

Location and Results of City of Houston Drinking Water Supply Samples Adjacent to UPRR

On July 29, 2019, samples of the City of Houston drinking water supply were collected from each of the three locations identified below located within the Union Pacific Railroad (UPRR) site groundwater plume. Figure 1 depicts the physical locations of each sample. No chemicals of concern were detected in the samples. These results verify that the City of Houston’s drinking water supply is safe and unaffected by the contamination.





PWS\_1010013\_AC\_20190729\_LCR Analysis Report  
LCRA Environmental Laboratory Services  
3505 Montopolis Drive  
Austin, TX 78744  
Phone: (512) 730-6022  
Fax: (512) 730-6021

August 13, 2019

SHUBHA THAKUR  
CITY OF HOUSTON  
4200 LEELAND STREET  
Houston, TX 77023  
Shubha.Thakur@houstontx.gov

RE: Final Analytical Report Q1948235

Attn: SHUBHA THAKUR

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:

Ariana Dean  
Account Manager  
ariana.dean@lcra.org



Enclosures:



## Sample Summary

Lab ID	Sample ID	Matrix	Method	Date Collected	Date Received
Q1948235001	FH 714978 2820 CLEMENTINE	DW	E525.2 Pesticides by GC/MS	7/29/2019 10:00	7/30/2019 08:00
Q1948235002	FH 715027 5217 LIBERTY RD	DW	E525.2 Pesticides by GC/MS	7/29/2019 08:55	7/30/2019 08:00
Q1948235003	FH 7499156 2803 KASHMERE	DW	E525.2 Pesticides by GC/MS	7/29/2019 09:35	7/30/2019 08:00

## Report Definitions

- MRL - Minimum Reporting Limit**
- LOD - Limit of Detection**
- ML - Maximum Limit - Client Specified**
- MCL - Maximum Contaminant Level**
- MDL - Method Detection Limit**
- LOQ - Limit of Quantitation - Client Specified**
- DF - Dilution Factor**
- Qual - Qualifier**
- (S) - Surrogate Spike**
- QC Qual - red font indicates Result Value outside acceptable range**
- B- Analyte detected in method blank**
- S - Spike recovery outside limit**
- R - RPD outside duplicate precision limit**
- J - Analyte detected below quantitation limit**
- RPD - Relative Percent Difference**



## Project Summary

### Sample Analysis Comments

**Lab ID:** Q1948235001      **Sample ID:** FH 714978 2820  
CLEMENTINE

- Not Accredited - Aldrin
- 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

**Lab ID:** Q1948235002      **Sample ID:** FH 715027 5217  
LIBERTY RD

- Not Accredited - Aldrin
- 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

**Lab ID:** Q1948235003      **Sample ID:** FH 7499156 2803  
KASHMERE

- Not Accredited - Aldrin
- 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: Q1948235001	Date Received: 7/30/2019 08:00	Matrix: Drinking Water
Sample ID: FH 714978 2820 CLEMENTINE	Date Collected: 7/29/2019 10:00	Sample Type: SAMPLE
Project ID: CO HOUSTON NON-REGULATORY		

Parameter	Results	Units	MRL	LOD	DF	Prepared	By	Analyzed	By	Qual
<b>E525.2 PAHs (E525.2 Pesticides by GC/MS)</b>										
Benzo(a)pyrene	<0.10	ug/L	0.10	0.02	0.2	1	08/07/19 11:22	MO	08/07/19 23:54	BC
<b>E525.2 Pesticides (E525.2 Pesticides by GC/MS)</b>										
trans-Nonachlor-chlordane	<0.1	ug/L	0.1	0.05		1	08/07/19 11:22	MO	08/07/19 23:54	BC *
Alachlor	<0.1	ug/L	0.1	0.05	2	1	08/07/19 11:22	MO	08/07/19 23:54	BC *
Aldrin	<0.1	ug/L	0.1	0.05		1	08/07/19 11:22	MO	08/07/19 23:54	BC *
alpha-Chlordane	<0.1	ug/L	0.1	0.05	2	1	08/07/19 11:22	MO	08/07/19 23:54	BC *
Atrazine	0.2	ug/L	0.1	0.05	3	1	08/07/19 11:22	MO	08/07/19 23:54	BC
Bromacil	<0.1	ug/L	0.1	0.05		1	08/07/19 11:22	MO	08/07/19 23:54	BC *
Butachlor	<0.1	ug/L	0.1	0.05		1	08/07/19 11:22	MO	08/07/19 23:54	BC *
Dieldrin	<0.1	ug/L	0.1	0.05		1	08/07/19 11:22	MO	08/07/19 23:54	BC *
Endrin	<0.10	ug/L	0.10	0.01	2	1	08/07/19 11:22	MO	08/07/19 23:54	BC
gamma-BHC (Lindane)	<0.10	ug/L	0.10	0.02	0.2	1	08/07/19 11:22	MO	08/07/19 23:54	BC
gamma-Chlordane	<0.1	ug/L	0.1	0.05	2	1	08/07/19 11:22	MO	08/07/19 23:54	BC *
Heptachlor	<0.10	ug/L	0.10	0.03	0.4	1	08/07/19 11:22	MO	08/07/19 23:54	BC
Heptachlor epoxide	<0.10	ug/L	0.10	0.02	0.2	1	08/07/19 11:22	MO	08/07/19 23:54	BC
Hexachlorobenzene	<0.1	ug/L	0.1	0.05	1	1	08/07/19 11:22	MO	08/07/19 23:54	BC
Hexachlorocyclopentadiene	<0.1	ug/L	0.1	0.05	50	1	08/07/19 11:22	MO	08/07/19 23:54	BC
Methoxychlor	<0.1	ug/L	0.1	0.05	40	1	08/07/19 11:22	MO	08/07/19 23:54	BC
Metolachlor	<0.1	ug/L	0.1	0.05		1	08/07/19 11:22	MO	08/07/19 23:54	BC *
Metribuzin	<0.1	ug/L	0.1	0.05		1	08/07/19 11:22	MO	08/07/19 23:54	BC *
Propachlor	<0.1	ug/L	0.1	0.05		1	08/07/19 11:22	MO	08/07/19 23:54	BC *
Simazine	<0.10	ug/L	0.10	0.06	4	1	08/07/19 11:22	MO	08/07/19 23:54	BC
<b>E525.2 Phthalates (E525.2 Pesticides by GC/MS)</b>										
Bis(2-ethylhexyl)adipate	<0.5	ug/L	0.5	0.20	400	1	08/07/19 11:22	MO	08/07/19 23:54	BC
Bis(2-Ethylhexyl)phthalate	<0.5	ug/L	0.5	0.20	6	1	08/07/19 11:22	MO	08/07/19 23:54	BC



## Analytical Results (cont.)

Lab ID: Q1948235002	Date Received: 7/30/2019 08:00	Matrix: Drinking Water
Sample ID: FH 715027 5217 LIBERTY RD	Date Collected: 7/29/2019 08:55	Sample Type: SAMPLE
Project ID: CO HOUSTON NON-REGULATORY		

Parameter	Results	Units	MRL	LOD	DF	Prepared	By	Analyzed	By	Qual
<b>E525.2 PAHs (E525.2 Pesticides by GC/MS)</b>										
Benzo(a)pyrene	<0.10	ug/L	0.10	0.02	0.2	1	08/07/19 11:22	MO	08/08/19 00:22	BC
<b>E525.2 Pesticides (E525.2 Pesticides by GC/MS)</b>										
trans-Nonachlor-chlordane	<0.1	ug/L	0.1	0.05		1	08/07/19 11:22	MO	08/08/19 00:22	BC *
Alachlor	<0.1	ug/L	0.1	0.05	2	1	08/07/19 11:22	MO	08/08/19 00:22	BC
Aldrin	<0.1	ug/L	0.1	0.05		1	08/07/19 11:22	MO	08/08/19 00:22	BC *
alpha-Chlordane	<0.1	ug/L	0.1	0.05	2	1	08/07/19 11:22	MO	08/08/19 00:22	BC *
Atrazine	0.2	ug/L	0.1	0.05	3	1	08/07/19 11:22	MO	08/08/19 00:22	BC
Bromacil	<0.1	ug/L	0.1	0.05		1	08/07/19 11:22	MO	08/08/19 00:22	BC *
Butachlor	<0.1	ug/L	0.1	0.05		1	08/07/19 11:22	MO	08/08/19 00:22	BC *
Dieldrin	<0.1	ug/L	0.1	0.05		1	08/07/19 11:22	MO	08/08/19 00:22	BC *
Endrin	<0.10	ug/L	0.10	0.01	2	1	08/07/19 11:22	MO	08/08/19 00:22	BC
gamma-BHC (Lindane)	<0.10	ug/L	0.10	0.02	0.2	1	08/07/19 11:22	MO	08/08/19 00:22	BC
gamma-Chlordane	<0.1	ug/L	0.1	0.05	2	1	08/07/19 11:22	MO	08/08/19 00:22	BC *
Heptachlor	<0.10	ug/L	0.10	0.03	0.4	1	08/07/19 11:22	MO	08/08/19 00:22	BC
Heptachlor epoxide	<0.10	ug/L	0.10	0.02	0.2	1	08/07/19 11:22	MO	08/08/19 00:22	BC
Hexachlorobenzene	<0.1	ug/L	0.1	0.05	1	1	08/07/19 11:22	MO	08/08/19 00:22	BC
Hexachlorocyclopentadiene	<0.1	ug/L	0.1	0.05	50	1	08/07/19 11:22	MO	08/08/19 00:22	BC
Methoxychlor	<0.1	ug/L	0.1	0.05	40	1	08/07/19 11:22	MO	08/08/19 00:22	BC
Metolachlor	<0.1	ug/L	0.1	0.05		1	08/07/19 11:22	MO	08/08/19 00:22	BC *
Metribuzin	<0.1	ug/L	0.1	0.05		1	08/07/19 11:22	MO	08/08/19 00:22	BC *
Propachlor	<0.1	ug/L	0.1	0.05		1	08/07/19 11:22	MO	08/08/19 00:22	BC *
Simazine	<0.10	ug/L	0.10	0.06	4	1	08/07/19 11:22	MO	08/08/19 00:22	BC
<b>E525.2 Phthalates (E525.2 Pesticides by GC/MS)</b>										
Bis(2-ethylhexyl)adipate	<0.5	ug/L	0.5	0.20	400	1	08/07/19 11:22	MO	08/08/19 00:22	BC
Bis(2-Ethylhexyl)phthalate	<0.5	ug/L	0.5	0.20	6	1	08/07/19 11:22	MO	08/08/19 00:22	BC



## Analytical Results (cont.)

Lab ID: Q1948235003	Date Received: 7/30/2019 08:00	Matrix: Drinking Water
Sample ID: FH 7499156 2803 KASHMERE	Date Collected: 7/29/2019 09:35	Sample Type: SAMPLE
Project ID: CO HOUSTON NON-REGULATORY		

Parameter	Results	Units	MRL	LOD	DF	Prepared	By	Analyzed	By	Qual
<b>E525.2 PAHs (E525.2 Pesticides by GC/MS)</b>										
Benzo(a)pyrene	<0.10	ug/L	0.10	0.02	0.2	1	08/07/19 11:22	MO	08/08/19 00:50	BC
<b>E525.2 Pesticides (E525.2 Pesticides by GC/MS)</b>										
trans-Nonachlor-chlordane	<0.1	ug/L	0.1	0.05		1	08/07/19 11:22	MO	08/08/19 00:50	BC *
Alachlor	<0.1	ug/L	0.1	0.05	2	1	08/07/19 11:22	MO	08/08/19 00:50	BC
Aldrin	<0.1	ug/L	0.1	0.05		1	08/07/19 11:22	MO	08/08/19 00:50	BC *
alpha-Chlordane	<0.1	ug/L	0.1	0.05	2	1	08/07/19 11:22	MO	08/08/19 00:50	BC *
Atrazine	0.2	ug/L	0.1	0.05	3	1	08/07/19 11:22	MO	08/08/19 00:50	BC
Bromacil	<0.1	ug/L	0.1	0.05		1	08/07/19 11:22	MO	08/08/19 00:50	BC *
Butachlor	<0.1	ug/L	0.1	0.05		1	08/07/19 11:22	MO	08/08/19 00:50	BC *
Dieldrin	<0.1	ug/L	0.1	0.05		1	08/07/19 11:22	MO	08/08/19 00:50	BC *
Endrin	<0.10	ug/L	0.10	0.01	2	1	08/07/19 11:22	MO	08/08/19 00:50	BC
gamma-BHC (Lindane)	<0.10	ug/L	0.10	0.02	0.2	1	08/07/19 11:22	MO	08/08/19 00:50	BC
gamma-Chlordane	<0.1	ug/L	0.1	0.05	2	1	08/07/19 11:22	MO	08/08/19 00:50	BC *
Heptachlor	<0.10	ug/L	0.10	0.03	0.4	1	08/07/19 11:22	MO	08/08/19 00:50	BC
Heptachlor epoxide	<0.10	ug/L	0.10	0.02	0.2	1	08/07/19 11:22	MO	08/08/19 00:50	BC
Hexachlorobenzene	<0.1	ug/L	0.1	0.05	1	1	08/07/19 11:22	MO	08/08/19 00:50	BC
Hexachlorocyclopentadiene	<0.1	ug/L	0.1	0.05	50	1	08/07/19 11:22	MO	08/08/19 00:50	BC
Methoxychlor	<0.1	ug/L	0.1	0.05	40	1	08/07/19 11:22	MO	08/08/19 00:50	BC
Metolachlor	<0.1	ug/L	0.1	0.05		1	08/07/19 11:22	MO	08/08/19 00:50	BC *
Metribuzin	<0.1	ug/L	0.1	0.05		1	08/07/19 11:22	MO	08/08/19 00:50	BC *
Propachlor	<0.1	ug/L	0.1	0.05		1	08/07/19 11:22	MO	08/08/19 00:50	BC *
Simazine	<0.10	ug/L	0.10	0.06	4	1	08/07/19 11:22	MO	08/08/19 00:50	BC
<b>E525.2 Phthalates (E525.2 Pesticides by GC/MS)</b>										
Bis(2-ethylhexyl)adipate	<0.5	ug/L	0.5	0.20	400	1	08/07/19 11:22	MO	08/08/19 00:50	BC
Bis(2-Ethylhexyl)phthalate	<0.5	ug/L	0.5	0.20	6	1	08/07/19 11:22	MO	08/08/19 00:50	BC



## Quality Control

**Preparation Batch:** ORG / 8434

**Analysis Method:** E525.2 Pesticides by GC/MS

**Preparation Method:** E525.2 Pesticides by GC/MS

**Associated Lab IDs:**

### Method Reporting Limit Check (1304013)

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

### Surrogate(s)

Parameter	Units	% Spike Recovery	Control Limits %
1,3-Dimethyl-2-nitrobenzene (S)	%	101	50 - 150
Perylene-d12 (S)	%	99.8	50 - 150
Pyrene-d10 (S)	%	100	50 - 150
Triphenyl Phosphate (S)	%	96.4	50 - 150





## Quality Control (cont.)

<b>Preparation Batch:</b> OEXT / 7287	<b>Analysis Method:</b> E525.2 Pesticides by GC/MS
<b>Preparation Method:</b> E525.2 Pesticides by GC/MS	
<b>Associated Lab IDs:</b> Q1948235001, Q1948235002, Q1948235003	

### Laboratory Reagent Blank (1305027)

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	<0.10	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	<0.10	ug/L	0.10	0.01	
gamma-BHC (Lindane)	<0.10	ug/L	0.10	0.02	
gamma-Chlordane	<0.1	ug/L	0.1	0.0	
Heptachlor	<0.10	ug/L	0.10	0.03	
Heptachlor epoxide	<0.10	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	<0.10	ug/L	0.10	0.06	

### Surrogate(s)

Parameter	Units	% Spike Recovery	Control Limits %
1,3-Dimethyl-2-nitrobenzene (S)	%	105	70 - 130
Perylene-d12 (S)	%	96.2	70 - 130
Pyrene-d10 (S)	%	96.8	70 - 130
Triphenyl Phosphate (S)	%	99.8	70 - 130

### Laboratory Fortified Blank (1305028); Lab Fortified Blank Duplicate (1305029)

Parameter	Units	Spiked Amount	Spike Result	% Spike Recovery	Control Limits %	Dup Result	% Dup Recovery	RPD	RPD Limit %
trans-Nonachlor-chlordane	ug/L	5	4.5	90.4	70 - 130	4.7	93.4	3.26	30
Alachlor	ug/L	5	5.7	113	70 - 130	5.3	105	7.34	30
Aldrin	ug/L	5	4.7	94	70 - 130	4.6	92.4	1.72	30
alpha-Chlordane	ug/L	5	4.5	90.6	70 - 130	4.7	93.4	3.04	30
Atrazine	ug/L	5	5.8	115	70 - 130	5.4	108	6.28	30
Benzo(a)pyrene	ug/L	5	4.94	98.8	70 - 130	5.04	101	2.2	30
Bis(2-ethylhexyl)adipate	ug/L	5	5.3	106	70 - 130	5.2	105	.948	30
Bis(2-Ethylhexyl)phthalate	ug/L	5	5.3	106	70 - 130	5.2	104	1.9	30
Bromacil	ug/L	5	6.1	121	70 - 130	5.7	114	5.96	30
Butachlor	ug/L	5	5.2	104	70 - 130	5.2	104	0	30
Dieldrin	ug/L	5	4.7	93.8	70 - 130	4.8	95.8	2.11	30
Endrin	ug/L	5	5.09	102	70 - 130	5.17	103	.976	30
gamma-BHC (Lindane)	ug/L	5	5.19	104	70 - 130	5.1	102	1.94	30
gamma-Chlordane	ug/L	5	4.6	92	70 - 130	4.7	93.4	1.51	30
Heptachlor	ug/L	5	4.86	97.2	70 - 130	4.85	97	.206	30



## Quality Control (cont.)

<b>Preparation Batch:</b> OEXT / 7287	<b>Analysis Method:</b> E525.2 Pesticides by GC/MS
<b>Preparation Method:</b> E525.2 Pesticides by GC/MS	
<b>Associated Lab IDs:</b> Q1948235001, Q1948235002, Q1948235003	

(continued)

Parameter	Units	Spiked Amount	Spike Result	% Spike Recovery	Control Limits %	Dup Result	% Dup Recovery	RPD	RPD Limit	Qual
Heptachlor epoxide	ug/L	5	5.27	105	70 - 130	5.02	100	4.88	30	
Hexachlorobenzene	ug/L	5	4.5	90.6	70 - 130	4.6	91	.441	30	
Hexachlorocyclopentadiene	ug/L	5	3.8	76.6	70 - 130	3.9	78.2	2.07	30	
Methoxychlor	ug/L	5	5.2	105	70 - 130	5.2	104	.957	30	
Metolachlor	ug/L	5	5.8	115	70 - 130	5.3	107	7.21	30	
Metribuzin	ug/L	5	5.6	112	70 - 130	5.4	107	4.57	30	
Propachlor	ug/L	5	6.1	122	70 - 130	5.7	115	5.91	30	
Simazine	ug/L	5	5.84	117	70 - 130	5.37	107	8.93	30	

### Surrogate(s)

Parameter	Units	% Spike Recovery	Control Limits %	% Dup Recovery
1,3-Dimethyl-2-nitrobenzene (S)	%	97.2	70 - 130	99.6
Perylene-d12 (S)	%	96	70 - 130	98
Pyrene-d10 (S)	%	94.8	70 - 130	97.4
Triphenyl Phosphate (S)	%	103	70 - 130	102

### Laboratory Fortified Matrix (1305030) Original: Q1949480001

Parameter	Units	Spiked Amount	Spike Result	% Spike Recovery	Control Limits %
trans-Nonachlor-chlordane	ug/L	5.1	4.8	93.8	70 - 130
Alachlor	ug/L	5.1	5.1	99.8	70 - 130
Aldrin	ug/L	5.1	4.6	91	70 - 130
alpha-Chlordane	ug/L	5.1	4.8	94.8	70 - 130
Atrazine	ug/L	5.1	4.4	86.4	70 - 130
Benzo(a)pyrene	ug/L	5.09	5.26	103	70 - 130
Bis(2-ethylhexyl)adipate	ug/L	5.1	5.6	110	70 - 130
Bis(2-Ethylhexyl)phthalate	ug/L	5.1	5.5	108	70 - 130
Bromacil	ug/L	5.1	6.2	123	70 - 130
Butachlor	ug/L	5.1	5.2	102	70 - 130
Dieldrin	ug/L	5.1	4.9	95.8	70 - 130
Endrin	ug/L	5.09	4.44	87.2	70 - 130
gamma-BHC (Lindane)	ug/L	5.09	5.4	106	70 - 130
gamma-Chlordane	ug/L	5.1	4.9	96.2	70 - 130
Heptachlor	ug/L	5.09	4.81	94.6	70 - 130
Heptachlor epoxide	ug/L	5.09	5.18	102	70 - 130
Hexachlorobenzene	ug/L	5.1	4.5	89.4	70 - 130
Hexachlorocyclopentadiene	ug/L	5.1	4	79.6	70 - 130
Methoxychlor	ug/L	5.1	5.6	111	70 - 130
Metolachlor	ug/L	5.1	5.5	108	70 - 130
Metribuzin	ug/L	5.1	5.3	104	70 - 130
Propachlor	ug/L	5.1	6	117	70 - 130
Simazine	ug/L	5.09	4.57	89.8	70 - 130

### Surrogate(s)

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



## Quality Control (cont.)

<b>Preparation Batch:</b> OEXT / 7287	<b>Analysis Method:</b> E525.2 Pesticides by GC/MS
<b>Preparation Method:</b> E525.2 Pesticides by GC/MS	
<b>Associated Lab IDs:</b> Q1948235001, Q1948235002, Q1948235003	

(continued)

Parameter	Units	Spiked Amount	Spike Result	% Spike Recovery	Control Limits %	Qual
<b>Surrogate(s)</b>						
<b>Parameter</b>	<b>Units</b>	<b>% Spike Recovery</b>	<b>Control Limits %</b>			
Perylene-d12 (S)	%	93.2	70 - 130			
Pyrene-d10 (S)	%	98.8	70 - 130			
Triphenyl Phosphate (S)	%	104	70 - 130			



## Quality Control (cont.)

<b>Preparation Batch:</b> OEXT / 8434	<b>Analysis Method:</b> E525.2 Pesticides by GC/MS
<b>Preparation Method:</b> E525.2 Pesticides by GC/MS	
<b>Associated Lab IDs:</b> Q1948235001, Q1948235002, Q1948235003	

### Method Reporting Limit Check (1304013)

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

### Surrogate(s)

Parameter	Units	% Spike Recovery	Control Limits %
1,3-Dimethyl-2-nitrobenzene (S)	%	101	50 - 150
Perylene-d12 (S)	%	99.8	50 - 150
Pyrene-d10 (S)	%	100	50 - 150
Triphenyl Phosphate (S)	%	96.4	50 - 150



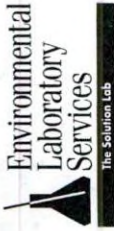
PWS\_1010013\_AC\_20190729\_LCR Analysis Report  
LCRA Environmental Laboratory Services  
3505 Montopolis Drive  
Austin, TX 78744  
Phone: (512) 730-6022  
Fax: (512) 730-6021

## Quality Control Cross Reference

*Batch ID: ORG/8434 - Analytical Method: E525.2 Pesticides by GC/MS*

Lab ID	Sample ID	Prep Batch	Prep Method
Q1948235001	FH 714978 2820 CLEMENTINE	OEXT/7287	E525.2 Pesticides by GC/MS
Q1948235002	FH 715027 5217 LIBERTY RD	OEXT/7287	E525.2 Pesticides by GC/MS
Q1948235003	FH 7499156 2803 KASHMERE	OEXT/7287	E525.2 Pesticides by GC/MS

Q1948235



LCRA - Environmental Lab  
 3505 Montopolis Dr.  
 Austin, TX 78744

Phone: (512) 356-6022 or 1-800-776-5272  
 Fax: (512) 356-6021  
<https://els.lcra.org>

LCRA Environmental Laboratory Services  
 Request for Analysis Chain-of-Custody Record



Lab ID#: \_\_\_\_\_  
 Client PO: \_\_\_\_\_  
 Invoice To: \_\_\_\_\_

Report To: Shubha Thakur  
 4200 Leeland St. Houston  
 Annex building, ~~Houston~~  
 TX 77023

Project: City of Houston Analysis E525.2  
 Client: City of Houston  
 Collector: Kevin Lancaster  
 Contact: Shubha Thakur  
 Event#: 95570  
 Phone: 832-395-6010

LAB USE ONLY	Sample ID *	Collected *		Matrix*	Container(s) Type/Preservative/Number *			Requested Analysis *															
		Date*	Time * HH:MM		AQ = Aqueous S = Solid T = Tissue DW = Drinking Water	COMP SITE Y/N	FILTERED Y/N	GRAB Y/N															
1	OH FH #714978 / 2820 Clementine	7-29-19	10:00 AM								EPA 525.2												
2																							
3	OH FH #715027 / 5217 Liberty RD	7-29-19	8:55 AM																				
4																							
5	OH FH #7499156 / 2803 Kashmere	7-29-19	9:35 AM																				
6																							
7																							
8																							
9																							
10																							

SIN # 91143960 Z5433406

Transfers	Relinquished By	Date/Time	Received By	Date/Time	Cooler Temp: 10-0
1	Kevin Lancaster	7-29-19 10:37 AM	Dione Eggs	7/29/19 10:37 AM	
2	Dione Eggs	7-29-19 12:30 PM			
3				7/30/19 8:00 AM	



01948235 410238

Note: Relinquishing sample(s) and signing the COC, client agrees to accept and is bound by the ELS Standard Terms and Conditions. All fields with an asterisk (\*) are required to be completed.