

From: Daniel Nix
Sent: Mon, 6 Aug 2012 15:21:56 -0500
To: tdh@cpbwf.com; Crawford, Susan
Cc: Russell Schreiber
Subject: Wastewater Effluent PPCP's
Attachments: 282121_final.pdf, 187975_ULInvoice.pdf

----- Forwarded message -----

From: **Mark Southard** <mark.southard@wichitafallstx.gov>
Date: Mon, Aug 6, 2012 at 2:47 PM
Subject: Fwd: report
To: Daniel Nix <daniel.nix@wichitafallstx.gov>

----- Forwarded message -----

From: **Vernon, James N** <James.N.Vernon@ul.com>
Date: Mon, Aug 6, 2012 at 12:21 PM
Subject: report
To: "mark.southard@wichitafallstx.gov" <mark.southard@wichitafallstx.gov>

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Mark Southard
City of Wichita Falls
Water Source/Purification Superintendent
[940-691-1153](tel:940-691-1153)
[940-691-4121](tel:940-691-4121) Fax



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Daniel K. Nix

Public Utilities Operations Manager

City of Wichita Falls

Physical Address: 4801 Big Ed Neal Drive, Wichita Falls, Texas 76310

Mailing Address: P.O. Box 1431, Wichita Falls, Texas 76307

940-691-1153 FAX: 940-691-4121

Daniel.Nix@wichitafallstx.gov





LABORATORY REPORT

This report contains 6 pages.
(including the cover page)

If you have any questions concerning this report, please do not hesitate to call us at (800) 332-4345 or (574) 233-4777.

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Laboratory Report

Client: City of Wichita Falls
Attn: Mark Southard
P. O. Box 1431
Wichita Falls, TX 76307

Report: 282121
Priority: Standard Written
Status: Final
PWS ID: TX2430001

Copies
to: None

Sample Information					
UL ID #	Client ID	Method	Collected Date / Time	Collected By:	Received Date / Time
2670990	River Road Effluent, Treated	L211	07/05/12 15:40	Client	07/06/12 10:00
2670991	River Road Effluent, Treated	S170	07/05/12 15:40	Client	07/06/12 10:00
2670992	River Road Effluent, Treated	L221	07/05/12 15:40	Client	07/06/12 10:00
2670993	River Road Effluent, Treated	L220	07/05/12 15:40	Client	07/06/12 10:00
2670994	River Road Effluent, Treated	L200	07/05/12 15:40	Client	07/06/12 10:00

Report Summary

Note: The samples submitted for analysis were received at a temperature of 8.8°C. The client was notified of the situation, and analysis was authorized by Mark Southard of the City of Wichita Falls.

Note: In the Method L200 analysis, the pentachlorophenol recovery in the LFB at 5.0 ug/L (68%) was low outside the acceptance limits of 70-130%. Any result is potentially low biased.

Detailed quantitative results are presented on the following pages. The results presented relate only to the samples provided for analysis.

We appreciate the opportunity to provide you with this analysis. If you have any questions concerning this report, please do not hesitate to call Jim Vernon at (574) 233-4777.

Note: This report may not be reproduced, except in full, without written approval from UL.

Digitally signed by James N. Vernon
Date: 2012.08.06 13:20:37 -04'00'

Authorized Signature

Title

Date

Client Name: City of Wichita Falls
Report #: 282121

Sampling Point: River Road Effluent, Treated

PWS ID: TX2430001

UL Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
80-05-7	Bisphenol A	L200	---	0.1	< 0.1	ug/L	07/16/12 07:34	07/17/12 00:06	2670994
25154-52-3	Nonylphenol, isomer mix	L200	---	0.5	< 0.5	ug/L	07/16/12 07:34	07/17/12 00:06	2670994
1806-26-4	4-n-Octylphenol	L200	---	0.5	< 0.5	ug/L	07/16/12 07:34	07/17/12 00:06	2670994
140-66-9	4-tert-Octylphenol	L200	---	0.5	< 0.5	ug/L	07/16/12 07:34	07/17/12 00:06	2670994
87-86-5	Pentachlorophenol	L200	---	0.1	< 0.1	ug/L	07/16/12 07:34	07/17/12 00:06	2670994
92-69-3	Phenylphenol	L200	---	0.1	< 0.1	ug/L	07/16/12 07:34	07/17/12 00:06	2670994
79-94-7	Tetrabromobisphenol A	L200	---	0.1	< 0.1	ug/L	07/16/12 07:34	07/17/12 00:06	2670994
88-06-2	2,4,6-Trichlorophenol	L200	---	0.1	< 0.1	ug/L	07/16/12 07:34	07/17/12 00:06	2670994
56-53-1	Diethylstilbestrol (DES)	L211	---	0.5	< 0.5	ng/L	07/11/12 09:00	07/12/12 17:13	2670990
57-91-0	17alpha-Estradiol	L211	---	0.5	< 0.5	ng/L	07/11/12 09:00	07/12/12 17:13	2670990
50-28-2	17beta-Estradiol	L211	---	0.5	< 0.5	ng/L	07/11/12 09:00	07/12/12 17:13	2670990
50-27-1	Estriol	L211	---	0.5	< 0.5	ng/L	07/11/12 09:00	07/12/12 17:13	2670990
53-16-7	Estrone	L211	---	0.5	< 0.5	ng/L	07/11/12 09:00	07/12/12 17:13	2670990
57-63-6	17alpha-Ethynyl estradiol	L211	---	0.5	< 0.5	ng/L	07/11/12 09:00	07/12/12 17:13	2670990
57-83-0	Progesterone	L211	---	0.1	0.3	ng/L	07/11/12 09:00	07/12/12 17:13	2670990
481-30-1	cis-Testosterone	L211	---	0.1	< 0.1	ng/L	07/11/12 09:00	07/12/12 17:13	2670990
58-22-0	trans-Testosterone	L211	---	0.1	< 0.1	ng/L	07/11/12 09:00	07/12/12 17:13	2670990
103-90-2	Acetaminophen	L220	---	0.005	0.007	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
60-80-0	Antipyrine	L220	---	0.001	< 0.001	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
29122-68-7	Atenolol	L220	---	0.001	0.206	ug/L	07/18/12 07:30	07/20/12 12:27	2670993
83905-01-5	Azithromycin	L220	---	0.005	< 0.005	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
1405-87-4	Bacitracin	L220	---	1.0	< 1.0	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
58-08-2	Caffeine	L220	---	0.05	< 0.05	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
6804-07-5	Carbadox	L220	---	0.005	< 0.005	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
298-46-4	Carbamazepine	L220	---	0.001	0.053	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
85721-33-1	Ciprofloxacin	L220	---	0.05	< 0.05	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
486-56-6	Cotinine	L220	---	0.001	0.025	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
134-62-3	DEET	L220	---	0.005	0.197	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
50-02-2	Dexamethasone	L220	---	0.005	< 0.005	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
439-14-5	Diazepam	L220	---	0.001	< 0.001	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
42399-41-7	Diltiazem	L220	---	0.0001	< 0.0001	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
93106-60-6	Enrofloxacin	L220	---	0.05	< 0.05	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
114-07-8	Erythromycin	L220	---	0.001	< 0.001	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
59333-67-4	Fluoxetine (Prozac)	L220	---	0.001	0.007	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
73334-07-3	Iopromide	L220	---	0.05	< 0.05	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
11054-70-9	Lasalocid	L220	---	0.001	< 0.001	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
154-21-2	Lincomycin	L220	---	0.0001	< 0.0001	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
57-53-4	Meprobamate	L220	---	0.001	0.476	ug/L	07/18/12 07:30	07/20/12 12:27	2670993
17090-79-8	Monensin	L220	---	0.001	< 0.001	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
55134-13-9	Narasin	L220	---	0.001	< 0.001	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
22083-74-5	Nicotine	L220	---	0.005	0.016	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
70458-96-7	Norfloxacin	L220	---	0.05	< 0.05	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
7060-74-4	Oleandomycin	L220	---	0.001	< 0.001	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
611-59-6	Paraxanthine	L220	---	0.005	0.026	ug/L	07/18/12 07:30	07/20/12 07:41	2670993

125-33-7	Primidone	L220	---	0.005	0.321	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
80214-83-1	Roxithromycin	L220	---	0.001	< 0.001	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
53003-10-4	Salinomycin	L220	---	0.0001	< 0.0001	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
79902-63-9	Simvastatin	L220	---	0.005	< 0.005	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
80-32-0	Sulfachloropyridazine	L220	---	0.005	< 0.005	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
68-35-9	Sulfadiazine	L220	---	0.001	< 0.001	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
122-11-2	Sulfadimethoxine	L220	---	0.0001	< 0.0001	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
127-79-7	Sulfamerazine	L220	---	0.001	< 0.001	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
57-68-1	Sulfamethazine	L220	---	0.001	< 0.001	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
144-82-1	Sulfamethizole	L220	---	0.001	< 0.001	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
723-46-6	Sulfamethoxazole	L220	---	0.001	0.003	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
599-79-1	Sulfasalazine	L220	---	0.005	< 0.005	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
72-14-0	Sulfathiazole	L220	---	0.001	< 0.001	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
83-67-0	Theobromine	L220	---	0.05	0.24	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
738-70-5	Trimethoprim	L220	---	0.001	< 0.001	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
74610-55-2	Tylosin	L220	---	0.001	< 0.001	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
21411-53-0	Virginiamycin M1	L220	---	0.001	< 0.001	ug/L	07/18/12 07:30	07/20/12 07:41	2670993
41859-67-0	Bezafibrate	L221	---	0.0005	< 0.0005	ug/L	07/11/12 08:00	07/18/12 03:02	2670992
56-75-7	Chloramphenicol	L221	---	0.005	< 0.005	ug/L	07/11/12 08:00	07/18/12 03:02	2670992
64-72-2	Chlorotetracycline	L221	---	0.05	< 0.05	ug/L	07/11/12 08:00	07/18/12 03:02	2670992
882-09-7	Clofibric acid	L221	---	0.0005	< 0.0005	ug/L	07/11/12 08:00	07/18/12 03:02	2670992
15307-86-5	Diclofenac	L221	---	0.0005	< 0.0005	ug/L	07/11/12 08:00	07/18/12 03:02	2670992
57-41-0	Dilantin	L221	---	0.002	0.186	ug/L	07/11/12 08:00	07/18/12 03:02	2670992
83038-87-3	Doxycycline	L221	---	0.05	< 0.05	ug/L	07/11/12 08:00	07/18/12 03:02	2670992
25812-30-0	Gemfibrozil	L221	---	0.0005	< 0.0005	ug/L	07/11/12 08:00	07/18/12 03:02	2670992
15687-27-1	Ibuprofen	L221	---	0.05	< 0.05	ug/L	07/11/12 08:00	07/18/12 03:02	2670992
51-48-9	Levothyroxine (Synthroid)	L221	---	0.002	< 0.002	ug/L	07/11/12 08:00	07/18/12 03:02	2670992
22204-53-1	Naproxen	L221	---	0.002	< 0.002	ug/L	07/11/12 08:00	07/18/12 03:02	2670992
2058-46-0	Oxytetracycline	L221	---	0.5	< 0.5	ug/L	07/11/12 08:00	07/18/12 03:02	2670992
61-33-6	Penicillin G	L221	---	0.002	< 0.002	ug/L	07/11/12 08:00	07/18/12 03:02	2670992
87-08-1	Penicillin V	L221	---	0.002	< 0.002	ug/L	07/11/12 08:00	07/18/12 03:02	2670992
53-03-2	Prednisone	L221	---	0.002	< 0.002	ug/L	07/11/12 08:00	07/18/12 03:02	2670992
69-72-7	Salicylic acid	L221	---	0.05	0.19	ug/L	07/11/12 08:00	07/18/12 03:02	2670992
60-54-8	Tetracycline	L221	---	0.5	< 0.5	ug/L	07/11/12 08:00	07/18/12 03:02	2670992
58-55-9	Theophylline	L221	---	0.005	0.046	ug/L	07/11/12 08:00	07/18/12 03:02	2670992
102-20-2	Triclocarban	L221	---	0.005	0.070	ug/L	07/11/12 08:00	07/18/12 03:02	2670992
3380-34-5	Triclosan	L221	---	0.050	< 0.050	ug/L	07/11/12 08:00	07/18/12 03:02	2670992
1222-05-5	Galaxolide	S170	---	10	270	ng/L	07/19/12 09:00	07/20/12 16:07	2670991
21145-77-7	Tonalid	S170	---	10	42	ng/L	07/19/12 09:00	07/20/12 16:07	2670991

† UL has demonstrated it can achieve these report limits in reagent water, but can not document them in all sample matrices.

Reg Limit Type:	MCL	SMCL	AL
Symbol:	*	^	!

Lab Definitions

Continuing Calibration Check Standard (CCC) / Continuing Calibration Verification (CCV) / Initial Calibration Verification Standard (ICV) / Initial Performance Check (IPC) - is a standard containing one or more of the target analytes that is prepared from the same standards used to calibrate the instrument. This standard is used to verify the calibration curve at the beginning of each analytical sequence, and may also be analyzed throughout and at the end of the sequence. The concentration of continuing standards may be varied, when prescribed by the reference method, so that the range of the calibration curve is verified on a regular basis.

Internal Standards (IS) - are pure compounds with properties similar to the analytes of interest, which are added to field samples or extracts, calibration standards, and quality control standards at a known concentration. They are used to measure the relative responses of the analytes of interest and surrogates in the sample, calibration standard or quality control standard.

Laboratory Duplicate (LD) - is a field sample aliquot taken from the same sample container in the laboratory and analyzed separately using identical procedures. Analysis of laboratory duplicates provides a measure of the precision of the laboratory procedures.

Laboratory Fortified Blank (LFB) / Laboratory Control Sample (LCS) - is an aliquot of reagent water to which known concentrations of the analytes of interest are added. The LFB is analyzed exactly the same as the field samples. LFBs are used to determine whether the method is in control.

Laboratory Method Blank (LMB) / Laboratory Reagent Blank (LRB) - is a sample of reagent water included in the sample batch analyzed in the same way as the associated field samples. The LMB is used to determine if method analytes or other background contamination have been introduced during the preparation or analytical procedure. The LMB is analyzed exactly the same as the field samples.

Laboratory Trip Blank (LTB) / Field Reagent Blank (FRB) - is a sample of laboratory reagent water placed in a sample container in the laboratory and treated as a field sample, including storage, preservation, and all analytical procedures. The FRB/LTB container follows the collection bottles to and from the collection site, but the FRB/LTB is not opened at any time during the trip. The FRB/LTB is primarily a travel blank used to verify that the samples were not contaminated during shipment.

Matrix Spike Duplicate Sample (MSD) / Laboratory Fortified Sample Matrix Duplicate (LFSMD) - is a sample aliquot taken from the same field sample source as the Matrix Spike Sample to which known quantities of the analytes of interest are added in the laboratory. The MSD is analyzed exactly the same as the field samples. Analysis of the MSD provides a measure of the precision of the laboratory procedures in a specific matrix.

Matrix Spike Sample (MS) / Laboratory Fortified Sample Matrix (LFSM) - is a sample aliquot taken from field sample source to which known quantities of the analytes of interest are added in the laboratory. The MS is analyzed exactly the same as the field samples. The purpose is to demonstrate recovery of the analytes from a sample matrix to determine if the specific matrix contributes bias to the analytical results.

Quality Control Standard (QCS) / Second Source Calibration Verification (SSCV) - is a solution containing known concentrations of the analytes of interest prepared from a source different from the source of the calibration standards. The solution is obtained from a second manufacturer or lot if the lot can be demonstrated by the manufacturer as prepared independently from other lots. The QCS sample is analyzed using the same procedures as field samples. The QCS is used as a check on the calibration standards used in the method on a routine basis.

Reporting Limit Check (RLC) / Initial Calibration Check Standard (ICCS) - is a procedural standard that is analyzed each day to evaluate instrument performance at or below the minimum reporting limit (MRL).

Surrogate Standard (SS) / Surrogate Analyte (SUR) - is a pure compound with properties similar to the analytes of interest, which is highly unlikely to be found in any field sample, that is added to the field samples, calibration standards, blanks and quality control standards before sample preparation. The SS is used to evaluate the efficiency of the sample preparation process.



110 S. Hill Street
South Bend, IN 46617
T: 1.800.332.4345
F: 1.574.233.8207

224937
Order #
Batch # 282121

www.ul.com/water

CHAIN OF CUSTODY RECORD

Page 1 of 1

Shaded area for UL use only				REPORT TO:				SAMPLER (Signature)		PWS ID #	STATE (sample origin)	PROJECT NAME	PO#	# OF CONTAINERS	MATRIX CODE	TURNAROUND TIME
BILL TO:				COMPLIANCE MONITORING		Yes	No	POPULATION SERVED	SOURCE WATER							
City of Wichita Falls								2430001	TX	PPCP's		P1204027				
City of Wichita Falls							X	100,000+	SW							
LAB Number		COLLECTION				SAMPLING SITE		TEST NAME		SAMPLE REMARKS		CHLORINATED		# OF CONTAINERS	MATRIX CODE	TURNAROUND TIME
		DATE	TIME	AM	PM							YES	NO			
1	2670990	07/05/12	3:40		X	River Road Effluent, Treated		Hormones, DW/L211				✓			NW	SW
2	991							Fragrances, DW/S170				✓			NW	SW
3	992							PACs Negative, DW/L221				✓			NW	SW
4	993							PACs Positive, DW/L220				✓			NW	SW
5	994							EDCs, DW/L200				✓			NW	SW
6																
7																
8																
9																
10																
11																
12																
13																
14																

RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME	LAB RESERVES THE RIGHT TO RETURN UNUSED PORTIONS OF NON-AQUEOUS SAMPLES TO CLIENT	
	07/05/12	3:45					LAB COMMENTS
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME		atg to Run P1- Client 7-6-12
							well ice melted
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED FOR LABORATORY BY:	DATE	TIME	CONDITIONS UPON RECEIPT (check one)	
				7/6/12	1000	☒ Iced/Wet/Blue ☐ Ambient 8.8 °C Upon Receipt ☐ N/A	

MATRIX CODES:	TURN-AROUND TIME (TAT) - SURCHARGES	
DW-DRINKING WATER	SW = Standard Written: (15 working days)	0%
RW-REAGENT WATER	RV* = Rush Verbal: (5 working days)	50%
GW-GROUND WATER	RW* = Rush Written: (5 working days)	75%
EW-EXPOSURE WATER		
SW-SURFACE WATER		
PW-POOL WATER		
WW-WASTE WATER		

* Please call, expedited service not available for all testing

06-LO-F0435 Issue 2.0 Effective Date: 01/20/2012

PM 7/6/12

100%
125%
CALL
CALL

Samples received unannounced with less than 48 hours holding time remaining may be subject to additional charges.

Sample analysis will be provided according to the standard UL GSA/Water Services Terms, which are available upon request. Any other terms proposed by Customer are deemed material alterations and are rejected unless expressly agree to in writing by UL.

**Remit to:**

Underwriters Laboratories Inc.
9334 Paysphere Circle
Chicago, IL 60674
Acct # 5800399205
ABA # 071000039

Invoice # 187975

Wichita Falls, City of
Mark Southard
P. O. Box 1431
Wichita Falls, TX 76307

Customer Information

Invoice Date: 08/06/12
Payment Terms: Net 30 Days
Order #: 224937
Report #: 282121
Client #: 5703
P.O. #: P1204027

Amount Due: **\$1750.00**

Amount Remitted:

Please detach and return upper portion with payment. Please reference Invoice Number with payment.

Underwriters Laboratories Inc.
9334 Paysphere Circle
Chicago, IL 60674
Acct # 5800399205
ABA # 071000039

Customer Information

Invoice Date: 08/06/12
Payment Terms: Net 30 Days
Order #: 224937
Report #: 282121
Client #: 5703
P.O. #: P1204027
Customer Contact: Mark Southard

Invoice # 187975

Description/Matrix/Sample Type	Unit Price	Qty	\$ Disc	Net
Estrogens and Other Hormones/WW/FS	\$350.00	1	\$0.00	\$350.00
Fragrances/WW/FS	\$300.00	1	\$0.00	\$300.00
Pharmaceutically Active Compounds - Negative/WW/FS	\$400.00	1	\$0.00	\$400.00
Pharmaceutically Active Compounds - Positive/WW/FS	\$400.00	1	\$0.00	\$400.00
Phenolic Endocrine Disrupting Chemicals/WW/FS	\$300.00	1	\$0.00	\$300.00
Sample Kit, Bottles, Preservatives	No Charge			
Collection Instructions	No Charge			
State Approved Report, if req'd	No Charge			
Standard Outgoing Shipping	No Charge			

Site Description:

Total Tests 5 **Total(\$ US)** **\$1,750.00**

See Enclosed report for details.

A Finance Charge of 1.5% per month
may be added to past-due accounts.

Thank you for selecting
Underwriters Laboratories Inc.
for your analytical services.

Simplify your life. With one call, UL can pre-schedule all your bottle shipments so that your bottles arrive just in time for monitoring. Provide your monthly, quarterly, or annual requirements to your project manager and we'll ship out your bottles when needed for the entire year.

The charges for services rendered are being invoiced by the entity designated on Page 1, on behalf of UL LLC.

If you have any questions concerning this invoice, please do not hesitate to call us at 1-800-332-4345.