



PWS_0430035_AC_20190812_Analysis Report
LCRA Environmental Laboratory Services
3505 Montopolis Drive
Austin, TX 78744
Phone: (512) 730-6022
Fax: (512) 730-6021

August 22, 2019

ROBERT TODD
FROGNOT WSC
PO BOX 400
408 W. FM 545 STE3
Blue Ridge, TX 75424
FROGNOTWATERCORP@YAHOO.COM

RE: Final Analytical Report Q1954104003

Attn: ROBERT TODD(FROGNOT WSC)

Enclosed are the analytical results for sample(s) received by LCRA Environmental Laboratory Services. Results reported herein conform to the most current NELAP standards, where applicable, unless otherwise narrated in the body of the report. This final report provides results related only to the sample(s) as received for the above referenced work order.

Thank you for selecting ELS for your analytical needs. If you have any questions regarding this report, please contact us at (512) 730-6022. We look forward to assisting you again.

Authorized for release by:

Bhanu Acharya
Account Manager
bhanu.acharya@lcra.org



Enclosures:



PWS_0430035_AC_20190812_Analysis Report
LCRA Environmental Laboratory Services
3505 Montopolis Drive
Austin, TX 78744
Phone: (512) 730-6022
Fax: (512) 730-6021

Sample Summary

Lab ID	Sample ID	Matrix	Method	Date Collected	Date Received
Q1954104003	1907228	DW	E525.2 Pesticides by GC/MS	8/12/2019 13:56	8/14/2019 07:45
Q1954104003	1907228	DW	E508.1 Pesticides by GC	8/12/2019 13:56	8/14/2019 07:45

Report Definitions

MRL - Minimum Reporting Limit
LOD - Limit of Detection
ML - Maximum Limit - Client Specified
MCL - Maximum Contaminant Level
LOQ - Limit of Quantitation - Client Specified
DF - Dilution Factor
Qual - Qualifier
(S) - Surrogate Spike
B - Analyte Detected in Method Blank
SL - Spike Recovery Low
SH - Spike Recovery High
R - RPD Outside Duplicate Precision Limit
J - Analyte detected below quantitation limit
RPD - Relative Percent Difference

Project Summary

Sample Analysis Comments

Lab ID: Q1954104003

Sample ID: 1907228

- Not Accredited - Aldrin
- Not Accredited - Aroclor-1016
- Not Accredited - Aroclor-1221
- Not Accredited - Aroclor-1232
- Not Accredited - Aroclor-1242
- Not Accredited - Aroclor-1248
- Not Accredited - Aroclor-1254
- Not Accredited - Aroclor-1260
- Not Accredited - Bromacil
- Not Accredited - Butachlor
- Not Accredited - Dieldrin
- Not Accredited - Metolachlor
- Not Accredited - Metribuzin
- Not Accredited - Propachlor
- Not Accredited - alpha-Chlordane
- Not Accredited - gamma-Chlordane
- Not Accredited - trans-Nonachlor-chlordane



Analytical Results

Lab ID: Q1954104003	Date Received: 8/14/2019 07:45	Matrix: Drinking Water
Sample ID: 1907228	Date Collected: 8/12/2019 13:56	Sample Type: SAMPLE
Project ID: DRINKING WATER PROGRAM	Location: PH	
Facility: EP001	Client ID: TX0430035	
Sample Point: TRT-TAP		

Parameter	Results	Units	MRL	LOD	MCL	DF	Prepared	By	Analyzed	By	Qual
E508.1 PCBs (E508.1 Pesticides by GC)											
Aroclor-1016	<0.07	ug/L	0.10	0.07	0.5	1	08/21/19 12:30	MO	08/21/19 20:53	MF	*
Aroclor-1221	<0.1	ug/L	0.1	0.05	0.5	1	08/21/19 12:30	MO	08/21/19 20:53	MF	*
Aroclor-1232	<0.1	ug/L	0.1	0.05	0.5	1	08/21/19 12:30	MO	08/21/19 20:53	MF	*
Aroclor-1242	<0.1	ug/L	0.1	0.05	0.5	1	08/21/19 12:30	MO	08/21/19 20:53	MF	*
Aroclor-1248	<0.1	ug/L	0.1	0.05	0.5	1	08/21/19 12:30	MO	08/21/19 20:53	MF	*
Aroclor-1254	<0.1	ug/L	0.1	0.05	0.5	1	08/21/19 12:30	MO	08/21/19 20:53	MF	*
Aroclor-1260	<0.1	ug/L	0.1	0.05	0.5	1	08/21/19 12:30	MO	08/21/19 20:53	MF	*
PCB, Total	<0.1	ug/L	0.1	0.07			08/21/19 12:30	MO	08/21/19 20:53	MF	*

Surrogate(s)

Parameter	Units	% Spike Recovery	Control Limits %
4,4'-Dibromobiphenyl (S)	%	77.2	70 - 130

E508.1 Pesticides (E508.1 Pesticides by GC)

Chlordane	<0.1	ug/L	0.1	0.05	2	1	08/21/19 12:30	MO	08/21/19 20:53	MF	
Toxaphene	<0.1	ug/L	0.1	0.05	3	1	08/21/19 12:30	MO	08/21/19 20:53	MF	

E525.2 PAHs (E525.2 Pesticides by GC/MS)

Benzo(a)pyrene	<0.02	ug/L	0.10	0.02	0.2	1	08/21/19 12:23	MO	08/21/19 18:45	BC	
----------------	-------	------	------	------	-----	---	----------------	----	----------------	----	--

E525.2 Pesticides (E525.2 Pesticides by GC/MS)

trans-Nonachlor-chlordane	<0.1	ug/L	0.1	0.05		1	08/21/19 12:23	MO	08/21/19 18:45	BC	*
Alachlor	<0.1	ug/L	0.1	0.05	2	1	08/21/19 12:23	MO	08/21/19 18:45	BC	
Aldrin	<0.1	ug/L	0.1	0.05		1	08/21/19 12:23	MO	08/21/19 18:45	BC	*
alpha-Chlordane	<0.1	ug/L	0.1	0.05	2	1	08/21/19 12:23	MO	08/21/19 18:45	BC	*
Atrazine	<0.1	ug/L	0.1	0.05	3	1	08/21/19 12:23	MO	08/21/19 18:45	BC	
Bromacil	<0.1	ug/L	0.1	0.05		1	08/21/19 12:23	MO	08/21/19 18:45	BC	
Butachlor	<0.1	ug/L	0.1	0.05		1	08/21/19 12:23	MO	08/21/19 18:45	BC	*
Dieldrin	<0.1	ug/L	0.1	0.05		1	08/21/19 12:23	MO	08/21/19 18:45	BC	*
Endrin	<0.01	ug/L	0.10	0.01	2	1	08/21/19 12:23	MO	08/21/19 18:45	BC	*
gamma-BHC (Lindane)	<0.02	ug/L	0.10	0.02	0.2	1	08/21/19 12:23	MO	08/21/19 18:45	BC	
gamma-Chlordane	<0.1	ug/L	0.1	0.05	2	1	08/21/19 12:23	MO	08/21/19 18:45	BC	*
Heptachlor	<0.03	ug/L	0.10	0.03	0.4	1	08/21/19 12:23	MO	08/21/19 18:45	BC	
Heptachlor epoxide	<0.02	ug/L	0.10	0.02	0.2	1	08/21/19 12:23	MO	08/21/19 18:45	BC	
Hexachlorobenzene	<0.1	ug/L	0.1	0.05	1	1	08/21/19 12:23	MO	08/21/19 18:45	BC	
Hexachlorocyclopentadiene	<0.1	ug/L	0.1	0.05	50	1	08/21/19 12:23	MO	08/21/19 18:45	BC	
Methoxychlor	<0.1	ug/L	0.1	0.05	40	1	08/21/19 12:23	MO	08/21/19 18:45	BC	
Metolachlor	<0.1	ug/L	0.1	0.05		1	08/21/19 12:23	MO	08/21/19 18:45	BC	*
Metribuzin	<0.1	ug/L	0.1	0.05		1	08/21/19 12:23	MO	08/21/19 18:45	BC	*
Propachlor	<0.1	ug/L	0.1	0.05		1	08/21/19 12:23	MO	08/21/19 18:45	BC	*
Simazine	<0.06	ug/L	0.10	0.06	4	1	08/21/19 12:23	MO	08/21/19 18:45	BC	

Analytical Results (cont.)

Lab ID: Q1954104003	Date Received: 8/14/2019 07:45	Matrix: Drinking Water
Sample ID: 1907228	Date Collected: 8/12/2019 13:56	Sample Type: SAMPLE
Project ID: DRINKING WATER PROGRAM	Location: PH	
Facility: EP001	Client ID: TX0430035	
Sample Point: TRT-TAP		

Parameter	Results	Units	MRL	LOD	MCL	DF	Prepared	By	Analyzed	By	Qual
Surrogate(s)											
Parameter	Units	% Spike Recovery	Control Limits %								
1,3-Dimethyl-2-nitrobenzene (S)	%	100	70 - 130								
Perylene-d12 (S)	%	90.2	70 - 130								
Pyrene-d10 (S)	%	103	70 - 130								
Triphenyl Phosphate (S)	%	102	70 - 130								

E525.2 Phthalates (E525.2 Pesticides by GC/MS)

Bis(2-ethylhexyl)adipate	<0.5ug/L	0.5	0.20	400	1	08/21/19 12:23	MO	08/21/19 18:45	BC
Bis(2-Ethylhexyl)phthalate	<0.5ug/L	0.5	0.20	6	1	08/21/19 12:23	MO	08/21/19 18:45	BC

Quality Control

Preparation Batch: ORG / 8488
Preparation Method: E508.1 Pesticides by GC
Associated Lab IDs: Q1954104003

Analysis Method: E508.1 Pesticides by GC

Method Reporting Limit Check (1318649)

Parameter	Units	Spiked Amount	Spike Result	% Spike Recovery	Control Limits %	Qual
Aroclor-1242	ug/L	100	106.6	107	50 - 150	
PCB, Total						

Quality Control (cont.)

Preparation Batch: ORG / 8480
Preparation Method: E525.2 Pesticides by GC/MS
Associated Lab IDs: Q1954104003

Analysis Method: E525.2 Pesticides by GC/MS

Method Reporting Limit Check (1316774)

Parameter	Units	Spiked Amount	Spike Result	% Spike Recovery	Control Limits %	Qual
Alachlor	ug/L	100	60	60	50 - 150	
Aldrin	ug/L	100	80	80	50 - 150	
Atrazine	ug/L	100	70	70	50 - 150	
Benzo(a)pyrene	ug/L	100	70	70	50 - 150	
Bis(2-Ethylhexyl)phthalate	ug/L	100	50	50	50 - 150	
Bis(2-ethylhexyl)adipate	ug/L	100	60	60	50 - 150	
Bromacil	ug/L	100	50	50	50 - 150	
Butachlor	ug/L	100	60	60	50 - 150	
Dieldrin	ug/L	100	90	90	50 - 150	
Endrin	ug/L	100	90	90	50 - 150	
Heptachlor	ug/L	100	70	70	50 - 150	
Heptachlor epoxide	ug/L	100	90	90	50 - 150	
Hexachlorobenzene	ug/L	100	90	90	50 - 150	
Hexachlorocyclopentadiene	ug/L	100	80	80	50 - 150	
Methoxychlor	ug/L	100	50	50	50 - 150	
Metolachlor	ug/L	100	60	60	50 - 150	
Metribuzin	ug/L	100	50	50	50 - 150	
Propachlor	ug/L	100	80	80	50 - 150	
Simazine	ug/L	100	70	70	50 - 150	
alpha-Chlordane	ug/L	100	90	90	50 - 150	
gamma-BHC (Lindane)	ug/L	100	90	90	50 - 150	
gamma-Chlordane	ug/L	100	90	90	50 - 150	
trans-Nonachlor-chlordane	ug/L	100	80	80	50 - 150	

Surrogate(s)

Parameter	Units	% Spike Recovery	Control Limits %
1,3-Dimethyl-2-nitrobenzene (S)	%	101	50 - 150
Perylene-d12 (S)	%	99.6	50 - 150
Pyrene-d10 (S)	%	104	50 - 150
Triphenyl Phosphate (S)	%	97	50 - 150

Quality Control (cont.)

Preparation Batch: OEXT / 7325
Preparation Method: E508.1 Pesticides by GC
Associated Lab IDs: Q1954104003

Analysis Method: E508.1 Pesticides by GC

Laboratory Reagent Blank (1317576)

Parameter	Results	Units	MRL	LOD	Qualifier
Chlordane	<0.1	ug/L	0.1	0.0	
Toxaphene	<0.1	ug/L	0.1	0.0	
Aroclor-1016	<0.07	ug/L	0.10	0.07	
Aroclor-1221	<0.1	ug/L	0.1	0.0	
Aroclor-1232	<0.1	ug/L	0.1	0.0	
Aroclor-1242	<0.1	ug/L	0.1	0.0	
Aroclor-1248	<0.1	ug/L	0.1	0.0	
Aroclor-1254	<0.1	ug/L	0.1	0.0	
Aroclor-1260	<0.1	ug/L	0.1	0.0	

Surrogate(s)

Parameter	Units	% Spike Recovery	Control Limits %
4,4'-Dibromobiphenyl (S)	%	85.4	70 - 130

Laboratory Fortified Blank (1317577); Lab Fortified Blank Duplicate (1317578)

Parameter	Units	Spiked Amount	Spike Result	% Spike Recovery	Control Limits %	Dup Result	% Dup Recovery	RPD	RPD Limit %	Qual
Aroclor-1242	ug/L	.5	.5	98.4	70 - 130	.5	97.8	0	30	
Aroclor-1016								0	30	
Aroclor-1221								0	30	
Aroclor-1232								0	30	
Aroclor-1248								0	30	
Aroclor-1254								0	30	
Aroclor-1260								0	30	
Chlordane								0	30	
Toxaphene								0	30	

Surrogate(s)

Parameter	Units	% Spike Recovery	Control Limits %	% Dup Recovery
4,4'-Dibromobiphenyl (S)	%	78	70 - 130	73

Laboratory Fortified Matrix (1317579) Original: Q1954104003

Parameter	Units	Spiked Amount	Spike Result	% Spike Recovery	Control Limits %	Qual
Aroclor-1242	ug/L	.5	1.2	235	70 - 130	SH

Surrogate(s)

Parameter	Units	% Spike Recovery	Control Limits %
4,4'-Dibromobiphenyl (S)	%	79.2	70 - 130

Quality Control (cont.)

Preparation Batch: OEXT / 7324
Preparation Method: E525.2 Pesticides by GC/MS
Associated Lab IDs: Q1954104003

Analysis Method: E525.2 Pesticides by GC/MS

Laboratory Reagent Blank (1317506)

Parameter	Results	Units	MRL	LOD	Qualifier
trans-Nonachlor-chlordane	<0.1	ug/L	0.1	0.0	
Alachlor	<0.1	ug/L	0.1	0.0	
Aldrin	<0.1	ug/L	0.1	0.0	
alpha-Chlordane	<0.1	ug/L	0.1	0.0	
Atrazine	<0.1	ug/L	0.1	0.0	
Benzo(a)pyrene	<0.02	ug/L	0.10	0.02	
Bis(2-ethylhexyl)adipate	<0.5	ug/L	0.5	0.2	
Bis(2-Ethylhexyl)phthalate	<0.5	ug/L	0.5	0.2	
Bromacil	<0.1	ug/L	0.1	0.0	
Butachlor	<0.1	ug/L	0.1	0.0	
Dieldrin	<0.1	ug/L	0.1	0.0	
Endrin	<0.01	ug/L	0.10	0.01	
gamma-BHC (Lindane)	<0.02	ug/L	0.10	0.02	
gamma-Chlordane	<0.1	ug/L	0.1	0.0	
Heptachlor	<0.03	ug/L	0.10	0.03	
Heptachlor epoxide	<0.02	ug/L	0.10	0.02	
Hexachlorobenzene	<0.1	ug/L	0.1	0.0	
Hexachlorocyclopentadiene	<0.1	ug/L	0.1	0.0	
Methoxychlor	<0.1	ug/L	0.1	0.0	
Metolachlor	<0.1	ug/L	0.1	0.0	
Metribuzin	<0.1	ug/L	0.1	0.0	
Propachlor	<0.1	ug/L	0.1	0.0	
Simazine	<0.06	ug/L	0.10	0.06	

Surrogate(s)

Parameter	Units	% Spike Recovery	Control Limits %
1,3-Dimethyl-2-nitrobenzene (S)	%	99.2	70 - 130
Perylene-d12 (S)	%	96.4	70 - 130
Pyrene-d10 (S)	%	104	70 - 130
Triphenyl Phosphate (S)	%	105	70 - 130

Laboratory Fortified Blank (1317507); Lab Fortified Blank Duplicate (1317508)

Parameter	Units	Spiked Amount	Spike Result	% Spike Recovery	Control Limits %	Dup Result	% Dup Recovery	RPD	RPD Limit %	Qual
Alachlor	ug/L	5	5.1	102	70 - 130	5.2	105	1.94	30	
Aldrin	ug/L	5	4.5	89.2	70 - 130	4.5	90	0	30	
Atrazine	ug/L	5	5.3	105	70 - 130	5.5	110	3.7	30	
Benzo(a)pyrene	ug/L	5	4.75	95	70 - 130	4.93	98.6	3.72	30	
Bis(2-Ethylhexyl)phthalate	ug/L	5	5.1	102	70 - 130	5.2	104	1.94	30	
Bis(2-ethylhexyl)adipate	ug/L	5	5	101	70 - 130	5.1	102	1.98	30	
Bromacil	ug/L	5	5.5	111	70 - 130	5.6	112	1.8	30	
Butachlor	ug/L	5	5	99.2	70 - 130	5.3	105	5.83	30	
Dieldrin	ug/L	5	4.8	96.6	70 - 130	5	101	4.08	30	
Endrin	ug/L	5	5.01	100	70 - 130	5.28	106	5.25	30	
Heptachlor	ug/L	5	4.74	94.8	70 - 130	4.8	96	1.26	30	
Heptachlor epoxide	ug/L	5	5.03	101	70 - 130	5.12	102	1.77	30	
Hexachlorobenzene	ug/L	5	4.5	90.2	70 - 130	4.6	91.4	2.2	30	
Hexachlorocyclopentadiene	ug/L	5	4.3	86.8	70 - 130	4.4	87.4	2.3	30	
Methoxychlor	ug/L	5	5.3	105	70 - 130	5.4	108	1.87	30	

Quality Control (cont.)

Preparation Batch: OEXT / 7324
Preparation Method: E525.2 Pesticides by GC/MS
Associated Lab IDs: Q1954104003

Analysis Method: E525.2 Pesticides by GC/MS

(continued)

Parameter	Units	Spiked Amount	Spike Result	% Spike Recovery	Control Limits %	Dup Result	% Dup Recovery	RPD	RPD Limit %	Qual
Metolachlor	ug/L	5	5.1	102	70 - 130	5.3	106	3.85	30	
Metribuzin	ug/L	5	5.4	107	70 - 130	5.4	108	0	30	
Propachlor	ug/L	5	5.4	108	70 - 130	5.7	115	5.41	30	
Simazine	ug/L	5	5.46	109	70 - 130	5.65	113	3.42	30	
alpha-Chlordane	ug/L	5	4.8	96	70 - 130	5	99.8	4.08	30	
gamma-BHC (Lindane)	ug/L	5	5.23	105	70 - 130	5.22	104	.191	30	
gamma-Chlordane	ug/L	5	4.8	96.2	70 - 130	5	99.4	4.08	30	
trans-Nonachlor-chlordane	ug/L	5	4.8	95.2	70 - 130	5	100	4.08	30	

Surrogate(s)

Parameter	Units	% Spike Recovery	Control Limits %	% Dup Recovery
1,3-Dimethyl-2-nitrobenzene (S)	%	93.2	70 - 130	96.2
Perylene-d12 (S)	%	90.2	70 - 130	95.6
Pyrene-d10 (S)	%	101	70 - 130	102
Triphenyl Phosphate (S)	%	102	70 - 130	105

Laboratory Fortified Matrix (1317509) Original: Q1954104003

Parameter	Units	Spiked Amount	Spike Result	% Spike Recovery	Control Limits %	Qual
Alachlor	ug/L	5.1	5	97.2	70 - 130	
Aldrin	ug/L	5.1	4.1	79.4	70 - 130	
Atrazine	ug/L	5.1	5.1	101	70 - 130	
Benzo(a)pyrene	ug/L	5.11	4.7	92	70 - 130	
Bis(2-Ethylhexyl)phthalate	ug/L	5.1	5.6	109	70 - 130	
Bis(2-ethylhexyl)adipate	ug/L	5.1	4.9	96.6	70 - 130	
Bromacil	ug/L	5.1	5.6	109	70 - 130	
Butachlor	ug/L	5.1	4.8	94.6	70 - 130	
Dieldrin	ug/L	5.1	4.6	90.8	70 - 130	
Endrin	ug/L	5.11	4.68	91.6	70 - 130	
Heptachlor	ug/L	5.11	4.45	87.2	70 - 130	
Heptachlor epoxide	ug/L	5.11	4.82	94.4	70 - 130	
Hexachlorobenzene	ug/L	5.1	4.4	85.2	70 - 130	
Hexachlorocyclopentadiene	ug/L	5.1	3.9	76	70 - 130	
Methoxychlor	ug/L	5.1	5.2	102	70 - 130	
Metolachlor	ug/L	5.1	5	97	70 - 130	
Metribuzin	ug/L	5.1	5.4	105	70 - 130	
Propachlor	ug/L	5.1	5.7	112	70 - 130	
Simazine	ug/L	5.11	5.43	106	70 - 130	
alpha-Chlordane	ug/L	5.1	4.5	87.2	70 - 130	
gamma-BHC (Lindane)	ug/L	5.11	5.08	99.4	70 - 130	
gamma-Chlordane	ug/L	5.1	4.6	89.6	70 - 130	
trans-Nonachlor-chlordane	ug/L	5.1	4.5	88.4	70 - 130	

Surrogate(s)

Parameter	Units	% Spike Recovery	Control Limits %
1,3-Dimethyl-2-nitrobenzene (S)	%	99.4	70 - 130

Quality Control (cont.)

Preparation Batch: OEXT / 7324
Preparation Method: E525.2 Pesticides by GC/MS
Associated Lab IDs: Q1954104003

Analysis Method: E525.2 Pesticides by GC/MS

(continued)

Parameter	Units	Spiked Amount	Spike Result	% Spike Recovery	Control Limits	Qual
Surrogate(s)						
Parameter	Units		% Spike Recovery	Control Limits %		
Perylene-d12 (S)	%		90.8	70 - 130		
Pyrene-d10 (S)	%		101	70 - 130		
Triphenyl Phosphate (S)	%		100	70 - 130		



PWS_0430035_AC_20190812_Analysis Report
LCRA Environmental Laboratory Services
3505 Montopolis Drive
Austin, TX 78744
Phone: (512) 730-6022
Fax: (512) 730-6021

Quality Control Cross Reference

ORG/8488 - E508.1 Pesticides by GC

Lab ID	Sample ID	Prep Batch	Prep Method
Q1954104003	1907228	OEXT/7325	E508.1 Pesticides by GC

ORG/8480 - E525.2 Pesticides by GC/MS

Lab ID	Sample ID	Prep Batch	Prep Method
Q1954104003	1907228	OEXT/7324	E525.2 Pesticides by GC/MS