westco b fhm acute may 2007

Conc-%	Mean	N-Mean
B-Control	1.0000	1.0000
20	1.0000	1.0000
40	1.0000	1.0000
60	1.0000	1.0000
80	1.0000	1.0000
100	1.0000	1.0000

Transform: Arcsin Square Root

Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N
B-Control	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2
20	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2
40	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2
60	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2
80	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2
100	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2

Auxiliary Tests

Statistic

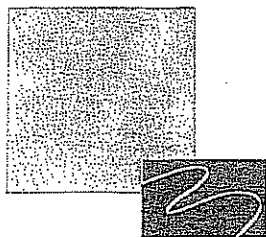
Critical

Skew

Kurt

Normality of the data set cannot be confirmed

Equality of variance cannot be confirmed

Grab # A

Toxicity Test Results

Results of *Pimephales* *promelas* 48 HR. ACUTE Toxicity Test
(Genus) (Species) (Type / Duration)

Conducted: 05/22/07 -- 05/24/07 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										
20% Effluent	100	100										
40% Effluent	100	100										
60% Effluent	100	100										
80% Effluent	100	100										
100% Effluent	100	100										
LC ₅₀ / IC ₂₅ Value: <u>> 100%</u>					Calculated TU Estimate * <u>< 1.0 Tua</u> (indicate Acute/Chronic)							
95% Confidence Limits					Permit Limits: <u>1.00 Tua</u> (Indicate TU _a / TU _c)							
UL: <u>na</u> LL: <u>na</u>					If acute test, method used to determine LC50 and Confidence Limit Valued:							
UL = Upper Limit LL = Lower Limit												

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</i>	05/09/07	5:00 P.M.	<u>48 hrs.</u>	<u>NaCl</u>	LC50=7.0079g/l
<i>promelas</i>					



Beckmar Sample Number 1848/6

NPDES Permit No:

Sample Collector:

(2) _____ am/pm; ____/____/____ (Date)

Test Period: Beginning Date: 5-22-07 Time: 5P

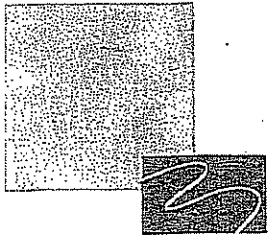
Ending Date: 5-24-07 Time: 5P

Test Species: FHM

Age / Source: 14 day old / Fish Hatch 050807

Dilution Water Used: MHSW

[illegible]



Appendix III

Chain of Custody Data Sheets

[illegible]



MSD Louisville and Jefferson County
Metropolitan Sewer District

IMSAST0004

Discharge Report

Jun 01, 2007 12:00 AM thru Jun 30, 2007 11:59 PM

Report Selections: Excluding PPI, CSO, Result: WUS, Act Code: DISDW, DISREV

KPDES # KY0078956	Facility ID MSD0277	Treatment Plant Name WEST COUNTY	Receiving Stream of Treatment Plant OHIO RIVER	Region WEST
-----------------------------	-------------------------------	--	--	-----------------------

Facility Type	Facility ID	Facility Address	If Pump Station, Name of Pump Station:	Receiving Stream	Discharge to
SMH Sewer Manhole	79650	4807 MUD LN			

<u>Activity Code / Description</u>	<u>WO #</u>	<u>Initiated</u>	<u>Initiated By</u>	<u>Problem</u>	<u>Resolution</u>	<u>Completed</u>
DISREV: RAIN EVENT DISCHARGE	680635	06/23/07 07:50 PM	GERALD DUNLAP	GREASE BLOCKAGE	DISCHARGE TO WATERS OF THE US	06/23/07 09:30 PM

Spot Inspections:

Discharge Amount:	30 GAL
Cause:	GREASE BLOCKAGE IN MANHOLE LEADING TO PUMP STATION.
Clean Up:	RAKED AREA AND SPREAD LIME AROUND MANHOLE
Control Zone:	NONE REQUIRED. UPON ARRIVAL RAIN HAD WASHED INTO THE LEAD
Impact:	WATER DISCHARGING FROM MANHOLE
Repair:	FLUSHED LEAD TO RELIEVE WATER - WORK ORDER #680636

Notifications:

06/23/07 01:00 PM	Email notification of unauthorized discharge sent to Harkins.John@epamail.epa.gov and eppc.ert@ky.gov
-------------------	---

Name of Sewage Treatment Plant: West County WTP Jefferson Month of: June 2007

County

KPDES Permit Number: KY0078956 Plant Capacity: 30 MGD Receiving Stream: Ohio River

Date	Total Flow (MG)	Raw Sewage		pH		Settleable Solids (mL/L)			Dissolved Oxygen (mg/L)			Suspended Solids (mg/L)			Total Solids (mg/L)			5-day BOD (mg/L)			Activated Sludge		Aeration Basin							Dig Sludge	Final						
		Grit Removed (cu ft)	Screenings (cu ft)	Raw	Final	Raw	Primary (or Sec.)	Final	Stream Above	Final	Stream Below	Raw	Primary (or Sec.)	Final	Raw	Primary (or Sec.)	Final	Raw	Primary (or Sec.)	Final	Million Gal/Day	MLSS mg/L X 1000	WAS	Gal/Day X 1000	Oxygen (mg/L) #1	Oxygen (mg/L) #2	MLSS (mg/L) X 1000 #1	MLVSS (mg/L) X 1000 #1	30 min. Sett.	SVI	% Solids	Phosphorus (mg/L)	TKN (mg/L)	Chlorine Residual (mg/L)	NH3-N (mg/L)	Fecal Coliform Col/100ml	
1	15.88			7.2	7.3				6.2			234		6				186		10		3290					1310	1050	130.0	0.10				0.01	6.00	15	
2	16.25			7.1	7.1				6.1			210		6				216		10		3240					1320	1060	120.0	0.09				0.01	6.00	1	
3	16.49			7.3	7.2				5.8			284		7				332		14		3130					1290	1020	120.0	0.09			9.02	0.01	6.83	2	
4	17.00			7.1	7.3				6.6			250		8				310		17		3240					1410	1160	140.0	0.10				0.01	8.18	1	
5	16.81			7.3	7.3				5.9			244		11				335		29		1990					1190	950	120.0	0.10		2.58		0.01	10.80	50	
6	16.81			6.9	7.3				6.2			912		6				661		18		3910					1760	1410	140.0	0.08				0.01	10.10	8	
7	15.35			7.1	7.3				6.3			236		8				295		14		3130					1210	1000	130.0	0.11				0.01	8.06	13	
8	16.48			7.2	7.3				6.3			284		4				314		10		2610					1120	920	110.0	0.10				0.01	8.62	53	
9	17.89			6.9	7.3				6.6			196		9				241		9		2940					1300	970	120.0	0.09				0.01	9.07	1	
10	13.63			7.1	7.4				5.1			250		6				399		15		2780					1310	1050	130.0	0.10			9.89	0.01	7.84	1	
11	15.44			7.2	7.3				7.0			226		8				403		17		2770					1190	930	140.0	0.12				0.01	8.82	116	
12	15.81			7.3	7.3				6.6			234		6				360		14		2950					1120	910	130.0	0.12		1.61		0.01	8.01	3	
13	15.77			7.3	7.3				6.8			226		5				350		13		2800					1290	970	130.0	0.10				0.01	7.39	11	
14	15.10			7.2	7.2				6.1			242		5				341		15		2910					1190	900	130.0	0.11				0.01	6.89	56	
15	15.27			7.3	7.4				6.0			214		4				290		9		3060					1270	1010	120.0	0.09				0.01	6.22	6	
16	14.98			7.3	7.4				5.9			224		5				366		13		2810					1480	1230	110.0	0.07				0.01	7.00	1	
17	14.98			7.2	7.3				5.3			232		6				362		18		2790					1370	1080	120.0	0.09			9.33	0.01	7.28	1	
18	15.71			7.1	7.2				5.9			258		6				357		15		2700					1080	870	110.0	0.10				0.01	7.62	2	
19	16.18			7.2	7.2				6.6			256		5				378		14		2930					1120	910	110.0	0.10		2.19		0.01	6.83	23	
20	15.73			7.2	7.2				6.0			284		6				304		13		2670					1090	860	100.0	0.09				0.01	6.33	13	
21	15.87			7.0	7.2				5.4			258		6				322		13		2660					1360	1080	100.0	0.07				0.01	6.55	2	
22	15.05			7.1	7.2				5.2			290		8				326		13		2720					1130	920	100.0	0.09				0.01	11.00	15	
23	19.69			7.0	7.2				5.6			356		10				357		15		2850					1180	950	100.0	0.08				0.01	8.00	10	
24	25.54			7.1	7.2				5.5			314		9				315		27		3340					1180	960	80.0	0.07			11.00	0.01	8.29	5	
25	19.74			7.1	7.2				6.1			236		6				275		17		3120					1160	910	90.0	0.08				0.01	7.78	3	
26	17.57			7.1	7.2				5.7			280		6				277		22		3020					1140	940	90.0	0.08		1.29		0.01	7.22	1	
27	18.55			7.2	7.2				5.0			306		7				355		21		2980					1520	1250	90.0	0.06				0.01	8.06	18	
28	22.30			7.1	7.3				5.0			268		9				271		29		3540					1090	880	80.0	0.07				0.01	8.34	4	
29	20.95			7.0	7.3				5.2			238		8				290		22		3960					1480	1170	90.0	0.06				0.01	7.50	11	
30	18.53			7.1	7.3				5.0			252		7				286		24		3540					1310	980	90.0	0.07				0.01	7.90	2	
31	0.00																													#####							
Total	511.4	0	0																		0.0		0.0														
Avg.	16.50			7.1	7.3				5.9			276		7				329		16		3019.3						1265.67	1010.00	112.33	#####		1.92	9.81	0.01	7.81	6

Total Number of Sewer Connections: 0 Industrial Waste Population Equivalent Operator: Iln Green

Residential Connections: 157097 266346 181112 Cert. #: 16155

Commercial Connections: Flow BOD TSS

Industrial Connections: Phone #: 502-540-6042

Sewer Connections X 4 = 0