

Analytical Report

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/23/19
Work Order: 19-01-1512
Preparation: EPA 7471A Total
Method: EPA 7471A
Units: mg/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-278-512	N/A	Solid	Mercury 08	01/29/19	01/29/19 18:27	190129L04E

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Mercury	ND	0.0197	0.00578	1.00	

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/23/19
 Work Order: 19-01-1512
 Preparation: N/A
 Method: ASTM D4464 (M)
 Units: %

Project: City of Newport Beach - Federal Channels

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC3-04-012319	19-01-1512-1-C	01/23/19 08:15	Sediment	LPSA 1	N/A	01/30/19 19:24	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	0.69	
Silt (0.00391 to 0.0625mm)	1.68	
Total Silt and Clay (0 to 0.0625mm)	2.37	
Very Fine Sand (0.0625 to 0.125mm)	1.65	
Fine Sand (0.125 to 0.25mm)	14.09	
Medium Sand (0.25 to 0.5mm)	31.67	
Coarse Sand (0.5 to 1mm)	32.30	
Very Coarse Sand (1 to 2mm)	15.70	
Gravel (greater than 2mm)	2.23	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC1-01-012319	19-01-1512-3-B	01/23/19 11:15	Sediment	LPSA 1	N/A	01/30/19 19:34	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	20.62	
Silt (0.00391 to 0.0625mm)	40.19	
Total Silt and Clay (0 to 0.0625mm)	60.81	
Very Fine Sand (0.0625 to 0.125mm)	1.91	
Fine Sand (0.125 to 0.25mm)	8.20	
Medium Sand (0.25 to 0.5mm)	19.59	
Coarse Sand (0.5 to 1mm)	9.47	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC1-02-012319	19-01-1512-5-B	01/23/19 13:45	Sediment	LPSA 1	N/A	01/30/19 19:44	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	28.76	
Silt (0.00391 to 0.0625mm)	55.79	
Total Silt and Clay (0 to 0.0625mm)	84.54	
Very Fine Sand (0.0625 to 0.125mm)	3.13	
Fine Sand (0.125 to 0.25mm)	10.96	
Medium Sand (0.25 to 0.5mm)	1.36	
Coarse Sand (0.5 to 1mm)	ND	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/23/19
 Work Order: 19-01-1512
 Preparation: N/A
 Method: ASTM D4464 (M)
 Units: %

Project: City of Newport Beach - Federal Channels

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC1-03-012319	19-01-1512-7-B	01/23/19 15:30	Sediment	LPSA 1	N/A	01/30/19 19:50	

<u>Parameter</u>	<u>Result</u>	<u>Qualifiers</u>
Clay (less than 0.00391mm)	15.11	
Silt (0.00391 to 0.0625mm)	29.78	
Total Silt and Clay (0 to 0.0625mm)	44.88	
Very Fine Sand (0.0625 to 0.125mm)	5.72	
Fine Sand (0.125 to 0.25mm)	23.84	
Medium Sand (0.25 to 0.5mm)	17.24	
Coarse Sand (0.5 to 1mm)	6.08	
Very Coarse Sand (1 to 2mm)	2.24	
Gravel (greater than 2mm)	ND	

NC1-04-012319	19-01-1512-9-B	01/23/19 17:00	Sediment	LPSA 1	N/A	01/30/19 19:58	
----------------------	-----------------------	---------------------------	-----------------	---------------	------------	---------------------------	--

<u>Parameter</u>	<u>Result</u>	<u>Qualifiers</u>
Clay (less than 0.00391mm)	15.91	
Silt (0.00391 to 0.0625mm)	36.68	
Total Silt and Clay (0 to 0.0625mm)	52.59	
Very Fine Sand (0.0625 to 0.125mm)	7.06	
Fine Sand (0.125 to 0.25mm)	29.24	
Medium Sand (0.25 to 0.5mm)	10.44	
Coarse Sand (0.5 to 1mm)	0.68	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/23/19
 Work Order: 19-01-1512
 Preparation: EPA 3541
 Method: EPA 8081A
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC3-04-012319	19-01-1512-1-AA	01/23/19 08:15	Sediment	GC 51	01/30/19	02/01/19 11:54	190130L09

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	1.3	0.55	1.00	
Alpha-BHC	ND	2.5	0.93	1.00	
Beta-BHC	ND	1.3	0.62	1.00	
Delta-BHC	ND	2.5	1.1	1.00	
Gamma-BHC	ND	1.3	0.56	1.00	
Dieldrin	ND	1.3	0.55	1.00	
Trans-nonachlor	ND	1.3	0.34	1.00	
2,4'-DDD	ND	1.3	0.36	1.00	
2,4'-DDE	ND	2.5	1.2	1.00	
2,4'-DDT	ND	1.3	0.40	1.00	
4,4'-DDD	ND	1.3	0.63	1.00	
4,4'-DDE	6.4	1.3	0.56	1.00	
4,4'-DDT	ND	1.3	0.55	1.00	
Endosulfan I	ND	1.3	0.50	1.00	
Endosulfan II	ND	1.3	0.59	1.00	
Endosulfan Sulfate	ND	1.3	0.66	1.00	
Endrin	ND	1.3	0.61	1.00	
Endrin Aldehyde	ND	1.3	0.76	1.00	
Endrin Ketone	ND	1.3	0.63	1.00	
Heptachlor	ND	1.3	0.54	1.00	
Heptachlor Epoxide	ND	2.5	0.93	1.00	
Methoxychlor	ND	1.3	0.70	1.00	
Toxaphene	ND	25	11	1.00	
Alpha Chlordane	ND	1.3	0.51	1.00	
Gamma Chlordane	ND	2.5	1.1	1.00	
Cis-nonachlor	ND	1.3	0.33	1.00	
Oxychlordane	ND	1.3	0.34	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
2,4,5,6-Tetrachloro-m-Xylene	84	25-145			
Decachlorobiphenyl	101	24-168			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/23/19
 Work Order: 19-01-1512
 Preparation: EPA 3541
 Method: EPA 8081A
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC1-01-012319	19-01-1512-3-AA	01/23/19 11:15	Sediment	GC 51	01/30/19	01/31/19 11:39	190130L09

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	1.8	0.77	1.00	
Alpha-BHC	ND	3.5	1.3	1.00	
Beta-BHC	ND	1.8	0.87	1.00	
Delta-BHC	ND	3.5	1.5	1.00	
Gamma-BHC	ND	1.8	0.78	1.00	
Dieldrin	ND	1.8	0.77	1.00	
Trans-nonachlor	ND	1.8	0.48	1.00	
2,4'-DDD	ND	1.8	0.50	1.00	
2,4'-DDE	ND	3.5	1.7	1.00	
2,4'-DDT	ND	1.8	0.55	1.00	
4,4'-DDD	ND	1.8	0.88	1.00	
4,4'-DDT	ND	1.8	0.77	1.00	
Endosulfan I	ND	1.8	0.70	1.00	
Endosulfan II	ND	1.8	0.83	1.00	
Endosulfan Sulfate	ND	1.8	0.92	1.00	
Endrin	ND	1.8	0.85	1.00	
Endrin Aldehyde	ND	1.8	1.1	1.00	
Endrin Ketone	ND	1.8	0.88	1.00	
Heptachlor	ND	1.8	0.76	1.00	
Heptachlor Epoxide	ND	3.5	1.3	1.00	
Methoxychlor	ND	1.8	0.98	1.00	
Toxaphene	ND	35	16	1.00	
Alpha Chlordane	ND	1.8	0.71	1.00	
Gamma Chlordane	ND	3.5	1.6	1.00	
Cis-nonachlor	ND	1.8	0.46	1.00	
Oxychlordane	ND	1.8	0.47	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2,4,5,6-Tetrachloro-m-Xylene	69	25-145	
Decachlorobiphenyl	91	24-168	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/23/19
Work Order: 19-01-1512
Preparation: EPA 3541
Method: EPA 8081A
Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 3 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC1-01-012319	19-01-1512-3-AA	01/23/19 11:15	Sediment	GC 51	01/30/19	02/01/19 14:36	190130L09

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
4,4'-DDE	14	8.8	3.9	5.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2,4,5,6-Tetrachloro-m-Xylene	62	25-145			
Decachlorobiphenyl	80	24-168			

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/23/19
 Work Order: 19-01-1512
 Preparation: EPA 3541
 Method: EPA 8081A
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 4 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC1-02-012319	19-01-1512-5-AA	01/23/19 13:45	Sediment	GC 51	01/30/19	02/01/19 12:08	190130L09

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	1.7	0.73	1.00	
Alpha-BHC	ND	3.3	1.2	1.00	
Beta-BHC	ND	1.7	0.83	1.00	
Delta-BHC	ND	3.3	1.5	1.00	
Gamma-BHC	ND	1.7	0.74	1.00	
Dieldrin	ND	1.7	0.73	1.00	
Trans-nonachlor	ND	1.7	0.45	1.00	
2,4'-DDD	ND	1.7	0.48	1.00	
2,4'-DDE	ND	3.3	1.6	1.00	
2,4'-DDT	ND	1.7	0.52	1.00	
4,4'-DDD	ND	1.7	0.83	1.00	
4,4'-DDE	8.8	1.7	0.74	1.00	
4,4'-DDT	ND	1.7	0.73	1.00	
Endosulfan I	ND	1.7	0.66	1.00	
Endosulfan II	ND	1.7	0.78	1.00	
Endosulfan Sulfate	ND	1.7	0.87	1.00	
Endrin	ND	1.7	0.80	1.00	
Endrin Aldehyde	ND	1.7	1.0	1.00	
Endrin Ketone	ND	1.7	0.84	1.00	
Heptachlor	ND	1.7	0.72	1.00	
Heptachlor Epoxide	ND	3.3	1.2	1.00	
Methoxychlor	ND	1.7	0.93	1.00	
Toxaphene	ND	33	15	1.00	
Alpha Chlordane	ND	1.7	0.67	1.00	
Gamma Chlordane	ND	3.3	1.5	1.00	
Cis-nonachlor	ND	1.7	0.43	1.00	
Oxychlordane	ND	1.7	0.45	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
2,4,5,6-Tetrachloro-m-Xylene	74	25-145			
Decachlorobiphenyl	99	24-168			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/23/19
 Work Order: 19-01-1512
 Preparation: EPA 3541
 Method: EPA 8081A
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 5 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC1-03-012319	19-01-1512-7-AA	01/23/19 15:30	Sediment	GC 51	01/30/19	02/01/19 12:23	190130L09

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	1.5	0.66	1.00	
Alpha-BHC	ND	3.0	1.1	1.00	
Beta-BHC	ND	1.5	0.75	1.00	
Delta-BHC	ND	3.0	1.3	1.00	
Gamma-BHC	ND	1.5	0.67	1.00	
Dieldrin	ND	1.5	0.66	1.00	
Trans-nonachlor	ND	1.5	0.41	1.00	
2,4'-DDD	ND	1.5	0.43	1.00	
2,4'-DDE	ND	3.0	1.5	1.00	
2,4'-DDT	ND	1.5	0.47	1.00	
4,4'-DDD	ND	1.5	0.76	1.00	
4,4'-DDE	11	1.5	0.67	1.00	
4,4'-DDT	ND	1.5	0.66	1.00	
Endosulfan I	ND	1.5	0.60	1.00	
Endosulfan II	ND	1.5	0.71	1.00	
Endosulfan Sulfate	ND	1.5	0.79	1.00	
Endrin	ND	1.5	0.73	1.00	
Endrin Aldehyde	ND	1.5	0.91	1.00	
Endrin Ketone	ND	1.5	0.76	1.00	
Heptachlor	ND	1.5	0.65	1.00	
Heptachlor Epoxide	ND	3.0	1.1	1.00	
Methoxychlor	ND	1.5	0.84	1.00	
Toxaphene	ND	30	14	1.00	
Alpha Chlordane	ND	1.5	0.61	1.00	
Gamma Chlordane	1.7	3.0	1.3	1.00	J
Cis-nonachlor	ND	1.5	0.39	1.00	
Oxychlordane	ND	1.5	0.41	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
2,4,5,6-Tetrachloro-m-Xylene	73	25-145			
Decachlorobiphenyl	89	24-168			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/23/19
 Work Order: 19-01-1512
 Preparation: EPA 3541
 Method: EPA 8081A
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 6 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC1-04-012319	19-01-1512-9-AA	01/23/19 17:00	Sediment	GC 51	01/30/19	02/01/19 12:37	190130L09

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	1.6	0.72	1.00	
Alpha-BHC	ND	3.3	1.2	1.00	
Beta-BHC	ND	1.6	0.82	1.00	
Delta-BHC	ND	3.3	1.4	1.00	
Gamma-BHC	ND	1.6	0.73	1.00	
Dieldrin	ND	1.6	0.72	1.00	
Trans-nonachlor	ND	1.6	0.45	1.00	
2,4'-DDD	ND	1.6	0.47	1.00	
2,4'-DDE	ND	3.3	1.6	1.00	
2,4'-DDT	ND	1.6	0.52	1.00	
4,4'-DDD	5.5	1.6	0.83	1.00	
4,4'-DDT	ND	1.6	0.72	1.00	
Endosulfan I	ND	1.6	0.65	1.00	
Endosulfan II	ND	1.6	0.78	1.00	
Endosulfan Sulfate	ND	1.6	0.86	1.00	
Endrin	ND	1.6	0.79	1.00	
Endrin Aldehyde	ND	1.6	1.0	1.00	
Endrin Ketone	ND	1.6	0.83	1.00	
Heptachlor	ND	1.6	0.71	1.00	
Heptachlor Epoxide	ND	3.3	1.2	1.00	
Methoxychlor	ND	1.6	0.92	1.00	
Toxaphene	ND	33	15	1.00	
Alpha Chlordane	ND	1.6	0.67	1.00	
Gamma Chlordane	2.0	3.3	1.5	1.00	J
Cis-nonachlor	ND	1.6	0.43	1.00	
Oxychlordane	ND	1.6	0.44	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2,4,5,6-Tetrachloro-m-Xylene	73	25-145	
Decachlorobiphenyl	90	24-168	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/23/19
Work Order: 19-01-1512
Preparation: EPA 3541
Method: EPA 8081A
Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 7 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC1-04-012319	19-01-1512-9-AA	01/23/19 17:00	Sediment	GC 51	01/30/19	02/01/19 14:50	190130L09

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
4,4'-DDE	13	8.2	3.7	5.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2,4,5,6-Tetrachloro-m-Xylene	67	25-145			
Decachlorobiphenyl	87	24-168			

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/23/19
 Work Order: 19-01-1512
 Preparation: EPA 3541
 Method: EPA 8081A
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 8 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-858-608	N/A	Solid	GC 51	01/30/19	01/31/19 07:07	190130L09

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Aldrin	ND	1.0	0.44	1.00	
Alpha-BHC	ND	2.0	0.74	1.00	
Beta-BHC	ND	1.0	0.50	1.00	
Delta-BHC	ND	2.0	0.88	1.00	
Gamma-BHC	ND	1.0	0.45	1.00	
Dieldrin	ND	1.0	0.44	1.00	
Trans-nonachlor	ND	1.0	0.27	1.00	
2,4'-DDD	ND	1.0	0.29	1.00	
2,4'-DDE	ND	2.0	0.99	1.00	
2,4'-DDT	ND	1.0	0.31	1.00	
4,4'-DDD	ND	1.0	0.50	1.00	
4,4'-DDE	ND	1.0	0.44	1.00	
4,4'-DDT	ND	1.0	0.44	1.00	
Endosulfan I	ND	1.0	0.40	1.00	
Endosulfan II	ND	1.0	0.47	1.00	
Endosulfan Sulfate	ND	1.0	0.52	1.00	
Endrin	ND	1.0	0.48	1.00	
Endrin Aldehyde	ND	1.0	0.60	1.00	
Endrin Ketone	ND	1.0	0.50	1.00	
Heptachlor	ND	1.0	0.43	1.00	
Heptachlor Epoxide	ND	2.0	0.74	1.00	
Methoxychlor	ND	1.0	0.56	1.00	
Toxaphene	ND	20	9.0	1.00	
Alpha Chlordane	ND	1.0	0.41	1.00	
Gamma Chlordane	ND	2.0	0.89	1.00	
Cis-nonachlor	ND	1.0	0.26	1.00	
Oxychlordane	ND	1.0	0.27	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
2,4,5,6-Tetrachloro-m-Xylene	64	25-145	
Decachlorobiphenyl	93	24-168	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/23/19
 Work Order: 19-01-1512
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHS
 Units: mg/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC3-04-012319	19-01-1512-1-AA	01/23/19 08:15	Sediment	GC/MS AAA	01/26/19	02/01/19 13:42	190126L02

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	ND	0.012	0.0029	1.00	
Acenaphthylene	ND	0.012	0.0022	1.00	
Anthracene	ND	0.012	0.0043	1.00	
Benzo (a) Anthracene	0.0053	0.012	0.0027	1.00	J
Benzo (a) Pyrene	0.0055	0.012	0.0023	1.00	J
Benzo (b) Fluoranthene	0.0052	0.012	0.0034	1.00	J
Benzo (g,h,i) Perylene	0.0039	0.012	0.0019	1.00	J
Benzo (k) Fluoranthene	0.0048	0.012	0.0035	1.00	J
Chrysene	0.0044	0.012	0.0028	1.00	J
Dibenz (a,h) Anthracene	ND	0.012	0.0024	1.00	
Fluoranthene	0.0059	0.012	0.0023	1.00	J
Fluorene	ND	0.012	0.0039	1.00	
Indeno (1,2,3-c,d) Pyrene	0.0035	0.012	0.0020	1.00	J
2-Methylnaphthalene	ND	0.012	0.0029	1.00	
1-Methylnaphthalene	ND	0.012	0.0029	1.00	
Naphthalene	ND	0.012	0.0043	1.00	
Phenanthrene	0.0033	0.012	0.0028	1.00	J
Pyrene	0.0064	0.012	0.0028	1.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	60	14-146	
Nitrobenzene-d5	40	18-162	
p-Terphenyl-d14	83	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/23/19
 Work Order: 19-01-1512
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs
 Units: mg/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC1-01-012319	19-01-1512-3-AA	01/23/19 11:15	Sediment	GC/MS AAA	01/26/19	02/01/19 16:56	190126L02

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	ND	0.018	0.0042	1.00	
Acenaphthylene	ND	0.018	0.0032	1.00	
Anthracene	ND	0.018	0.0062	1.00	
Benzo (a) Anthracene	0.0087	0.018	0.0038	1.00	J
Benzo (a) Pyrene	0.018	0.018	0.0032	1.00	J
Benzo (b) Fluoranthene	ND	0.018	0.0048	1.00	
Benzo (g,h,i) Perylene	0.0078	0.018	0.0027	1.00	J
Benzo (k) Fluoranthene	0.015	0.018	0.0049	1.00	J
Chrysene	0.011	0.018	0.0039	1.00	J
Dibenz (a,h) Anthracene	ND	0.018	0.0034	1.00	
Fluoranthene	0.014	0.018	0.0032	1.00	J
Fluorene	ND	0.018	0.0055	1.00	
Indeno (1,2,3-c,d) Pyrene	0.0071	0.018	0.0028	1.00	J
2-Methylnaphthalene	ND	0.018	0.0041	1.00	
1-Methylnaphthalene	ND	0.018	0.0041	1.00	
Naphthalene	ND	0.018	0.0061	1.00	
Phenanthrene	0.0063	0.018	0.0039	1.00	J
Pyrene	0.015	0.018	0.0040	1.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	48	14-146	
Nitrobenzene-d5	23	18-162	
p-Terphenyl-d14	74	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/23/19
 Work Order: 19-01-1512
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs
 Units: mg/kg

Project: City of Newport Beach - Federal Channels

Page 3 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC1-02-012319	19-01-1512-5-AA	01/23/19 13:45	Sediment	GC/MS AAA	01/26/19	02/01/19 14:21	190126L02

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	ND	0.017	0.0039	1.00	
Acenaphthylene	ND	0.017	0.0030	1.00	
Anthracene	ND	0.017	0.0058	1.00	
Benzo (a) Anthracene	0.011	0.017	0.0036	1.00	J
Benzo (a) Pyrene	0.024	0.017	0.0031	1.00	
Benzo (b) Fluoranthene	0.027	0.017	0.0046	1.00	
Benzo (g,h,i) Perylene	0.012	0.017	0.0026	1.00	J
Benzo (k) Fluoranthene	0.020	0.017	0.0047	1.00	
Chrysene	0.014	0.017	0.0037	1.00	J
Dibenz (a,h) Anthracene	ND	0.017	0.0033	1.00	
Fluoranthene	0.021	0.017	0.0031	1.00	
Fluorene	ND	0.017	0.0052	1.00	
Indeno (1,2,3-c,d) Pyrene	0.010	0.017	0.0027	1.00	J
2-Methylnaphthalene	ND	0.017	0.0039	1.00	
1-Methylnaphthalene	ND	0.017	0.0039	1.00	
Naphthalene	ND	0.017	0.0058	1.00	
Phenanthrene	0.0084	0.017	0.0037	1.00	J
Pyrene	0.025	0.017	0.0038	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	62	14-146	
Nitrobenzene-d5	44	18-162	
p-Terphenyl-d14	79	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/23/19
 Work Order: 19-01-1512
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs
 Units: mg/kg

Project: City of Newport Beach - Federal Channels

Page 4 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC1-03-012319	19-01-1512-7-AA	01/23/19 15:30	Sediment	GC/MS AAA	01/26/19	02/01/19 14:40	190126L02

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	0.042	0.015	0.0035	1.00	
Acenaphthylene	ND	0.015	0.0027	1.00	
Anthracene	ND	0.015	0.0052	1.00	
Benzo (a) Anthracene	0.0045	0.015	0.0032	1.00	J
Benzo (a) Pyrene	ND	0.015	0.0028	1.00	
Benzo (b) Fluoranthene	ND	0.015	0.0041	1.00	
Benzo (g,h,i) Perylene	ND	0.015	0.0023	1.00	
Benzo (k) Fluoranthene	ND	0.015	0.0042	1.00	
Chrysene	0.0039	0.015	0.0034	1.00	J
Dibenz (a,h) Anthracene	ND	0.015	0.0029	1.00	
Fluoranthene	0.0065	0.015	0.0027	1.00	J
Fluorene	ND	0.015	0.0047	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	0.015	0.0024	1.00	
2-Methylnaphthalene	ND	0.015	0.0035	1.00	
1-Methylnaphthalene	ND	0.015	0.0035	1.00	
Naphthalene	ND	0.015	0.0052	1.00	
Phenanthrene	0.0043	0.015	0.0033	1.00	J
Pyrene	0.011	0.015	0.0034	1.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	46	14-146	
Nitrobenzene-d5	23	18-162	
p-Terphenyl-d14	60	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/23/19
 Work Order: 19-01-1512
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs
 Units: mg/kg

Project: City of Newport Beach - Federal Channels

Page 5 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC1-04-012319	19-01-1512-9-AA	01/23/19 17:00	Sediment	GC/MS AAA	01/26/19	02/01/19 19:34	190126L02

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	0.086	0.017	0.0039	1.00	
Acenaphthylene	0.091	0.017	0.0030	1.00	
Anthracene	0.088	0.017	0.0058	1.00	
Benzo (a) Anthracene	0.098	0.017	0.0036	1.00	
Benzo (a) Pyrene	0.11	0.017	0.0031	1.00	
Benzo (b) Fluoranthene	0.097	0.017	0.0046	1.00	
Benzo (g,h,i) Perylene	0.11	0.017	0.0026	1.00	
Benzo (k) Fluoranthene	0.089	0.017	0.0047	1.00	
Chrysene	0.093	0.017	0.0037	1.00	
Dibenz (a,h) Anthracene	0.11	0.017	0.0033	1.00	
Fluoranthene	0.087	0.017	0.0030	1.00	
Fluorene	0.097	0.017	0.0052	1.00	
Indeno (1,2,3-c,d) Pyrene	0.10	0.017	0.0027	1.00	
2-Methylnaphthalene	0.092	0.017	0.0039	1.00	
1-Methylnaphthalene	0.081	0.017	0.0039	1.00	
Naphthalene	0.086	0.017	0.0058	1.00	
Phenanthrene	0.090	0.017	0.0037	1.00	
Pyrene	0.087	0.017	0.0038	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	59	14-146	
Nitrobenzene-d5	39	18-162	
p-Terphenyl-d14	62	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/23/19
 Work Order: 19-01-1512
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs
 Units: mg/kg

Project: City of Newport Beach - Federal Channels

Page 6 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-097-324	N/A	Solid	GC/MS AAA	01/26/19	02/01/19 12:02	190126L02

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	ND	0.010	0.0024	1.00	
Acenaphthylene	ND	0.010	0.0018	1.00	
Anthracene	ND	0.010	0.0035	1.00	
Benzo (a) Anthracene	ND	0.010	0.0022	1.00	
Benzo (a) Pyrene	ND	0.010	0.0018	1.00	
Benzo (b) Fluoranthene	ND	0.010	0.0027	1.00	
Benzo (g,h,i) Perylene	ND	0.010	0.0015	1.00	
Benzo (k) Fluoranthene	ND	0.010	0.0028	1.00	
Chrysene	ND	0.010	0.0022	1.00	
Dibenz (a,h) Anthracene	ND	0.010	0.0020	1.00	
Fluoranthene	ND	0.010	0.0018	1.00	
Fluorene	ND	0.010	0.0031	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	0.010	0.0016	1.00	
2-Methylnaphthalene	ND	0.010	0.0023	1.00	
1-Methylnaphthalene	ND	0.010	0.0023	1.00	
Naphthalene	ND	0.010	0.0035	1.00	
Phenanthrene	ND	0.010	0.0022	1.00	
Pyrene	ND	0.010	0.0022	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	82	14-146	
Nitrobenzene-d5	61	18-162	
p-Terphenyl-d14	82	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/23/19
 Work Order: 19-01-1512
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 12

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC3-04-012319	19-01-1512-1-AA	01/23/19 08:15	Sediment	GC/MS HHH	01/26/19	02/02/19 01:54	190126L03

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB018	ND	0.25	0.081	1.00	
PCB028	ND	0.25	0.086	1.00	
PCB037	ND	0.25	0.076	1.00	
PCB044	ND	0.25	0.19	1.00	
PCB049	ND	0.25	0.062	1.00	
PCB052	ND	0.25	0.24	1.00	
PCB066	ND	0.25	0.15	1.00	
PCB070	ND	0.25	0.089	1.00	
PCB074	ND	0.25	0.11	1.00	
PCB077	ND	0.25	0.14	1.00	
PCB081	ND	0.25	0.11	1.00	
PCB087	ND	0.25	0.14	1.00	
PCB099	0.21	0.25	0.059	1.00	J
PCB101	ND	0.25	0.055	1.00	
PCB105	ND	0.25	0.067	1.00	
PCB110	0.33	0.25	0.042	1.00	
PCB114	ND	0.25	0.092	1.00	
PCB118	ND	0.25	0.043	1.00	
PCB119	ND	0.25	0.078	1.00	
PCB123	ND	0.25	0.091	1.00	
PCB126	ND	0.25	0.068	1.00	
PCB128	ND	0.25	0.15	1.00	
PCB132/153	0.53	0.50	0.20	1.00	
PCB138/158	ND	0.50	0.44	1.00	
PCB149	0.38	0.25	0.15	1.00	
PCB151	ND	0.25	0.11	1.00	
PCB156	ND	0.25	0.096	1.00	
PCB157	ND	0.25	0.11	1.00	
PCB167	ND	0.25	0.17	1.00	
PCB168	ND	0.25	0.18	1.00	
PCB169	ND	0.25	0.081	1.00	
PCB170	ND	0.25	0.14	1.00	
PCB177	ND	0.25	0.15	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/23/19
Work Order: 19-01-1512
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners
Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 12

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB180	ND	0.25	0.11	1.00	
PCB183	ND	0.25	0.12	1.00	
PCB187	ND	0.25	0.13	1.00	
PCB189	ND	0.25	0.080	1.00	
PCB194	ND	0.25	0.092	1.00	
PCB201	ND	0.25	0.042	1.00	
PCB206	ND	0.25	0.14	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	51	14-146			
p-Terphenyl-d14	82	34-148			

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/23/19
 Work Order: 19-01-1512
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 3 of 12

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC1-01-012319	19-01-1512-3-AA	01/23/19 11:15	Sediment	GC/MS HHH	01/26/19	02/02/19 02:18	190126L03

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB018	ND	0.35	0.11	1.00	
PCB028	1.2	0.35	0.12	1.00	
PCB037	ND	0.35	0.11	1.00	
PCB044	1.3	0.35	0.27	1.00	
PCB049	2.5	0.35	0.088	1.00	
PCB052	2.3	0.35	0.34	1.00	
PCB066	3.6	0.35	0.22	1.00	
PCB070	ND	0.35	0.13	1.00	
PCB074	1.1	0.35	0.16	1.00	
PCB077	ND	0.35	0.20	1.00	
PCB081	ND	0.35	0.16	1.00	
PCB087	0.87	0.35	0.20	1.00	
PCB099	2.7	0.35	0.084	1.00	
PCB101	3.3	0.35	0.078	1.00	
PCB105	ND	0.35	0.094	1.00	
PCB110	2.8	0.35	0.060	1.00	
PCB114	ND	0.35	0.13	1.00	
PCB118	2.8	0.35	0.061	1.00	
PCB119	ND	0.35	0.11	1.00	
PCB123	ND	0.35	0.13	1.00	
PCB126	ND	0.35	0.097	1.00	
PCB128	ND	0.35	0.21	1.00	
PCB132/153	4.7	0.71	0.29	1.00	
PCB138/158	3.1	0.71	0.62	1.00	
PCB149	2.4	0.35	0.21	1.00	
PCB151	0.73	0.35	0.15	1.00	
PCB156	ND	0.35	0.14	1.00	
PCB157	ND	0.35	0.15	1.00	
PCB167	ND	0.35	0.23	1.00	
PCB168	ND	0.35	0.25	1.00	
PCB169	ND	0.35	0.12	1.00	
PCB170	0.86	0.35	0.20	1.00	
PCB177	0.80	0.35	0.21	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/23/19
Work Order: 19-01-1512
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners
Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 4 of 12

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB180	2.2	0.35	0.16	1.00	
PCB183	0.62	0.35	0.17	1.00	
PCB187	1.8	0.35	0.18	1.00	
PCB189	ND	0.35	0.11	1.00	
PCB194	ND	0.35	0.13	1.00	
PCB201	ND	0.35	0.060	1.00	
PCB206	ND	0.35	0.20	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	44	14-146			
p-Terphenyl-d14	81	34-148			

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/23/19
 Work Order: 19-01-1512
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 5 of 12

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC1-02-012319	19-01-1512-5-AA	01/23/19 13:45	Sediment	GC/MS HHH	01/26/19	02/02/19 02:42	190126L03

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB018	1.4	0.33	0.11	1.00	
PCB028	1.3	0.33	0.12	1.00	
PCB037	ND	0.33	0.10	1.00	
PCB044	1.3	0.33	0.25	1.00	
PCB049	ND	0.33	0.083	1.00	
PCB052	1.5	0.33	0.32	1.00	
PCB066	2.2	0.33	0.21	1.00	
PCB070	0.76	0.33	0.12	1.00	
PCB074	0.83	0.33	0.15	1.00	
PCB077	ND	0.33	0.19	1.00	
PCB081	ND	0.33	0.15	1.00	
PCB087	ND	0.33	0.19	1.00	
PCB099	1.6	0.33	0.079	1.00	
PCB101	2.1	0.33	0.074	1.00	
PCB105	ND	0.33	0.089	1.00	
PCB110	1.7	0.33	0.057	1.00	
PCB114	ND	0.33	0.12	1.00	
PCB118	1.6	0.33	0.058	1.00	
PCB119	ND	0.33	0.10	1.00	
PCB123	ND	0.33	0.12	1.00	
PCB126	ND	0.33	0.092	1.00	
PCB128	ND	0.33	0.20	1.00	
PCB132/153	2.9	0.67	0.27	1.00	
PCB138/158	2.3	0.67	0.59	1.00	
PCB149	1.5	0.33	0.20	1.00	
PCB151	ND	0.33	0.15	1.00	
PCB156	ND	0.33	0.13	1.00	
PCB157	ND	0.33	0.14	1.00	
PCB167	ND	0.33	0.22	1.00	
PCB168	ND	0.33	0.24	1.00	
PCB169	ND	0.33	0.11	1.00	
PCB170	ND	0.33	0.19	1.00	
PCB177	ND	0.33	0.20	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/23/19
Work Order: 19-01-1512
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners
Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 6 of 12

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB180	1.7	0.33	0.15	1.00	
PCB183	0.36	0.33	0.16	1.00	
PCB187	1.1	0.33	0.17	1.00	
PCB189	ND	0.33	0.11	1.00	
PCB194	ND	0.33	0.12	1.00	
PCB201	ND	0.33	0.057	1.00	
PCB206	0.69	0.33	0.19	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	53	14-146			
p-Terphenyl-d14	82	34-148			

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/23/19
 Work Order: 19-01-1512
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 7 of 12

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC1-03-012319	19-01-1512-7-AA	01/23/19 15:30	Sediment	GC/MS HHH	01/26/19	02/02/19 03:06	190126L03

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB018	ND	0.30	0.098	1.00	
PCB028	ND	0.30	0.10	1.00	
PCB037	ND	0.30	0.091	1.00	
PCB044	ND	0.30	0.23	1.00	
PCB049	ND	0.30	0.075	1.00	
PCB052	ND	0.30	0.29	1.00	
PCB066	1.2	0.30	0.19	1.00	
PCB070	ND	0.30	0.11	1.00	
PCB074	ND	0.30	0.14	1.00	
PCB077	ND	0.30	0.17	1.00	
PCB081	ND	0.30	0.14	1.00	
PCB087	ND	0.30	0.17	1.00	
PCB099	0.68	0.30	0.071	1.00	
PCB101	ND	0.30	0.067	1.00	
PCB105	ND	0.30	0.080	1.00	
PCB110	0.93	0.30	0.051	1.00	
PCB114	ND	0.30	0.11	1.00	
PCB118	1.0	0.30	0.052	1.00	
PCB119	ND	0.30	0.094	1.00	
PCB123	ND	0.30	0.11	1.00	
PCB126	ND	0.30	0.083	1.00	
PCB128	ND	0.30	0.18	1.00	
PCB132/153	1.6	0.60	0.24	1.00	
PCB138/158	1.3	0.60	0.53	1.00	
PCB149	0.83	0.30	0.18	1.00	
PCB151	ND	0.30	0.13	1.00	
PCB156	ND	0.30	0.12	1.00	
PCB157	ND	0.30	0.13	1.00	
PCB167	ND	0.30	0.20	1.00	
PCB168	ND	0.30	0.21	1.00	
PCB169	ND	0.30	0.098	1.00	
PCB170	ND	0.30	0.17	1.00	
PCB177	ND	0.30	0.18	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/23/19
Work Order: 19-01-1512
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners
Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 8 of 12

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB180	1.7	0.30	0.14	1.00	
PCB183	ND	0.30	0.14	1.00	
PCB187	0.99	0.30	0.15	1.00	
PCB189	ND	0.30	0.096	1.00	
PCB194	ND	0.30	0.11	1.00	
PCB201	ND	0.30	0.051	1.00	
PCB206	ND	0.30	0.17	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	39	14-146			
p-Terphenyl-d14	64	34-148			

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/23/19
 Work Order: 19-01-1512
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 9 of 12

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC1-04-012319	19-01-1512-9-AA	01/23/19 17:00	Sediment	GC/MS HHH	01/26/19	02/02/19 03:29	190126L03

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB018	ND	0.33	0.11	1.00	
PCB028	ND	0.33	0.12	1.00	
PCB037	ND	0.33	0.10	1.00	
PCB044	ND	0.33	0.25	1.00	
PCB049	ND	0.33	0.083	1.00	
PCB052	ND	0.33	0.32	1.00	
PCB066	ND	0.33	0.21	1.00	
PCB070	ND	0.33	0.12	1.00	
PCB074	ND	0.33	0.15	1.00	
PCB077	ND	0.33	0.19	1.00	
PCB081	ND	0.33	0.15	1.00	
PCB087	ND	0.33	0.19	1.00	
PCB099	ND	0.33	0.079	1.00	
PCB101	2.4	0.33	0.074	1.00	
PCB105	ND	0.33	0.089	1.00	
PCB110	ND	0.33	0.057	1.00	
PCB114	ND	0.33	0.12	1.00	
PCB118	ND	0.33	0.058	1.00	
PCB119	ND	0.33	0.10	1.00	
PCB123	ND	0.33	0.12	1.00	
PCB126	ND	0.33	0.092	1.00	
PCB128	ND	0.33	0.20	1.00	
PCB132/153	ND	0.67	0.27	1.00	
PCB138/158	ND	0.67	0.59	1.00	
PCB149	ND	0.33	0.20	1.00	
PCB151	ND	0.33	0.15	1.00	
PCB156	ND	0.33	0.13	1.00	
PCB157	ND	0.33	0.14	1.00	
PCB167	ND	0.33	0.22	1.00	
PCB168	ND	0.33	0.24	1.00	
PCB169	ND	0.33	0.11	1.00	
PCB170	ND	0.33	0.19	1.00	
PCB177	ND	0.33	0.20	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/23/19
Work Order: 19-01-1512
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners
Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 10 of 12

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB180	ND	0.33	0.15	1.00	
PCB183	ND	0.33	0.16	1.00	
PCB187	1.2	0.33	0.17	1.00	
PCB189	ND	0.33	0.11	1.00	
PCB194	ND	0.33	0.12	1.00	
PCB201	ND	0.33	0.057	1.00	
PCB206	ND	0.33	0.19	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	33	14-146			
p-Terphenyl-d14	112	34-148			

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/23/19
 Work Order: 19-01-1512
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 11 of 12

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-418-354	N/A	Solid	GC/MS HHH	01/26/19	02/01/19 21:33	190126L03

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB018	ND	0.20	0.065	1.00	
PCB028	ND	0.20	0.069	1.00	
PCB037	ND	0.20	0.061	1.00	
PCB044	ND	0.20	0.15	1.00	
PCB049	ND	0.20	0.050	1.00	
PCB052	ND	0.20	0.19	1.00	
PCB066	ND	0.20	0.12	1.00	
PCB070	ND	0.20	0.072	1.00	
PCB074	ND	0.20	0.090	1.00	
PCB077	ND	0.20	0.12	1.00	
PCB081	ND	0.20	0.090	1.00	
PCB087	ND	0.20	0.11	1.00	
PCB099	ND	0.20	0.047	1.00	
PCB101	ND	0.20	0.044	1.00	
PCB105	ND	0.20	0.053	1.00	
PCB110	ND	0.20	0.034	1.00	
PCB114	ND	0.20	0.074	1.00	
PCB118	ND	0.20	0.035	1.00	
PCB119	ND	0.20	0.062	1.00	
PCB123	ND	0.20	0.073	1.00	
PCB126	ND	0.20	0.055	1.00	
PCB128	ND	0.20	0.12	1.00	
PCB132/153	ND	0.40	0.16	1.00	
PCB138/158	ND	0.40	0.35	1.00	
PCB149	ND	0.20	0.12	1.00	
PCB151	ND	0.20	0.088	1.00	
PCB156	ND	0.20	0.077	1.00	
PCB157	ND	0.20	0.085	1.00	
PCB167	ND	0.20	0.13	1.00	
PCB168	ND	0.20	0.14	1.00	
PCB169	ND	0.20	0.065	1.00	
PCB170	ND	0.20	0.11	1.00	
PCB177	ND	0.20	0.12	1.00	
PCB180	ND	0.20	0.092	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/23/19
Work Order: 19-01-1512
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners
Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 12 of 12

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB183	ND	0.20	0.093	1.00	
PCB187	ND	0.20	0.10	1.00	
PCB189	ND	0.20	0.064	1.00	
PCB194	ND	0.20	0.074	1.00	
PCB201	ND	0.20	0.034	1.00	
PCB206	ND	0.20	0.12	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	55	14-146			
p-Terphenyl-d14	69	34-148			

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/23/19
 Work Order: 19-01-1512
 Preparation: EPA 3550B (M)
 Method: Organotins by Krone et al.
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC3-04-012319	19-01-1512-1-AA	01/23/19 08:15	Sediment	GC/MS Y	01/29/19	01/30/19 22:59	190129L04

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	11	3.8	0.93	1.00	
Monobutyltin	ND	3.8	1.8	1.00	
Tetrabutyltin	ND	3.8	0.94	1.00	
Tributyltin	ND	3.8	1.9	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	85	27-135	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC1-01-012319	19-01-1512-3-AA	01/23/19 11:15	Sediment	GC/MS Y	01/29/19	01/30/19 23:16	190129L04

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	44	5.2	1.3	1.00	
Monobutyltin	ND	5.2	2.4	1.00	
Tetrabutyltin	ND	5.2	1.3	1.00	
Tributyltin	3.8	5.2	2.6	1.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	56	27-135	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC1-02-012319	19-01-1512-5-AA	01/23/19 13:45	Sediment	GC/MS Y	01/29/19	01/30/19 23:33	190129L04

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	20	5.0	1.2	1.00	
Monobutyltin	ND	5.0	2.3	1.00	
Tetrabutyltin	ND	5.0	1.2	1.00	
Tributyltin	ND	5.0	2.5	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	76	27-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/23/19
 Work Order: 19-01-1512
 Preparation: EPA 3550B (M)
 Method: Organotins by Krone et al.
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC1-03-012319	19-01-1512-7-AA	01/23/19 15:30	Sediment	GC/MS Y	01/29/19	01/30/19 23:50	190129L04

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	34	4.6	1.1	1.00	
Monobutyltin	3.7	4.6	2.1	1.00	J
Tetrabutyltin	ND	4.6	1.1	1.00	
Tributyltin	2.8	4.6	2.3	1.00	J
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Tripentyltin	81	27-135			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC1-04-012319	19-01-1512-9-AA	01/23/19 17:00	Sediment	GC/MS Y	01/29/19	01/31/19 00:07	190129L04

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	24	4.9	1.2	1.00	
Monobutyltin	ND	4.9	2.2	1.00	
Tetrabutyltin	ND	4.9	1.2	1.00	
Tributyltin	3.9	4.9	2.4	1.00	J
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Tripentyltin	72	27-135			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-07-016-1662	N/A	Solid	GC/MS Y	01/29/19	01/30/19 21:33	190129L04

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	ND	3.0	0.73	1.00	
Monobutyltin	ND	3.0	1.4	1.00	
Tetrabutyltin	ND	3.0	0.74	1.00	
Tributyltin	ND	3.0	1.5	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Tripentyltin	90	27-135			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/23/19
Work Order: 19-01-1512
Preparation: N/A
Method: EPA 9060A

Project: City of Newport Beach - Federal Channels

Page 1 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
NC3-04-012319	Sample	Sediment	TOC 10	01/29/19	01/29/19 13:19	J0129TOCS1
NC3-04-012319	Matrix Spike	Sediment	TOC 10	01/29/19	01/29/19 13:19	J0129TOCS1
NC3-04-012319	Matrix Spike Duplicate	Sediment	TOC 10	01/29/19	01/29/19 13:19	J0129TOCS1

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Carbon, Total Organic	0.4920	3.000	3.315	94	3.361	96	75-125	1	0-25	


 Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/23/19
Work Order: 19-01-1512
Preparation: EPA 3541
Method: EPA 8270D (M)/TQ/EI

Project: City of Newport Beach - Federal Channels

Page 2 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
NC3-04-012319	Sample	Sediment	GCTQ 1	01/28/19	01/30/19 08:21	190128S07				
NC3-04-012319	Matrix Spike	Sediment	GCTQ 1	01/28/19	01/30/19 12:41	190128S07				
NC3-04-012319	Matrix Spike Duplicate	Sediment	GCTQ 1	01/28/19	01/30/19 13:33	190128S07				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Allethrin	ND	5.000	5.406	108	6.056	121	10-148	11	0-30	
Bifenthrin	ND	5.000	6.085	122	6.791	136	26-128	11	0-30	3
Cyfluthrin	ND	5.000	6.980	140	7.399	148	10-131	6	0-30	3
Cypermethrin	ND	5.000	6.189	124	6.765	135	10-136	9	0-30	
Deltamethrin/Tralomethrin	ND	5.000	6.749	135	7.689	154	13-190	13	0-30	
Fenpropathrin	ND	5.000	7.267	145	8.008	160	10-148	10	0-30	3
Fenvalerate/Esfenvalerate	ND	5.000	7.242	145	7.571	151	10-149	4	0-30	3
Fluvalinate	ND	5.000	6.323	126	6.917	138	10-121	9	0-30	3
Permethrin (cis/trans)	ND	5.000	7.207	144	7.858	157	45-123	9	0-30	3
Phenothrin	ND	5.000	8.089	162	8.985	180	45-165	11	0-30	3
Resmethrin/Bioresmethrin	ND	5.000	9.575	192	10.22	204	38-164	6	0-30	3
Tetramethrin	ND	5.000	8.147	163	8.958	179	15-153	9	0-30	3
lambda-Cyhalothrin	ND	5.000	7.224	144	8.220	164	10-123	13	0-30	3

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Spike/Spike Duplicate - Surrogate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/23/19
Work Order: 19-01-1512
Preparation: EPA 3541
Method: EPA 8270D (M)/TQ/EI

Project: City of Newport Beach - Federal Channels

Page 3 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number	
NC3-04-012319	Sample	Sediment	GCTQ 1	01/28/19	01/30/19 08:21	190128S07	
NC3-04-012319	Matrix Spike	Sediment	GCTQ 1	01/28/19	01/30/19 12:41	190128S07	
NC3-04-012319	Matrix Spike Duplicate	Sediment	GCTQ 1	01/28/19	01/30/19 13:33	190128S07	
Parameter	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	Qualifiers
Dibutylchloroendate	5.000	48.52	97	51.16	102	14-116	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/23/19
Work Order: 19-01-1512
Preparation: EPA 3050B
Method: EPA 6020

Project: City of Newport Beach - Federal Channels

Page 4 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
NC3-04-012319	Sample	Sediment	ICP/MS 05	01/28/19	01/29/19 14:08	190128S02
NC3-04-012319	Matrix Spike	Sediment	ICP/MS 05	01/28/19	01/29/19 13:54	190128S02
NC3-04-012319	Matrix Spike Duplicate	Sediment	ICP/MS 05	01/28/19	01/29/19 13:58	190128S02

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	2.161	25.00	31.48	117	31.30	117	80-120	1	0-20	
Cadmium	0.1162	25.00	29.31	117	28.83	115	80-120	2	0-20	
Chromium	4.979	25.00	35.65	123	34.36	118	80-120	4	0-20	3
Copper	7.095	25.00	37.40	121	35.98	116	80-120	4	0-20	3
Lead	4.541	25.00	34.30	119	34.15	118	80-120	0	0-20	
Nickel	3.048	25.00	31.20	113	30.28	109	80-120	3	0-20	
Selenium	0.4396	25.00	28.29	111	27.19	107	80-120	4	0-20	
Silver	ND	12.50	14.73	118	14.29	114	80-120	3	0-20	
Zinc	18.46	25.00	51.48	132	50.11	127	80-120	3	0-20	3

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/23/19
Work Order: 19-01-1512
Preparation: EPA 7471A Total
Method: EPA 7471A

Project: City of Newport Beach - Federal Channels

Page 5 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
NC3-04-012319	Sample	Sediment	Mercury 08	01/29/19	01/29/19 18:34	190129S04				
NC3-04-012319	Matrix Spike	Sediment	Mercury 08	01/29/19	01/29/19 18:36	190129S04				
NC3-04-012319	Matrix Spike Duplicate	Sediment	Mercury 08	01/29/19	01/29/19 18:38	190129S04				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	0.07125	0.8350	0.7740	84	0.7597	82	76-136	2	0-16	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/23/19
Work Order: 19-01-1512
Preparation: EPA 3541
Method: EPA 8081A

Project: City of Newport Beach - Federal Channels

Page 6 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
NC3-04-012319	Sample	Sediment	GC 51	01/30/19	02/01/19 11:54	190130S09
NC3-04-012319	Matrix Spike	Sediment	GC 51	01/30/19	01/31/19 10:56	190130S09
NC3-04-012319	Matrix Spike Duplicate	Sediment	GC 51	01/30/19	01/31/19 11:10	190130S09

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Aldrin	ND	5.000	2.102	42	2.984	60	50-135	35	0-25	3,4
Alpha-BHC	ND	5.000	3.543	71	3.584	72	50-135	1	0-25	
Beta-BHC	ND	5.000	5.268	105	4.612	92	50-135	13	0-25	
Delta-BHC	ND	5.000	3.637	73	3.591	72	50-135	1	0-25	
Gamma-BHC	ND	5.000	3.038	61	3.201	64	50-135	5	0-25	
Dieldrin	ND	5.000	2.954	59	3.112	62	50-135	5	0-25	
4,4'-DDD	ND	5.000	3.979	80	4.289	86	50-135	8	0-25	
4,4'-DDE	5.025	5.000	7.617	52	7.486	49	50-135	2	0-25	3
4,4'-DDT	ND	5.000	3.344	67	2.824	56	50-135	17	0-25	
Endosulfan I	ND	5.000	2.792	56	2.929	59	50-135	5	0-25	
Endosulfan II	ND	5.000	4.266	85	3.451	69	50-135	21	0-25	
Endosulfan Sulfate	ND	5.000	3.119	62	3.307	66	50-135	6	0-25	
Endrin	ND	5.000	2.663	53	2.938	59	50-135	10	0-25	
Endrin Aldehyde	ND	5.000	3.168	63	3.036	61	50-135	4	0-25	
Endrin Ketone	ND	5.000	3.451	69	3.419	68	50-135	1	0-25	
Heptachlor	ND	5.000	2.864	57	3.337	67	50-135	15	0-25	
Heptachlor Epoxide	ND	5.000	3.144	63	3.288	66	50-135	5	0-25	
Methoxychlor	ND	5.000	3.201	64	3.354	67	50-135	5	0-25	
Alpha Chlordane	ND	5.000	3.051	61	3.145	63	50-135	3	0-25	
Gamma Chlordane	ND	5.000	3.740	75	3.694	74	50-135	1	0-25	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Spike/Spike Duplicate - Surrogate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/23/19
Work Order: 19-01-1512
Preparation: EPA 3541
Method: EPA 8081A

Project: City of Newport Beach - Federal Channels

Page 7 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number	
NC3-04-012319	Sample	Sediment	GC 51	01/30/19	02/01/19 11:54	190130S09	
NC3-04-012319	Matrix Spike	Sediment	GC 51	01/30/19	01/31/19 10:56	190130S09	
NC3-04-012319	Matrix Spike Duplicate	Sediment	GC 51	01/30/19	01/31/19 11:10	190130S09	
Parameter	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	Qualifiers
2,4,5,6-Tetrachloro-m-Xylene	1.000	4.896	49	4.897	49	25-145	
Decachlorobiphenyl	1.000	6.672	67	6.067	61	24-168	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/23/19
Work Order: 19-01-1512
Preparation: EPA 3541
Method: EPA 8270C SIM PAHs

Project: City of Newport Beach - Federal Channels

Page 8 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
NC3-04-012319	Sample	Sediment	GC/MS AAA	01/26/19	02/01/19 13:42	190126S02
NC3-04-012319	Matrix Spike	Sediment	GC/MS AAA	01/26/19	02/01/19 13:03	190126S02
NC3-04-012319	Matrix Spike Duplicate	Sediment	GC/MS AAA	01/26/19	02/01/19 16:37	190126S02

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Acenaphthene	ND	0.1000	0.05076	51	0.06002	60	40-160	17	0-20	
Acenaphthylene	ND	0.1000	0.05556	56	0.05471	55	40-160	2	0-20	
Anthracene	ND	0.1000	0.06414	64	0.06939	69	40-160	8	0-20	
Benzo (a) Anthracene	ND	0.1000	0.06789	68	0.06562	66	40-160	3	0-20	
Benzo (a) Pyrene	ND	0.1000	0.06911	69	0.07634	76	40-160	10	0-20	
Benzo (b) Fluoranthene	ND	0.1000	0.06175	62	0.06468	65	40-160	5	0-20	
Benzo (g,h,i) Perylene	ND	0.1000	0.04364	44	0.03685	37	40-160	17	0-20	3
Benzo (k) Fluoranthene	ND	0.1000	0.06091	61	0.05678	57	40-160	7	0-20	
Chrysene	ND	0.1000	0.06356	64	0.06537	65	40-160	3	0-20	
Dibenz (a,h) Anthracene	ND	0.1000	0.04989	50	0.04272	43	40-160	15	0-20	
Fluoranthene	ND	0.1000	0.06990	70	0.07231	72	40-160	3	0-20	
Fluorene	ND	0.1000	0.06213	62	0.07055	71	40-160	13	0-20	
Indeno (1,2,3-c,d) Pyrene	ND	0.1000	0.04702	47	0.04168	42	40-160	12	0-20	
2-Methylnaphthalene	ND	0.1000	0.04913	49	0.05416	54	40-160	10	0-20	
1-Methylnaphthalene	ND	0.1000	0.04419	44	0.04779	48	40-160	8	0-20	
Naphthalene	ND	0.1000	0.04124	41	0.04742	47	40-160	14	0-20	
Phenanthrene	ND	0.1000	0.06467	65	0.06946	69	40-160	7	0-20	
Pyrene	ND	0.1000	0.06920	69	0.05914	59	40-160	16	0-46	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Spike/Spike Duplicate - Surrogate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/23/19
Work Order: 19-01-1512
Preparation: EPA 3541
Method: EPA 8270C SIM PAHs

Project: City of Newport Beach - Federal Channels

Page 9 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
NC3-04-012319	Sample	Sediment	GC/MS AAA	01/26/19	02/01/19 13:42	190126S02
NC3-04-012319	Matrix Spike	Sediment	GC/MS AAA	01/26/19	02/01/19 13:03	190126S02
NC3-04-012319	Matrix Spike Duplicate	Sediment	GC/MS AAA	01/26/19	02/01/19 16:37	190126S02

Parameter	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	Qualifiers
2-Fluorobiphenyl	0.01000	0.06283	63	0.06076	61	14-146	
Nitrobenzene-d5	0.01000	0.04591	46	0.03646	36	18-162	
p-Terphenyl-d14	0.01000	0.08024	80	0.06664	67	34-148	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/23/19
Work Order: 19-01-1512
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners

Project: City of Newport Beach - Federal Channels

Page 10 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
NC3-04-012319	Sample	Sediment	GC/MS HHH	01/26/19	02/02/19 01:54	190126S03
NC3-04-012319	Matrix Spike	Sediment	GC/MS HHH	01/26/19	02/02/19 01:06	190126S03
NC3-04-012319	Matrix Spike Duplicate	Sediment	GC/MS HHH	01/26/19	02/02/19 01:30	190126S03

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
PCB018	ND	50.00	29.59	59	33.50	67	50-150	12	0-25	
PCB028	ND	50.00	33.77	68	37.53	75	50-150	11	0-25	
PCB044	ND	50.00	32.99	66	37.42	75	50-150	13	0-25	
PCB052	ND	50.00	30.18	60	34.44	69	50-150	13	0-25	
PCB066	ND	50.00	37.80	76	42.63	85	50-150	12	0-25	
PCB077	ND	50.00	32.46	65	37.01	74	50-150	13	0-25	
PCB101	ND	50.00	32.29	65	36.25	73	50-150	12	0-25	
PCB105	ND	50.00	33.71	67	37.22	74	50-150	10	0-25	
PCB118	ND	50.00	33.34	67	37.49	75	50-150	12	0-25	
PCB126	ND	50.00	34.22	68	38.34	77	50-150	11	0-25	
PCB128	ND	50.00	36.13	72	40.71	81	50-150	12	0-25	
PCB170	ND	50.00	30.83	62	34.70	69	50-150	12	0-25	
PCB180	ND	50.00	37.56	75	41.79	84	50-150	11	0-25	
PCB187	ND	50.00	34.68	69	39.26	79	50-150	12	0-25	
PCB206	ND	50.00	32.03	64	35.80	72	50-150	11	0-25	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Spike/Spike Duplicate - Surrogate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/23/19
Work Order: 19-01-1512
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners

Project: City of Newport Beach - Federal Channels

Page 11 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number	
NC3-04-012319	Sample	Sediment	GC/MS HHH	01/26/19	02/02/19 01:54	190126S03	
NC3-04-012319	Matrix Spike	Sediment	GC/MS HHH	01/26/19	02/02/19 01:06	190126S03	
NC3-04-012319	Matrix Spike Duplicate	Sediment	GC/MS HHH	01/26/19	02/02/19 01:30	190126S03	
Parameter	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	Qualifiers
2-Fluorobiphenyl	10.00	52.01	52	54.74	55	14-146	
p-Terphenyl-d14	10.00	76.57	77	84.22	84	34-148	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/23/19
Work Order: 19-01-1512
Preparation: EPA 3550B (M)
Method: Organotins by Krone et al.

Project: City of Newport Beach - Federal Channels

Page 12 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
NC3-04-012319	Sample	Sediment	GC/MS Y	01/29/19	01/30/19 22:59	190129S04				
NC3-04-012319	Matrix Spike	Sediment	GC/MS Y	01/29/19	01/30/19 22:24	190129S04				
NC3-04-012319	Matrix Spike Duplicate	Sediment	GC/MS Y	01/29/19	01/30/19 22:41	190129S04				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Tetrabutyltin	ND	100.0	73.66	74	77.12	77	33-129	5	0-36	
Tributyltin	ND	100.0	75.13	75	78.63	79	34-142	5	0-50	


 Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Spike/Spike Duplicate - Surrogate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/23/19
Work Order: 19-01-1512
Preparation: EPA 3550B (M)
Method: Organotins by Krone et al.

Project: City of Newport Beach - Federal Channels

Page 13 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number	
NC3-04-012319	Sample	Sediment	GC/MS Y	01/29/19	01/30/19 22:59	190129S04	
NC3-04-012319	Matrix Spike	Sediment	GC/MS Y	01/29/19	01/30/19 22:24	190129S04	
NC3-04-012319	Matrix Spike Duplicate	Sediment	GC/MS Y	01/29/19	01/30/19 22:41	190129S04	
Parameter	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	Qualifiers
Tripentyltin	50.00	81.93	82	84.43	84	27-135	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - PDS

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/23/19
Work Order: 19-01-1512
Preparation: EPA 3050B
Method: EPA 6020

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
NC3-04-012319	Sample	Sediment	ICP/MS 05	01/28/19 00:00	01/29/19 14:08	190128S02
NC3-04-012319	PDS	Sediment	ICP/MS 05	01/28/19 00:00	01/29/19 14:01	190128S02
Parameter	Sample Conc.	Spike Added	PDS Conc.	PDS %Rec.	%Rec. CL	Qualifiers
Arsenic	2.161	25.00	30.72	114	75-125	
Cadmium	0.1162	25.00	28.07	112	75-125	
Chromium	4.979	25.00	33.00	112	75-125	
Copper	7.095	25.00	35.28	113	75-125	
Lead	4.541	25.00	33.18	115	75-125	
Nickel	3.048	25.00	30.43	110	75-125	
Selenium	0.4396	25.00	29.00	114	75-125	
Silver	ND	12.50	13.19	105	75-125	
Zinc	18.46	25.00	48.78	121	75-125	



Calscience

Quality Control - Sample Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/23/19
Work Order: 19-01-1512
Preparation: N/A
Method: SM 2540 B (M)

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
NC3-04-012319	Sample	Sediment	N/A	01/28/19 00:00	01/28/19 20:00	J0128TSD2
NC3-04-012319	Sample Duplicate	Sediment	N/A	01/28/19 00:00	01/28/19 20:00	J0128TSD2
<u>Parameter</u>		<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Solids, Total		78.70	78.60	0	0-10	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/23/19
Work Order: 19-01-1512
Preparation: N/A
Method: EPA 9060A

Project: City of Newport Beach - Federal Channels

Page 1 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-06-013-1936	LCS	Solid	TOC 10	01/29/19	01/29/19 13:19	J0129TOCL1			
099-06-013-1936	LCSD	Solid	TOC 10	01/29/19	01/29/19 13:19	J0129TOCL1			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Carbon, Total Organic	0.6000	0.5108	85	0.6206	103	80-120	19	0-20	

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/23/19
 Work Order: 19-01-1512
 Preparation: EPA 3541
 Method: EPA 8270D (M)/TQ/EI

Project: City of Newport Beach - Federal Channels

Page 2 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-14-403-193	LCS	Solid	GCTQ 1	01/28/19	01/30/19 03:10	190127L07				
099-14-403-193	LCSD	Solid	GCTQ 1	01/28/19	01/30/19 04:02	190127L07				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Allethrin	5.000	4.961	99	4.952	99	10-148	0-171	0	0-25	
Bifenthrin	5.000	5.147	103	5.524	110	26-128	9-145	7	0-25	
Cyfluthrin	5.000	4.444	89	4.861	97	10-131	0-151	9	0-25	
Cypermethrin	5.000	3.785	76	4.104	82	10-136	0-157	8	0-25	
Deltamethrin/Tralomethrin	5.000	3.997	80	4.268	85	13-190	0-220	7	0-25	
Fenpropathrin	5.000	4.798	96	5.107	102	10-148	0-171	6	0-25	
Fenvalerate/Esfenvalerate	5.000	3.616	72	3.989	80	10-149	0-172	10	0-25	
Fluvalinate	5.000	3.427	69	3.859	77	10-121	0-140	12	0-25	
Permethrin (cis/trans)	5.000	4.604	92	5.095	102	45-123	32-136	10	0-25	
Phenothrin	5.000	5.587	112	5.883	118	45-165	25-185	5	0-25	
Resmethrin/Bioresmethrin	5.000	6.677	134	7.224	144	38-164	17-185	8	0-25	
Tetramethrin	5.000	4.990	100	5.410	108	15-153	0-176	8	0-25	
lambda-Cyhalothrin	5.000	4.582	92	4.933	99	10-123	0-142	7	0-25	

Total number of LCS compounds: 13

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

LCS/LCSD - Surrogate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/23/19
Work Order: 19-01-1512
Preparation: EPA 3541
Method: EPA 8270D (M)/TQ/EI

Project: City of Newport Beach - Federal Channels

Page 3 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number	
099-14-403-193	LCS	Solid	GCTQ 1	01/28/19	01/30/19 03:10	190127L07	
099-14-403-193	LCSD	Solid	GCTQ 1	01/28/19	01/30/19 04:02	190127L07	
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	Qualifiers
Dibutylchloroendate	5.000	41.53	83	45.31	91	14-116	



Calscience

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/23/19
Work Order: 19-01-1512
Preparation: EPA 3050B
Method: EPA 6020

Project: City of Newport Beach - Federal Channels

Page 4 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-15-254-710	LCS	Solid	ICP/MS 05	01/28/19	01/29/19 15:40	190128L02			
099-15-254-710	LCSD	Solid	ICP/MS 05	01/28/19	01/29/19 15:43	190128L02			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	25.00	25.89	104	26.49	106	80-120	2	0-20	
Cadmium	25.00	25.78	103	26.18	105	80-120	2	0-20	
Chromium	25.00	26.42	106	26.65	107	80-120	1	0-20	
Copper	25.00	25.48	102	25.29	101	80-120	1	0-20	
Lead	25.00	27.32	109	27.62	110	80-120	1	0-20	
Nickel	25.00	25.87	103	26.41	106	80-120	2	0-20	
Selenium	25.00	23.08	92	23.93	96	80-120	4	0-20	
Silver	12.50	12.75	102	12.91	103	80-120	1	0-20	
Zinc	25.00	29.49	118	28.05	112	80-120	5	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/23/19
Work Order: 19-01-1512
Preparation: EPA 7471A Total
Method: EPA 7471A

Project: City of Newport Beach - Federal Channels

Page 5 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-16-278-512	LCS	Solid	Mercury 08	01/29/19	01/29/19 18:29	190129L04E			
099-16-278-512	LCSD	Solid	Mercury 08	01/29/19	01/29/19 18:31	190129L04E			
<u>Parameter</u>	<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>LCSD Conc.</u>	<u>LCSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Mercury	0.8350	0.7044	84	0.7003	84	82-124	1	0-16	

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/23/19
 Work Order: 19-01-1512
 Preparation: EPA 3541
 Method: EPA 8081A

Project: City of Newport Beach - Federal Channels

Page 6 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-858-608	LCS	Solid	GC 51	01/30/19	02/01/19 16:22	190130L09				
099-12-858-608	LCSD	Solid	GC 51	01/30/19	01/31/19 07:35	190130L09				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Aldrin	5.000	3.630	73	2.988	60	50-135	36-149	19	0-25	
Alpha-BHC	5.000	3.819	76	3.440	69	50-135	36-149	10	0-25	
Beta-BHC	5.000	3.993	80	3.722	74	50-135	36-149	7	0-25	
Delta-BHC	5.000	4.269	85	3.955	79	50-135	36-149	8	0-25	
Gamma-BHC	5.000	3.825	77	3.584	72	50-135	36-149	7	0-25	
Dieldrin	5.000	3.750	75	3.585	72	50-135	36-149	4	0-25	
4,4'-DDD	5.000	4.118	82	4.004	80	50-135	36-149	3	0-25	
4,4'-DDE	5.000	4.079	82	3.959	79	50-135	36-149	3	0-25	
4,4'-DDT	5.000	4.171	83	4.684	94	50-135	36-149	12	0-25	
Endosulfan I	5.000	3.456	69	3.383	68	50-135	36-149	2	0-25	
Endosulfan II	5.000	3.799	76	4.056	81	50-135	36-149	7	0-25	
Endosulfan Sulfate	5.000	3.878	78	3.286	66	50-135	36-149	17	0-25	
Endrin	5.000	3.823	76	3.729	75	50-135	36-149	3	0-25	
Endrin Aldehyde	5.000	2.667	53	3.119	62	50-135	36-149	16	0-25	
Endrin Ketone	5.000	4.009	80	3.885	78	50-135	36-149	3	0-25	
Heptachlor	5.000	4.097	82	3.619	72	50-135	36-149	12	0-25	
Heptachlor Epoxide	5.000	3.764	75	3.564	71	50-135	36-149	5	0-25	
Methoxychlor	5.000	4.157	83	3.976	80	50-135	36-149	4	0-25	
Alpha Chlordane	5.000	3.689	74	3.533	71	50-135	36-149	4	0-25	
Gamma Chlordane	5.000	3.760	75	3.706	74	50-135	36-149	1	0-25	

Total number of LCS compounds: 20

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

LCS/LCSD - Surrogate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/23/19
Work Order: 19-01-1512
Preparation: EPA 3541
Method: EPA 8081A

Project: City of Newport Beach - Federal Channels

Page 7 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number	
099-12-858-608	LCS	Solid	GC 51	01/30/19	02/01/19 16:22	190130L09	
099-12-858-608	LCSD	Solid	GC 51	01/30/19	01/31/19 07:35	190130L09	
<u>Parameter</u>	<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>LCSD Conc.</u>	<u>LCSD %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
2,4,5,6-Tetrachloro-m-Xylene	1.000	6.902	69	7.218	72	25-145	
Decachlorobiphenyl	1.000	8.406	84	8.572	86	24-168	

Quality Control - LCS

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/23/19
 Work Order: 19-01-1512
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs

Project: City of Newport Beach - Federal Channels

Page 8 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number	
099-14-097-324	LCS	Solid	GC/MS AAA	01/26/19	02/01/19 17:56	190126L02	
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
Acenaphthene		0.1000	0.05284	53	40-160	20-180	
Acenaphthylene		0.1000	0.05578	56	40-160	20-180	
Anthracene		0.1000	0.05409	54	40-160	20-180	
Benzo (a) Anthracene		0.1000	0.05847	58	40-160	20-180	
Benzo (a) Pyrene		0.1000	0.06552	66	40-160	20-180	
Benzo (b) Fluoranthene		0.1000	0.06391	64	40-160	20-180	
Benzo (g,h,i) Perylene		0.1000	0.06646	66	40-160	20-180	
Benzo (k) Fluoranthene		0.1000	0.04786	48	40-160	20-180	
Chrysene		0.1000	0.05788	58	40-160	20-180	
Dibenz (a,h) Anthracene		0.1000	0.06734	67	40-160	20-180	
Fluoranthene		0.1000	0.05559	56	40-160	20-180	
Fluorene		0.1000	0.05824	58	40-160	20-180	
Indeno (1,2,3-c,d) Pyrene		0.1000	0.06401	64	40-160	20-180	
2-Methylnaphthalene		0.1000	0.05618	56	40-160	20-180	
1-Methylnaphthalene		0.1000	0.04872	49	40-160	20-180	
Naphthalene		0.1000	0.05205	52	40-160	20-180	
Phenanthrene		0.1000	0.05445	54	40-160	20-180	
Pyrene		0.1000	0.04665	47	40-160	20-180	

Total number of LCS compounds: 18

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

LCS Only - Surrogate

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/23/19
 Work Order: 19-01-1512
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs

Project: City of Newport Beach - Federal Channels

Page 9 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-097-324	LCS	Solid	GC/MS AAA	01/26/19	02/01/19 17:56	190126L02
<u>Parameter</u>		<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
2-Fluorobiphenyl		0.01000	0.05705	57	14-146	
Nitrobenzene-d5		0.01000	0.04018	40	18-162	
p-Terphenyl-d14		0.01000	0.05547	55	34-148	

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/23/19
 Work Order: 19-01-1512
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners

Project: City of Newport Beach - Federal Channels

Page 10 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-16-418-354	LCS	Solid	GC/MS HHH	01/26/19	02/01/19 21:56	190126L03				
099-16-418-354	LCSD	Solid	GC/MS HHH	01/26/19	02/01/19 22:19	190126L03				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
PCB018	50.00	41.87	84	44.53	89	24-132	6-150	6	0-28	
PCB028	50.00	46.34	93	49.59	99	31-133	14-150	7	0-26	
PCB044	50.00	49.38	99	51.11	102	36-120	22-134	3	0-28	
PCB052	50.00	44.24	88	45.91	92	31-121	16-136	4	0-27	
PCB066	50.00	57.04	114	60.48	121	43-139	27-155	6	0-25	
PCB077	50.00	50.30	101	53.13	106	41-131	26-146	5	0-25	
PCB101	50.00	49.05	98	51.23	102	37-121	23-135	4	0-27	
PCB105	50.00	51.75	104	55.75	112	48-132	34-146	7	0-26	
PCB118	50.00	52.06	104	55.59	111	46-136	31-151	7	0-25	
PCB126	50.00	51.76	104	55.95	112	38-134	22-150	8	0-25	
PCB128	50.00	55.45	111	60.47	121	40-130	25-145	9	0-26	
PCB170	50.00	49.81	100	52.11	104	40-124	26-138	5	0-29	
PCB180	50.00	58.23	116	63.73	127	41-143	24-160	9	0-26	
PCB187	50.00	54.05	108	58.76	118	39-129	24-144	8	0-26	
PCB206	50.00	53.98	108	55.05	110	33-135	16-152	2	0-24	

Total number of LCS compounds: 15

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

LCS/LCSD - Surrogate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/23/19
Work Order: 19-01-1512
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners

Project: City of Newport Beach - Federal Channels

Page 11 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number	
099-16-418-354	LCS	Solid	GC/MS HHH	01/26/19	02/01/19 21:56	190126L03	
099-16-418-354	LCSD	Solid	GC/MS HHH	01/26/19	02/01/19 22:19	190126L03	
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	Qualifiers
2-Fluorobiphenyl	10.00	53.38	53	66.70	67	14-146	
p-Terphenyl-d14	10.00	75.59	76	83.95	84	34-148	



Calscience

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/23/19
Work Order: 19-01-1512
Preparation: EPA 3550B (M)
Method: Organotins by Krone et al.

Project: City of Newport Beach - Federal Channels

Page 12 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-07-016-1662	LCS	Solid	GC/MS Y	01/29/19	01/30/19 21:50	190129L04
099-07-016-1662	LCSD	Solid	GC/MS Y	01/29/19	01/30/19 22:07	190129L04

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Tetrabutyltin	100.0	63.86	64	72.28	72	40-142	12	0-20	
Tributyltin	100.0	55.93	56	46.79	47	33-147	18	0-20	


 Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

LCS/LCSD - Surrogate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/23/19
Work Order: 19-01-1512
Preparation: EPA 3550B (M)
Method: Organotins by Krone et al.

Project: City of Newport Beach - Federal Channels

Page 13 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number	
099-07-016-1662	LCS	Solid	GC/MS Y	01/29/19	01/30/19 21:50	190129L04	
099-07-016-1662	LCSD	Solid	GC/MS Y	01/29/19	01/30/19 22:07	190129L04	
<u>Parameter</u>	<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>LCSD Conc.</u>	<u>LCSD %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Tripentyltin	50.00	73.54	74	62.69	63	27-135	

Sample Analysis Summary Report

Work Order: 19-01-1512

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
ASTM D4464 (M)	N/A	1106	LPSA 1	1
EPA 6020	EPA 3050B	598	ICP/MS 05	1
EPA 7471A	EPA 7471A Total	868	Mercury 08	1
EPA 8081A	EPA 3541	669	GC 51	1
EPA 8270C SIM PAHs	EPA 3541	1037	GC/MS AAA	1
EPA 8270C SIM PCB Congeners	EPA 3541	1037	GC/MS HHH	1
EPA 8270D (M)/TQ/EI	EPA 3541	27	GCTQ 1	3
EPA 9060A	N/A	834	TOC 10	1
Organotins by Krone et al.	EPA 3550B (M)	1117	GC/MS Y	1
SM 2540 B (M)	N/A	1136	N/A	1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.



Calscience

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
For courier service / sample drop off information, contact us26_sales@eurofins.com or call us.

LABORATORY CLIENT:

Anchor QEA

ADDRESS: **27201 Puerta Real, Suite 350**

CITY: **Mission Viejo**

STATE: **CA**

ZIP: **92691**

TEL: **949.347.2780**

E-MAIL: cosuch@anchoragea.com

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

SAME DAY 24 HR 48 HR 72 HR 5 DAYS STANDARD

COELT EDF

LOG CODE:

SPECIAL INSTRUCTIONS:

Report down to the MDL. Refer to SAP for parameters and QC frequency.

CHAIN OF CUSTODY RECORD

DATE: **1/23/19**

PAGE: **1** OF **1**

WQ # / LAB USE ONLY

19-01-1512

CLIENT PROJECT NAME / NUMBER:

City of Newport Beach - Federal Channels

PROJECT CONTACT:

Chris Osuch

P.O. NO.:

180713-02.01

SAMPLER(S): (PRINT)

**C. Dolphin
D. Massaro**

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Field Filtered	Preserved	Unpreserved	EPA 6020 Metals	EPA 7471A Mercury	EPA 8081A Organochlorine pesticides	EPA 8270C SIM PAHs	EPA 8270C SIM PCB Congeners	EPA 9060A Total Organic Carbon	Krone et al. Organotins	Pyrethroids by EPA 8270D (M)/TQ/EI	SM 2540 B (M) Total Solids	ASTM D464 (M) Particle Size	MS/MSD
1	NC3-04-012319	1/23/19	0815	SEP	3				X	X	X	X	X	X	X	X	X	X	X
2	NC3-04-2-012319		0815		1				X	X	X	X	X	X	X	X	X	X	X
3	NC1-01-012319		1115		2				X	X	X	X	X	X	X	X	X	X	X
4	NC1-01-2-012319		1115		1				X	X	X	X	X	X	X	X	X	X	X
5	NC1-02-012319		1345		2				X	X	X	X	X	X	X	X	X	X	X
6	NC1-02-2-012319		1345		1				X	X	X	X	X	X	X	X	X	X	X
7	NC1-03-012319		1530		2				X	X	X	X	X	X	X	X	X	X	X
8	NC1-03-2-012319		1530		1				X	X	X	X	X	X	X	X	X	X	X
9	NC1-04-012319		1700		2				X	X	X	X	X	X	X	X	X	X	X
10	NC1-04-2-012319		1700		1				X	X	X	X	X	X	X	X	X	X	X

Received by: (Signature/Affiliation)
 Received by: (Signature/Affiliation)
 Received by: (Signature/Affiliation)

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: Anchor

DATE: 01/23/2019

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: -0.5°C); Temperature (w/o CF): 28 °C (w/ CF): 23 °C; Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: Air Filter

Checked by: 1091

CUSTODY SEAL:

Cooler Present and Intact Present but Not Intact Not Present N/A

Sample(s) Present and Intact Present but Not Intact Not Present N/A

Checked by: 1091

Checked by: 836

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sampling date <input type="checkbox"/> Sampling time <input type="checkbox"/> Matrix <input type="checkbox"/> Number of containers			
<input type="checkbox"/> No analysis requested <input type="checkbox"/> Not relinquished <input type="checkbox"/> No relinquished date <input type="checkbox"/> No relinquished time			
Sampler's name indicated on COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sufficient volume/mass for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples for certain analyses received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfide <input type="checkbox"/> Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation chemical(s) noted on COC and/or sample container	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Unpreserved aqueous sample(s) received for certain analyses			
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Total Metals <input type="checkbox"/> Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Container(s) for certain analysis free of headspace	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Dissolved Gases (RSK-175) <input type="checkbox"/> Dissolved Oxygen (SM 4500)			
<input type="checkbox"/> Carbon Dioxide (SM 4500) <input type="checkbox"/> Ferrous Iron (SM 3500) <input type="checkbox"/> Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: VOA VOA_h VOAn₂ 100PJ 100PJn₂ 125AGB 125AGB_h 125AGB_p 125PB 125PBz_{na} (pH__9)

250AGB 250CGB 250CGBs (pH__2) 250PB 250PBn (pH__2) 500AGB 500AGJ 500AGJs (pH__2) 500PB

1AGB 1AGBn₂ 1AGBs (pH__2) 1AGBs (O&G) 1PB 1PBna (pH__12) _____ _____

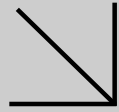
Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (____) EnCores® (____) TerraCores® (____) _____

Air: Tedlar™ Canister Sorbent Tube PUF _____ Other Matrix (Sediment): 160265 _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO₃, **na** = NaOH, **na₂** = Na₂S₂O₃, **p** = H₃PO₄, Labeled/Checked by: 836

s = H₂SO₄, **u** = ultra-pure, **x** = Na₂SO₃+NaHSO₄.H₂O, **z_{na}** = Zn (CH₃CO₂)₂ + NaOH Reviewed by: 778



WORK ORDER NUMBER: 19-01-1600

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: ANCHOR QEA, LLC

Client Project Name: City of Newport Beach - Federal Channels

Attention: Chris Osuch
9700 RESEARCH DR
IRVINE, CA 92618-4327

Approved for release on 02/05/2019 by:
Richard Villafania
Project Manager

ResultLink ▶

Email your PM ▶

Eurofins Calscience (Calscience) certifies that the test results provided in this report meet all NELAC Institute requirements for parameters for which accreditation is required or available. Any exceptions to NELAC Institute requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Contents

Client Project Name: City of Newport Beach - Federal Channels
 Work Order Number: 19-01-1600

1	Work Order Narrative.	3
2	Sample Summary.	4
3	Client Sample Data.	5
	3.1 EPA 9060A Total Organic Carbon (Solid).	5
	3.2 SM 2540 B (M) Total Solids (Solid).	6
	3.3 Pyrethroids by EPA 8270D (M)/TQ/EI (Solid).	7
	3.4 EPA 6020 ICP/MS Metals (Solid).	11
	3.5 EPA 7471A Mercury (Solid).	13
	3.6 ASTM D4464 (M) Particle Size Laser (Solid).	14
	3.7 EPA 8081A Organochlorine Pesticides (Solid).	15
	3.8 EPA 8270C SIM PAHs (Solid).	22
	3.9 EPA 8270C SIM PCB Congeners (Solid).	26
	3.10 Krone et al. Organotins (Solid).	34
4	Quality Control Sample Data.	36
	4.1 MS/MSD.	36
	4.2 PDS/PDSD.	49
	4.3 Sample Duplicate.	50
	4.4 LCS/LCSD.	51
5	Sample Analysis Summary.	64
6	Glossary of Terms and Qualifiers.	65
7	Chain-of-Custody/Sample Receipt Form.	66

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 01/24/19. They were assigned to Work Order 19-01-1600.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

DoD Projects:

The test results contained in this report are accredited under the laboratory's ISO/IEC 17025:2005 and DoD-ELAP accreditation issued by the ANSI-ASQ National Accreditation Board. Refer to certificate and scope of accreditation ADE-1864.

Sample Summary

Client: ANCHOR QEA, LLC	Work Order: 19-01-1600
9700 RESEARCH DR	Project Name: City of Newport Beach - Federal Channels
IRVINE, CA 92618-4327	PO Number:
	Date/Time Received: 01/24/19 18:20
	Number of Containers: 9

Attn: Chris Osuch

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
NC2-01-012419	19-01-1600-1	01/24/19 08:10	2	Sediment
NC2-01-Z-012419	19-01-1600-2	01/24/19 08:10	1	Sediment
NC2-02-012419	19-01-1600-3	01/24/19 11:00	2	Sediment
NC2-02-Z-012419	19-01-1600-4	01/24/19 11:00	1	Sediment
NC2-03-012419	19-01-1600-5	01/24/19 12:35	2	Sediment
NC2-03-Z-012419	19-01-1600-6	01/24/19 12:35	1	Sediment

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/24/19
 Work Order: 19-01-1600
 Preparation: N/A
 Method: EPA 9060A
 Units: %

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-01-012419	19-01-1600-1-AA	01/24/19 08:10	Sediment	TOC 10	01/29/19	01/29/19 13:19	J0129TOCL1

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	0.42	0.080	0.028	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-02-012419	19-01-1600-3-AA	01/24/19 11:00	Sediment	TOC 10	01/29/19	01/29/19 13:19	J0129TOCL1

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	0.84	0.087	0.030	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-03-012419	19-01-1600-5-AA	01/24/19 12:35	Sediment	TOC 10	01/29/19	01/29/19 13:19	J0129TOCL1

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	0.27	0.071	0.025	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-06-013-1936	N/A	Solid	TOC 10	01/29/19	01/29/19 13:19	J0129TOCL1

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	ND	0.050	0.017	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/24/19
Work Order: 19-01-1600
Preparation: N/A
Method: SM 2540 B (M)
Units: %

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-01-012419	19-01-1600-1-AA	01/24/19 08:10	Sediment	N/A	01/29/19	01/29/19 16:00	J0129TSB1

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	62.4	0.100	0.100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-02-012419	19-01-1600-3-AA	01/24/19 11:00	Sediment	N/A	01/29/19	01/29/19 16:00	J0129TSB1

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	57.8	0.100	0.100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-03-012419	19-01-1600-5-AA	01/24/19 12:35	Sediment	N/A	01/29/19	01/29/19 16:00	J0129TSB1

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	70.1	0.100	0.100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-05-019-4391	N/A	Solid	N/A	01/29/19	01/29/19 16:00	J0129TSB1

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	ND	0.100	0.100	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/24/19
 Work Order: 19-01-1600
 Preparation: EPA 3541
 Method: EPA 8270D (M)/TQ/EI
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-01-012419	19-01-1600-1-AA	01/24/19 08:10	Sediment	GCTQ 1	01/28/19	02/01/19 08:10	190127L07

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Allethrin	ND	0.80	0.40	1.00	
Bifenthrin	1.3	0.80	0.48	1.00	
Cyfluthrin	ND	0.80	0.40	1.00	
Cypermethrin	ND	0.80	0.40	1.00	
Deltamethrin/Tralomethrin	ND	0.80	0.40	1.00	
Fenpropathrin	ND	0.80	0.40	1.00	
Fenvalerate/Esfenvalerate	ND	0.80	0.40	1.00	
Fluvalinate	ND	0.80	0.40	1.00	
Permethrin (cis/trans)	ND	1.6	0.80	1.00	
Phenothrin	ND	0.80	0.40	1.00	
Resmethrin/Bioresmethrin	ND	0.80	0.68	1.00	
Tetramethrin	ND	0.80	0.48	1.00	
lambda-Cyhalothrin	ND	0.80	0.40	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
Dibutylchloroendate	92	14-116			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/24/19
 Work Order: 19-01-1600
 Preparation: EPA 3541
 Method: EPA 8270D (M)/TQ/EI
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-02-012419	19-01-1600-3-AA	01/24/19 11:00	Sediment	GCTQ 1	01/28/19	02/01/19 09:02	190127L07

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Allethrin	ND	0.87	0.43	1.00	
Bifenthrin	ND	0.87	0.52	1.00	
Cyfluthrin	ND	0.87	0.43	1.00	
Cypermethrin	ND	0.87	0.43	1.00	
Deltamethrin/Tralomethrin	ND	0.87	0.43	1.00	
Fenpropathrin	ND	0.87	0.43	1.00	
Fenvalerate/Esfenvalerate	ND	0.87	0.43	1.00	
Fluvalinate	ND	0.87	0.43	1.00	
Permethrin (cis/trans)	ND	1.7	0.87	1.00	
Phenothrin	ND	0.87	0.43	1.00	
Resmethrin/Bioresmethrin	ND	0.87	0.74	1.00	
Tetramethrin	ND	0.87	0.52	1.00	
lambda-Cyhalothrin	ND	0.87	0.43	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
Dibutylchloroendate	73	14-116			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/24/19
 Work Order: 19-01-1600
 Preparation: EPA 3541
 Method: EPA 8270D (M)/TQ/EI
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 3 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-03-012419	19-01-1600-5-AA	01/24/19 12:35	Sediment	GCTQ 1	01/28/19	02/01/19 09:54	190127L07

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Allethrin	ND	0.71	0.35	1.00	
Bifenthrin	0.85	0.71	0.43	1.00	
Cyfluthrin	ND	0.71	0.35	1.00	
Cypermethrin	ND	0.71	0.35	1.00	
Deltamethrin/Tralomethrin	ND	0.71	0.35	1.00	
Fenpropathrin	ND	0.71	0.35	1.00	
Fenvalerate/Esfenvalerate	ND	0.71	0.35	1.00	
Fluvalinate	ND	0.71	0.35	1.00	
Permethrin (cis/trans)	ND	1.4	0.71	1.00	
Phenothrin	ND	0.71	0.35	1.00	
Resmethrin/Bioresmethrin	ND	0.71	0.60	1.00	
Tetramethrin	ND	0.71	0.43	1.00	
lambda-Cyhalothrin	ND	0.71	0.35	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
Dibutylchlorendate	93	14-116			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/24/19
 Work Order: 19-01-1600
 Preparation: EPA 3541
 Method: EPA 8270D (M)/TQ/EI
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 4 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-403-193	N/A	Solid	GCTQ 1	01/28/19	01/30/19 04:54	190127L07

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Allethrin	ND	0.50	0.25	1.00	
Bifenthrin	ND	0.50	0.30	1.00	
Cyfluthrin	ND	0.50	0.25	1.00	
Cypermethrin	ND	0.50	0.25	1.00	
Deltamethrin/Tralomethrin	ND	0.50	0.25	1.00	
Fenpropathrin	ND	0.50	0.25	1.00	
Fenvalerate/Esfenvalerate	ND	0.50	0.25	1.00	
Fluvalinate	ND	0.50	0.25	1.00	
Permethrin (cis/trans)	ND	1.0	0.50	1.00	
Phenothrin	ND	0.50	0.25	1.00	
Resmethrin/Bioresmethrin	ND	0.50	0.42	1.00	
Tetramethrin	ND	0.50	0.30	1.00	
lambda-Cyhalothrin	ND	0.50	0.25	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibutylchloroendate	94	14-116	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/24/19
 Work Order: 19-01-1600
 Preparation: EPA 3050B
 Method: EPA 6020
 Units: mg/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-01-012419	19-01-1600-1-AA	01/24/19 08:10	Sediment	ICP/MS 05	01/29/19	02/01/19 03:07	190128L02

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	5.70	0.160	0.140	1.00	
Cadmium	0.444	0.160	0.0917	1.00	
Chromium	13.7	0.160	0.0995	1.00	
Copper	56.5	0.160	0.0672	1.00	
Lead	19.9	0.160	0.106	1.00	
Nickel	9.48	0.160	0.0811	1.00	
Selenium	2.87	0.160	0.117	1.00	
Silver	0.783	0.160	0.0502	1.00	
Zinc	87.4	1.60	1.27	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-02-012419	19-01-1600-3-AA	01/24/19 11:00	Sediment	ICP/MS 05	01/29/19	02/01/19 03:11	190128L02

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	7.29	0.173	0.151	1.00	
Cadmium	0.884	0.173	0.0990	1.00	
Chromium	22.0	0.173	0.107	1.00	
Copper	47.7	0.173	0.0725	1.00	
Lead	29.4	0.173	0.114	1.00	
Nickel	16.0	0.173	0.0876	1.00	
Selenium	2.74	0.173	0.126	1.00	
Silver	1.39	0.173	0.0542	1.00	
Zinc	102	1.73	1.38	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/24/19
 Work Order: 19-01-1600
 Preparation: EPA 3050B
 Method: EPA 6020
 Units: mg/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-03-012419	19-01-1600-5-AA	01/24/19 12:35	Sediment	ICP/MS 05	01/29/19	02/01/19 03:15	190128L02

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	3.46	0.143	0.125	1.00	
Cadmium	0.324	0.143	0.0816	1.00	
Chromium	8.91	0.143	0.0885	1.00	
Copper	25.7	0.143	0.0598	1.00	
Lead	11.8	0.143	0.0940	1.00	
Nickel	5.94	0.143	0.0722	1.00	
Selenium	1.36	0.143	0.104	1.00	
Silver	0.624	0.143	0.0446	1.00	
Zinc	48.2	1.43	1.13	1.00	

Method Blank	099-15-254-710	N/A	Solid	ICP/MS 05	01/28/19	01/29/19 13:44	190128L02
--------------	----------------	-----	-------	-----------	----------	-------------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	ND	0.100	0.0873	1.00	
Cadmium	ND	0.100	0.0572	1.00	
Chromium	ND	0.100	0.0621	1.00	
Copper	ND	0.100	0.0419	1.00	
Lead	ND	0.100	0.0659	1.00	
Nickel	ND	0.100	0.0506	1.00	
Selenium	ND	0.100	0.0731	1.00	
Silver	ND	0.100	0.0313	1.00	
Zinc	ND	1.00	0.795	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/24/19
 Work Order: 19-01-1600
 Preparation: EPA 7471A Total
 Method: EPA 7471A
 Units: mg/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-01-012419	19-01-1600-1-AA	01/24/19 08:10	Sediment	Mercury 08	01/30/19	01/30/19 17:28	190130L04E

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.402	0.0326	0.00957	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-02-012419	19-01-1600-3-AA	01/24/19 11:00	Sediment	Mercury 08	01/30/19	01/30/19 17:33	190130L04E

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	1.52	0.0364	0.0107	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-03-012419	19-01-1600-5-AA	01/24/19 12:35	Sediment	Mercury 08	01/30/19	01/30/19 17:33	190130L04E

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	1.26	0.0300	0.00882	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-278-513	N/A	Solid	Mercury 08	01/30/19	01/30/19 16:26	190130L04E

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	ND	0.0200	0.00587	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/24/19
 Work Order: 19-01-1600
 Preparation: N/A
 Method: ASTM D4464 (M)
 Units: %

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-01-012419	19-01-1600-1-B	01/24/19 08:10	Sediment	LPSA 1	N/A	01/30/19 20:36	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	13.12	
Silt (0.00391 to 0.0625mm)	29.81	
Total Silt and Clay (0 to 0.0625mm)	42.93	
Very Fine Sand (0.0625 to 0.125mm)	2.36	
Fine Sand (0.125 to 0.25mm)	12.24	
Medium Sand (0.25 to 0.5mm)	26.95	
Coarse Sand (0.5 to 1mm)	13.89	
Very Coarse Sand (1 to 2mm)	1.63	
Gravel (greater than 2mm)	ND	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-02-012419	19-01-1600-3-B	01/24/19 11:00	Sediment	LPSA 1	N/A	01/30/19 20:44	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	21.10	
Silt (0.00391 to 0.0625mm)	46.71	
Total Silt and Clay (0 to 0.0625mm)	67.82	
Very Fine Sand (0.0625 to 0.125mm)	7.98	
Fine Sand (0.125 to 0.25mm)	17.59	
Medium Sand (0.25 to 0.5mm)	4.74	
Coarse Sand (0.5 to 1mm)	1.87	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-03-012419	19-01-1600-5-B	01/24/19 12:35	Sediment	LPSA 1	N/A	01/30/19 20:51	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	10.84	
Silt (0.00391 to 0.0625mm)	27.23	
Total Silt and Clay (0 to 0.0625mm)	38.07	
Very Fine Sand (0.0625 to 0.125mm)	2.30	
Fine Sand (0.125 to 0.25mm)	8.73	
Medium Sand (0.25 to 0.5mm)	24.21	
Coarse Sand (0.5 to 1mm)	25.10	
Very Coarse Sand (1 to 2mm)	1.59	
Gravel (greater than 2mm)	ND	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/24/19
 Work Order: 19-01-1600
 Preparation: EPA 3541
 Method: EPA 8081A
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-01-012419	19-01-1600-1-AA	01/24/19 08:10	Sediment	GC 51	01/30/19	02/01/19 13:47	190130L09

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	1.6	0.70	1.00	
Alpha-BHC	ND	3.2	1.2	1.00	
Beta-BHC	ND	1.6	0.80	1.00	
Delta-BHC	ND	3.2	1.4	1.00	
Gamma-BHC	ND	1.6	0.71	1.00	
Dieldrin	ND	1.6	0.70	1.00	
Trans-nonachlor	ND	1.6	0.43	1.00	
2,4'-DDD	ND	1.6	0.46	1.00	
2,4'-DDE	ND	3.2	1.6	1.00	
2,4'-DDT	ND	1.6	0.50	1.00	
4,4'-DDD	1.3	1.6	0.80	1.00	J
4,4'-DDT	ND	1.6	0.70	1.00	
Endosulfan I	ND	1.6	0.64	1.00	
Endosulfan II	ND	1.6	0.75	1.00	
Endosulfan Sulfate	ND	1.6	0.84	1.00	
Endrin	ND	1.6	0.77	1.00	
Endrin Aldehyde	ND	1.6	0.97	1.00	
Endrin Ketone	ND	1.6	0.81	1.00	
Heptachlor	ND	1.6	0.69	1.00	
Heptachlor Epoxide	ND	3.2	1.2	1.00	
Methoxychlor	ND	1.6	0.89	1.00	
Toxaphene	ND	32	14	1.00	
Alpha Chlordane	ND	1.6	0.65	1.00	
Gamma Chlordane	2.3	3.2	1.4	1.00	J
Cis-nonachlor	ND	1.6	0.42	1.00	
Oxychlordane	ND	1.6	0.43	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2,4,5,6-Tetrachloro-m-Xylene	120	25-145	
Decachlorobiphenyl	139	24-168	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/24/19
Work Order: 19-01-1600
Preparation: EPA 3541
Method: EPA 8081A
Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-01-012419	19-01-1600-1-AA	01/24/19 08:10	Sediment	GC 51	01/30/19	02/01/19 15:04	190130L09

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
4,4'-DDE	17	8.0	3.6	5.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2,4,5,6-Tetrachloro-m-Xylene	75	25-145			
Decachlorobiphenyl	89	24-168			

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/24/19
 Work Order: 19-01-1600
 Preparation: EPA 3541
 Method: EPA 8081A
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 3 of 7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-02-012419	19-01-1600-3-AA	01/24/19 11:00	Sediment	GC 51	01/30/19	02/01/19 14:02	190130L09

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	1.7	0.75	1.00	
Alpha-BHC	ND	3.4	1.3	1.00	
Beta-BHC	ND	1.7	0.85	1.00	
Delta-BHC	ND	3.4	1.5	1.00	
Gamma-BHC	ND	1.7	0.76	1.00	
Dieldrin	ND	1.7	0.75	1.00	
Trans-nonachlor	ND	1.7	0.46	1.00	
2,4'-DDD	ND	1.7	0.49	1.00	
2,4'-DDE	3.5	3.4	1.7	1.00	
2,4'-DDT	ND	1.7	0.54	1.00	
4,4'-DDT	ND	1.7	0.75	1.00	
Endosulfan I	ND	1.7	0.68	1.00	
Endosulfan II	ND	1.7	0.80	1.00	
Endosulfan Sulfate	ND	1.7	0.89	1.00	
Endrin	ND	1.7	0.82	1.00	
Endrin Aldehyde	ND	1.7	1.0	1.00	
Endrin Ketone	ND	1.7	0.86	1.00	
Heptachlor	ND	1.7	0.74	1.00	
Heptachlor Epoxide	ND	3.4	1.3	1.00	
Methoxychlor	ND	1.7	0.95	1.00	
Toxaphene	ND	34	15	1.00	
Alpha Chlordane	ND	1.7	0.69	1.00	
Gamma Chlordane	2.2	3.4	1.5	1.00	J
Cis-nonachlor	ND	1.7	0.44	1.00	
Oxychlordane	ND	1.7	0.46	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
2,4,5,6-Tetrachloro-m-Xylene	98	25-145			
Decachlorobiphenyl	127	24-168			

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/24/19
Work Order: 19-01-1600
Preparation: EPA 3541
Method: EPA 8081A
Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 4 of 7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-02-012419	19-01-1600-3-AA	01/24/19 11:00	Sediment	GC 51	01/30/19	02/01/19 15:18	190130L09

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
4,4'-DDD	19	8.5	4.3	5.00	
4,4'-DDE	30	8.5	3.8	5.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
2,4,5,6-Tetrachloro-m-Xylene	69	25-145	
Decachlorobiphenyl	95	24-168	

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/24/19
 Work Order: 19-01-1600
 Preparation: EPA 3541
 Method: EPA 8081A
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 5 of 7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-03-012419	19-01-1600-5-AA	01/24/19 12:35	Sediment	GC 51	01/30/19	02/01/19 14:21	190130L09

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	1.4	0.62	1.00	
Alpha-BHC	ND	2.8	1.1	1.00	
Beta-BHC	ND	1.4	0.71	1.00	
Delta-BHC	ND	2.8	1.2	1.00	
Gamma-BHC	ND	1.4	0.63	1.00	
Dieldrin	ND	1.4	0.62	1.00	
Trans-nonachlor	ND	1.4	0.38	1.00	
2,4'-DDD	ND	1.4	0.41	1.00	
2,4'-DDE	1.5	2.8	1.4	1.00	J
2,4'-DDT	ND	1.4	0.45	1.00	
4,4'-DDD	8.0	1.4	0.71	1.00	
4,4'-DDT	ND	1.4	0.62	1.00	
Endosulfan I	ND	1.4	0.56	1.00	
Endosulfan II	ND	1.4	0.67	1.00	
Endosulfan Sulfate	ND	1.4	0.74	1.00	
Endrin	ND	1.4	0.68	1.00	
Endrin Aldehyde	ND	1.4	0.86	1.00	
Endrin Ketone	ND	1.4	0.71	1.00	
Heptachlor	ND	1.4	0.61	1.00	
Heptachlor Epoxide	ND	2.8	1.0	1.00	
Methoxychlor	ND	1.4	0.79	1.00	
Toxaphene	ND	28	13	1.00	
Alpha Chlordane	ND	1.4	0.58	1.00	
Gamma Chlordane	2.3	2.8	1.3	1.00	J
Cis-nonachlor	ND	1.4	0.37	1.00	
Oxychlordane	ND	1.4	0.38	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2,4,5,6-Tetrachloro-m-Xylene	95	25-145	
Decachlorobiphenyl	115	24-168	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/24/19
Work Order: 19-01-1600
Preparation: EPA 3541
Method: EPA 8081A
Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 6 of 7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-03-012419	19-01-1600-5-AA	01/24/19 12:35	Sediment	GC 51	01/30/19	02/01/19 15:32	190130L09

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
4,4'-DDE	12	7.1	3.2	5.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2,4,5,6-Tetrachloro-m-Xylene	68	25-145			
Decachlorobiphenyl	84	24-168			

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/24/19
 Work Order: 19-01-1600
 Preparation: EPA 3541
 Method: EPA 8081A
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 7 of 7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-858-608	N/A	Solid	GC 51	01/30/19	01/31/19 07:07	190130L09

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Aldrin	ND	1.0	0.44	1.00	
Alpha-BHC	ND	2.0	0.74	1.00	
Beta-BHC	ND	1.0	0.50	1.00	
Delta-BHC	ND	2.0	0.88	1.00	
Gamma-BHC	ND	1.0	0.45	1.00	
Dieldrin	ND	1.0	0.44	1.00	
Trans-nonachlor	ND	1.0	0.27	1.00	
2,4'-DDD	ND	1.0	0.29	1.00	
2,4'-DDE	ND	2.0	0.99	1.00	
2,4'-DDT	ND	1.0	0.31	1.00	
4,4'-DDD	ND	1.0	0.50	1.00	
4,4'-DDE	ND	1.0	0.44	1.00	
4,4'-DDT	ND	1.0	0.44	1.00	
Endosulfan I	ND	1.0	0.40	1.00	
Endosulfan II	ND	1.0	0.47	1.00	
Endosulfan Sulfate	ND	1.0	0.52	1.00	
Endrin	ND	1.0	0.48	1.00	
Endrin Aldehyde	ND	1.0	0.60	1.00	
Endrin Ketone	ND	1.0	0.50	1.00	
Heptachlor	ND	1.0	0.43	1.00	
Heptachlor Epoxide	ND	2.0	0.74	1.00	
Methoxychlor	ND	1.0	0.56	1.00	
Toxaphene	ND	20	9.0	1.00	
Alpha Chlordane	ND	1.0	0.41	1.00	
Gamma Chlordane	ND	2.0	0.89	1.00	
Cis-nonachlor	ND	1.0	0.26	1.00	
Oxychlordane	ND	1.0	0.27	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
2,4,5,6-Tetrachloro-m-Xylene	64	25-145	
Decachlorobiphenyl	93	24-168	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/24/19
 Work Order: 19-01-1600
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs
 Units: mg/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-01-012419	19-01-1600-1-AA	01/24/19 08:10	Sediment	GC/MS AAA	01/26/19	02/01/19 15:19	190126L02

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	ND	0.016	0.0037	1.00	
Acenaphthylene	ND	0.016	0.0028	1.00	
Anthracene	ND	0.016	0.0055	1.00	
Benzo (a) Anthracene	0.0075	0.016	0.0034	1.00	J
Benzo (a) Pyrene	ND	0.016	0.0029	1.00	
Benzo (b) Fluoranthene	ND	0.016	0.0043	1.00	
Benzo (g,h,i) Perylene	0.0078	0.016	0.0024	1.00	J
Benzo (k) Fluoranthene	ND	0.016	0.0044	1.00	
Chrysene	0.0088	0.016	0.0035	1.00	J
Dibenz (a,h) Anthracene	ND	0.016	0.0031	1.00	
Fluoranthene	0.010	0.016	0.0029	1.00	J
Fluorene	ND	0.016	0.0049	1.00	
Indeno (1,2,3-c,d) Pyrene	0.0067	0.016	0.0025	1.00	J
2-Methylnaphthalene	ND	0.016	0.0037	1.00	
1-Methylnaphthalene	ND	0.016	0.0037	1.00	
Naphthalene	ND	0.016	0.0055	1.00	
Phenanthrene	0.0039	0.016	0.0035	1.00	J
Pyrene	0.013	0.016	0.0036	1.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	54	14-146	
Nitrobenzene-d5	20	18-162	
p-Terphenyl-d14	79	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/24/19
 Work Order: 19-01-1600
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs
 Units: mg/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-02-012419	19-01-1600-3-AA	01/24/19 11:00	Sediment	GC/MS AAA	01/26/19	02/01/19 19:53	190126L02

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	ND	0.017	0.0041	1.00	
Acenaphthylene	ND	0.017	0.0031	1.00	
Anthracene	ND	0.017	0.0060	1.00	
Benzo (a) Anthracene	ND	0.017	0.0037	1.00	
Benzo (a) Pyrene	ND	0.017	0.0032	1.00	
Benzo (b) Fluoranthene	ND	0.017	0.0047	1.00	
Benzo (g,h,i) Perylene	ND	0.017	0.0027	1.00	
Benzo (k) Fluoranthene	ND	0.017	0.0048	1.00	
Chrysene	0.0044	0.017	0.0038	1.00	J
Dibenz (a,h) Anthracene	ND	0.017	0.0034	1.00	
Fluoranthene	0.0065	0.017	0.0031	1.00	J
Fluorene	ND	0.017	0.0054	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	0.017	0.0027	1.00	
2-Methylnaphthalene	ND	0.017	0.0040	1.00	
1-Methylnaphthalene	ND	0.017	0.0040	1.00	
Naphthalene	ND	0.017	0.0060	1.00	
Phenanthrene	ND	0.017	0.0038	1.00	
Pyrene	0.0074	0.017	0.0039	1.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	37	14-146	
Nitrobenzene-d5	24	18-162	
p-Terphenyl-d14	50	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/24/19
 Work Order: 19-01-1600
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs
 Units: mg/kg

Project: City of Newport Beach - Federal Channels

Page 3 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-03-012419	19-01-1600-5-AA	01/24/19 12:35	Sediment	GC/MS AAA	01/26/19	02/01/19 15:58	190126L02

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	ND	0.014	0.0033	1.00	
Acenaphthylene	ND	0.014	0.0025	1.00	
Anthracene	ND	0.014	0.0049	1.00	
Benzo (a) Anthracene	0.0038	0.014	0.0030	1.00	J
Benzo (a) Pyrene	ND	0.014	0.0026	1.00	
Benzo (b) Fluoranthene	ND	0.014	0.0039	1.00	
Benzo (g,h,i) Perylene	ND	0.014	0.0022	1.00	
Benzo (k) Fluoranthene	ND	0.014	0.0039	1.00	
Chrysene	0.0050	0.014	0.0032	1.00	J
Dibenz (a,h) Anthracene	ND	0.014	0.0028	1.00	
Fluoranthene	0.0059	0.014	0.0026	1.00	J
Fluorene	ND	0.014	0.0044	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	0.014	0.0022	1.00	
2-Methylnaphthalene	ND	0.014	0.0033	1.00	
1-Methylnaphthalene	ND	0.014	0.0033	1.00	
Naphthalene	ND	0.014	0.0049	1.00	
Phenanthrene	ND	0.014	0.0031	1.00	
Pyrene	0.0064	0.014	0.0032	1.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	53	14-146	
Nitrobenzene-d5	32	18-162	
p-Terphenyl-d14	80	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/24/19
 Work Order: 19-01-1600
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs
 Units: mg/kg

Project: City of Newport Beach - Federal Channels

Page 4 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-097-324	N/A	Solid	GC/MS AAA	01/26/19	02/01/19 12:02	190126L02

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	ND	0.010	0.0024	1.00	
Acenaphthylene	ND	0.010	0.0018	1.00	
Anthracene	ND	0.010	0.0035	1.00	
Benzo (a) Anthracene	ND	0.010	0.0022	1.00	
Benzo (a) Pyrene	ND	0.010	0.0018	1.00	
Benzo (b) Fluoranthene	ND	0.010	0.0027	1.00	
Benzo (g,h,i) Perylene	ND	0.010	0.0015	1.00	
Benzo (k) Fluoranthene	ND	0.010	0.0028	1.00	
Chrysene	ND	0.010	0.0022	1.00	
Dibenz (a,h) Anthracene	ND	0.010	0.0020	1.00	
Fluoranthene	ND	0.010	0.0018	1.00	
Fluorene	ND	0.010	0.0031	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	0.010	0.0016	1.00	
2-Methylnaphthalene	ND	0.010	0.0023	1.00	
1-Methylnaphthalene	ND	0.010	0.0023	1.00	
Naphthalene	ND	0.010	0.0035	1.00	
Phenanthrene	ND	0.010	0.0022	1.00	
Pyrene	ND	0.010	0.0022	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	82	14-146	
Nitrobenzene-d5	61	18-162	
p-Terphenyl-d14	82	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/24/19
 Work Order: 19-01-1600
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-01-012419	19-01-1600-1-AA	01/24/19 08:10	Sediment	GC/MS HHH	01/26/19	02/02/19 03:53	190126L03

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB018	ND	0.32	0.10	1.00	
PCB028	ND	0.32	0.11	1.00	
PCB037	ND	0.32	0.096	1.00	
PCB044	ND	0.32	0.24	1.00	
PCB049	ND	0.32	0.078	1.00	
PCB052	ND	0.32	0.30	1.00	
PCB066	ND	0.32	0.19	1.00	
PCB070	ND	0.32	0.11	1.00	
PCB074	ND	0.32	0.14	1.00	
PCB077	ND	0.32	0.18	1.00	
PCB081	ND	0.32	0.14	1.00	
PCB087	ND	0.32	0.18	1.00	
PCB099	ND	0.32	0.075	1.00	
PCB101	ND	0.32	0.070	1.00	
PCB105	ND	0.32	0.084	1.00	
PCB110	ND	0.32	0.053	1.00	
PCB114	ND	0.32	0.12	1.00	
PCB118	2.2	0.32	0.055	1.00	
PCB119	ND	0.32	0.099	1.00	
PCB123	ND	0.32	0.12	1.00	
PCB126	ND	0.32	0.087	1.00	
PCB128	ND	0.32	0.19	1.00	
PCB132/153	ND	0.63	0.26	1.00	
PCB138/158	4.1	0.63	0.56	1.00	
PCB149	ND	0.32	0.19	1.00	
PCB151	ND	0.32	0.14	1.00	
PCB156	ND	0.32	0.12	1.00	
PCB157	ND	0.32	0.13	1.00	
PCB167	ND	0.32	0.21	1.00	
PCB168	3.7	0.32	0.23	1.00	
PCB169	ND	0.32	0.10	1.00	
PCB170	ND	0.32	0.18	1.00	
PCB177	ND	0.32	0.19	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/24/19
 Work Order: 19-01-1600
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 8

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB180	1.8	0.32	0.15	1.00	
PCB183	ND	0.32	0.15	1.00	
PCB187	1.7	0.32	0.16	1.00	
PCB189	ND	0.32	0.10	1.00	
PCB194	ND	0.32	0.12	1.00	
PCB201	ND	0.32	0.054	1.00	
PCB206	ND	0.32	0.18	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	37	14-146			
p-Terphenyl-d14	114	34-148			

Return to Contents 

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/24/19
 Work Order: 19-01-1600
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 3 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-02-012419	19-01-1600-3-AA	01/24/19 11:00	Sediment	GC/MS HHH	01/26/19	02/02/19 04:17	190126L03

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB018	ND	0.34	0.11	1.00	
PCB028	1.6	0.34	0.12	1.00	
PCB037	ND	0.34	0.10	1.00	
PCB044	ND	0.34	0.26	1.00	
PCB049	ND	0.34	0.085	1.00	
PCB052	ND	0.34	0.33	1.00	
PCB066	ND	0.34	0.21	1.00	
PCB070	ND	0.34	0.12	1.00	
PCB074	ND	0.34	0.16	1.00	
PCB077	ND	0.34	0.20	1.00	
PCB081	ND	0.34	0.16	1.00	
PCB087	ND	0.34	0.19	1.00	
PCB099	ND	0.34	0.082	1.00	
PCB101	ND	0.34	0.076	1.00	
PCB105	ND	0.34	0.092	1.00	
PCB110	2.1	0.34	0.058	1.00	
PCB114	ND	0.34	0.13	1.00	
PCB118	2.4	0.34	0.060	1.00	
PCB119	ND	0.34	0.11	1.00	
PCB123	ND	0.34	0.13	1.00	
PCB126	ND	0.34	0.095	1.00	
PCB128	ND	0.34	0.21	1.00	
PCB132/153	ND	0.69	0.28	1.00	
PCB138/158	ND	0.69	0.61	1.00	
PCB149	ND	0.34	0.20	1.00	
PCB151	ND	0.34	0.15	1.00	
PCB156	ND	0.34	0.13	1.00	
PCB157	ND	0.34	0.15	1.00	
PCB167	ND	0.34	0.23	1.00	
PCB168	5.6	0.34	0.25	1.00	
PCB169	ND	0.34	0.11	1.00	
PCB170	ND	0.34	0.19	1.00	
PCB177	1.2	0.34	0.20	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/24/19
 Work Order: 19-01-1600
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 4 of 8

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB180	4.2	0.34	0.16	1.00	
PCB183	ND	0.34	0.16	1.00	
PCB187	1.8	0.34	0.18	1.00	
PCB189	ND	0.34	0.11	1.00	
PCB194	ND	0.34	0.13	1.00	
PCB201	ND	0.34	0.059	1.00	
PCB206	ND	0.34	0.20	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	34	14-146			
p-Terphenyl-d14	108	34-148			

Return to Contents 

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/24/19
 Work Order: 19-01-1600
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 5 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-03-012419	19-01-1600-5-AA	01/24/19 12:35	Sediment	GC/MS HHH	01/26/19	02/02/19 04:40	190126L03

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB018	ND	0.28	0.092	1.00	
PCB028	ND	0.28	0.098	1.00	
PCB037	ND	0.28	0.086	1.00	
PCB044	ND	0.28	0.21	1.00	
PCB049	ND	0.28	0.070	1.00	
PCB052	ND	0.28	0.27	1.00	
PCB066	ND	0.28	0.17	1.00	
PCB070	ND	0.28	0.10	1.00	
PCB074	ND	0.28	0.13	1.00	
PCB077	ND	0.28	0.16	1.00	
PCB081	ND	0.28	0.13	1.00	
PCB087	ND	0.28	0.16	1.00	
PCB099	ND	0.28	0.067	1.00	
PCB101	ND	0.28	0.063	1.00	
PCB105	ND	0.28	0.075	1.00	
PCB110	ND	0.28	0.048	1.00	
PCB114	ND	0.28	0.10	1.00	
PCB118	1.7	0.28	0.049	1.00	
PCB119	ND	0.28	0.088	1.00	
PCB123	ND	0.28	0.10	1.00	
PCB126	ND	0.28	0.078	1.00	
PCB128	ND	0.28	0.17	1.00	
PCB132/153	ND	0.56	0.23	1.00	
PCB138/158	ND	0.56	0.50	1.00	
PCB149	ND	0.28	0.17	1.00	
PCB151	ND	0.28	0.12	1.00	
PCB156	ND	0.28	0.11	1.00	
PCB157	ND	0.28	0.12	1.00	
PCB167	ND	0.28	0.19	1.00	
PCB168	3.3	0.28	0.20	1.00	
PCB169	ND	0.28	0.092	1.00	
PCB170	ND	0.28	0.16	1.00	
PCB177	ND	0.28	0.17	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/24/19
Work Order: 19-01-1600
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners
Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 6 of 8

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB180	1.6	0.28	0.13	1.00	
PCB183	ND	0.28	0.13	1.00	
PCB187	1.7	0.28	0.14	1.00	
PCB189	ND	0.28	0.091	1.00	
PCB194	ND	0.28	0.10	1.00	
PCB201	ND	0.28	0.048	1.00	
PCB206	ND	0.28	0.16	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	39	14-146			
p-Terphenyl-d14	107	34-148			

Analytical Report

ANCHOR QEA, LLC	Date Received:	01/24/19
9700 RESEARCH DR	Work Order:	19-01-1600
IRVINE, CA 92618-4327	Preparation:	EPA 3541
	Method:	EPA 8270C SIM PCB Congeners
	Units:	ug/kg

Project: City of Newport Beach - Federal Channels

Page 7 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-418-354	N/A	Solid	GC/MS HHH	01/26/19	02/01/19 21:33	190126L03

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB018	ND	0.20	0.065	1.00	
PCB028	ND	0.20	0.069	1.00	
PCB037	ND	0.20	0.061	1.00	
PCB044	ND	0.20	0.15	1.00	
PCB049	ND	0.20	0.050	1.00	
PCB052	ND	0.20	0.19	1.00	
PCB066	ND	0.20	0.12	1.00	
PCB070	ND	0.20	0.072	1.00	
PCB074	ND	0.20	0.090	1.00	
PCB077	ND	0.20	0.12	1.00	
PCB081	ND	0.20	0.090	1.00	
PCB087	ND	0.20	0.11	1.00	
PCB099	ND	0.20	0.047	1.00	
PCB101	ND	0.20	0.044	1.00	
PCB105	ND	0.20	0.053	1.00	
PCB110	ND	0.20	0.034	1.00	
PCB114	ND	0.20	0.074	1.00	
PCB118	ND	0.20	0.035	1.00	
PCB119	ND	0.20	0.062	1.00	
PCB123	ND	0.20	0.073	1.00	
PCB126	ND	0.20	0.055	1.00	
PCB128	ND	0.20	0.12	1.00	
PCB132/153	ND	0.40	0.16	1.00	
PCB138/158	ND	0.40	0.35	1.00	
PCB149	ND	0.20	0.12	1.00	
PCB151	ND	0.20	0.088	1.00	
PCB156	ND	0.20	0.077	1.00	
PCB157	ND	0.20	0.085	1.00	
PCB167	ND	0.20	0.13	1.00	
PCB168	ND	0.20	0.14	1.00	
PCB169	ND	0.20	0.065	1.00	
PCB170	ND	0.20	0.11	1.00	
PCB177	ND	0.20	0.12	1.00	
PCB180	ND	0.20	0.092	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/24/19
Work Order: 19-01-1600
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners
Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 8 of 8

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB183	ND	0.20	0.093	1.00	
PCB187	ND	0.20	0.10	1.00	
PCB189	ND	0.20	0.064	1.00	
PCB194	ND	0.20	0.074	1.00	
PCB201	ND	0.20	0.034	1.00	
PCB206	ND	0.20	0.12	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	55	14-146			
p-Terphenyl-d14	69	34-148			

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/24/19
 Work Order: 19-01-1600
 Preparation: EPA 3550B (M)
 Method: Organotins by Krone et al.
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-01-012419	19-01-1600-1-AA	01/24/19 08:10	Sediment	GC/MS Y	01/29/19	01/31/19 01:51	190129L04

Comment(s):
 - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	33	4.8	1.2	1.00	
Monobutyltin	ND	4.8	2.2	1.00	
Tetrabutyltin	ND	4.8	1.2	1.00	
Tributyltin	7.0	4.8	2.4	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	94	27-135	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-02-012419	19-01-1600-3-AA	01/24/19 11:00	Sediment	GC/MS Y	01/29/19	01/31/19 02:08	190129L04

Comment(s):
 - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	27	5.1	1.2	1.00	
Monobutyltin	ND	5.1	2.3	1.00	
Tetrabutyltin	ND	5.1	1.3	1.00	
Tributyltin	ND	5.1	2.5	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	95	27-135	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-03-012419	19-01-1600-5-AA	01/24/19 12:35	Sediment	GC/MS Y	01/29/19	01/31/19 02:25	190129L04

Comment(s):
 - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	15	4.2	1.0	1.00	
Monobutyltin	ND	4.2	2.0	1.00	
Tetrabutyltin	ND	4.2	1.0	1.00	
Tributyltin	ND	4.2	2.1	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	103	27-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/24/19
Work Order: 19-01-1600
Preparation: EPA 3550B (M)
Method: Organotins by Krone et al.
Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-07-016-1662	N/A	Solid	GC/MS Y	01/29/19	01/30/19 21:33	190129L04

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Dibutyltin	ND	3.0	0.73	1.00	
Monobutyltin	ND	3.0	1.4	1.00	
Tetrabutyltin	ND	3.0	0.74	1.00	
Tributyltin	ND	3.0	1.5	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
Tripentyltin	90	27-135			



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/24/19
 Work Order: 19-01-1600
 Preparation: N/A
 Method: EPA 9060A

Project: City of Newport Beach - Federal Channels

Page 1 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
19-01-1512-1	Sample	Sediment	TOC 10	01/29/19	01/29/19 13:19	J0129TOCS1
19-01-1512-1	Matrix Spike	Sediment	TOC 10	01/29/19	01/29/19 13:19	J0129TOCS1
19-01-1512-1	Matrix Spike Duplicate	Sediment	TOC 10	01/29/19	01/29/19 13:19	J0129TOCS1

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Carbon, Total Organic	0.4920	3.000	3.315	94	3.361	96	75-125	1	0-25	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/24/19
Work Order: 19-01-1600
Preparation: EPA 3541
Method: EPA 8270D (M)/TQ/EI

Project: City of Newport Beach - Federal Channels

Page 2 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
19-01-1512-1	Sample	Sediment	GCTQ 1	01/28/19	01/30/19 08:21	190128S07
19-01-1512-1	Matrix Spike	Sediment	GCTQ 1	01/28/19	01/30/19 12:41	190128S07
19-01-1512-1	Matrix Spike Duplicate	Sediment	GCTQ 1	01/28/19	01/30/19 13:33	190128S07

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Allethrin	ND	5.000	5.406	108	6.056	121	10-148	11	0-30	
Bifenthrin	ND	5.000	6.085	122	6.791	136	26-128	11	0-30	3
Cyfluthrin	ND	5.000	6.980	140	7.399	148	10-131	6	0-30	3
Cypermethrin	ND	5.000	6.189	124	6.765	135	10-136	9	0-30	
Deltamethrin/Tralomethrin	ND	5.000	6.749	135	7.689	154	13-190	13	0-30	
Fenpropathrin	ND	5.000	7.267	145	8.008	160	10-148	10	0-30	3
Fenvalerate/Esfenvalerate	ND	5.000	7.242	145	7.571	151	10-149	4	0-30	3
Fluvalinate	ND	5.000	6.323	126	6.917	138	10-121	9	0-30	3
Permethrin (cis/trans)	ND	5.000	7.207	144	7.858	157	45-123	9	0-30	3
Phenothrin	ND	5.000	8.089	162	8.985	180	45-165	11	0-30	3
Resmethrin/Bioresmethrin	ND	5.000	9.575	192	10.22	204	38-164	6	0-30	3
Tetramethrin	ND	5.000	8.147	163	8.958	179	15-153	9	0-30	3
lambda-Cyhalothrin	ND	5.000	7.224	144	8.220	164	10-123	13	0-30	3

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Spike/Spike Duplicate - Surrogate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/24/19
Work Order: 19-01-1600
Preparation: EPA 3541
Method: EPA 8270D (M)/TQ/EI

Project: City of Newport Beach - Federal Channels

Page 3 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number	
19-01-1512-1	Sample	Sediment	GCTQ 1	01/28/19	01/30/19 08:21	190128S07	
19-01-1512-1	Matrix Spike	Sediment	GCTQ 1	01/28/19	01/30/19 12:41	190128S07	
19-01-1512-1	Matrix Spike Duplicate	Sediment	GCTQ 1	01/28/19	01/30/19 13:33	190128S07	
Parameter	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	Qualifiers
Dibutylchloroendate	5.000	48.52	97	51.16	102	14-116	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/24/19
Work Order: 19-01-1600
Preparation: EPA 3050B
Method: EPA 6020

Project: City of Newport Beach - Federal Channels

Page 4 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
19-01-1512-1	Sample	Sediment	ICP/MS 05	01/28/19	01/29/19 14:08	190128S02
19-01-1512-1	Matrix Spike	Sediment	ICP/MS 05	01/28/19	01/29/19 13:54	190128S02
19-01-1512-1	Matrix Spike Duplicate	Sediment	ICP/MS 05	01/28/19	01/29/19 13:58	190128S02

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	2.161	25.00	31.48	117	31.30	117	80-120	1	0-20	
Cadmium	0.1162	25.00	29.31	117	28.83	115	80-120	2	0-20	
Chromium	4.979	25.00	35.65	123	34.36	118	80-120	4	0-20	3
Copper	7.095	25.00	37.40	121	35.98	116	80-120	4	0-20	3
Lead	4.541	25.00	34.30	119	34.15	118	80-120	0	0-20	
Nickel	3.048	25.00	31.20	113	30.28	109	80-120	3	0-20	
Selenium	0.4396	25.00	28.29	111	27.19	107	80-120	4	0-20	
Silver	ND	12.50	14.73	118	14.29	114	80-120	3	0-20	
Zinc	18.46	25.00	51.48	132	50.11	127	80-120	3	0-20	3

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/24/19
Work Order: 19-01-1600
Preparation: EPA 7471A Total
Method: EPA 7471A

Project: City of Newport Beach - Federal Channels

Page 5 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
19-01-1701-1	Sample	Solid	Mercury 08	01/30/19	01/30/19 16:38	190130S04
19-01-1701-1	Matrix Spike	Solid	Mercury 08	01/30/19	01/30/19 16:40	190130S04
19-01-1701-1	Matrix Spike Duplicate	Solid	Mercury 08	01/30/19	01/30/19 16:42	190130S04

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	0.09585	0.8350	0.7433	78	0.9050	97	71-137	20	0-14	4

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/24/19
Work Order: 19-01-1600
Preparation: EPA 3541
Method: EPA 8081A

Project: City of Newport Beach - Federal Channels

Page 6 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
19-01-1512-1	Sample	Sediment	GC 51	01/30/19	02/01/19 11:54	190130S09
19-01-1512-1	Matrix Spike	Sediment	GC 51	01/30/19	01/31/19 10:56	190130S09
19-01-1512-1	Matrix Spike Duplicate	Sediment	GC 51	01/30/19	01/31/19 11:10	190130S09

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Aldrin	ND	5.000	2.102	42	2.984	60	50-135	35	0-25	3,4
Alpha-BHC	ND	5.000	3.543	71	3.584	72	50-135	1	0-25	
Beta-BHC	ND	5.000	5.268	105	4.612	92	50-135	13	0-25	
Delta-BHC	ND	5.000	3.637	73	3.591	72	50-135	1	0-25	
Gamma-BHC	ND	5.000	3.038	61	3.201	64	50-135	5	0-25	
Dieldrin	ND	5.000	2.954	59	3.112	62	50-135	5	0-25	
4,4'-DDD	ND	5.000	3.979	80	4.289	86	50-135	8	0-25	
4,4'-DDE	5.025	5.000	7.617	52	7.486	49	50-135	2	0-25	3
4,4'-DDT	ND	5.000	3.344	67	2.824	56	50-135	17	0-25	
Endosulfan I	ND	5.000	2.792	56	2.929	59	50-135	5	0-25	
Endosulfan II	ND	5.000	4.266	85	3.451	69	50-135	21	0-25	
Endosulfan Sulfate	ND	5.000	3.119	62	3.307	66	50-135	6	0-25	
Endrin	ND	5.000	2.663	53	2.938	59	50-135	10	0-25	
Endrin Aldehyde	ND	5.000	3.168	63	3.036	61	50-135	4	0-25	
Endrin Ketone	ND	5.000	3.451	69	3.419	68	50-135	1	0-25	
Heptachlor	ND	5.000	2.864	57	3.337	67	50-135	15	0-25	
Heptachlor Epoxide	ND	5.000	3.144	63	3.288	66	50-135	5	0-25	
Methoxychlor	ND	5.000	3.201	64	3.354	67	50-135	5	0-25	
Alpha Chlordane	ND	5.000	3.051	61	3.145	63	50-135	3	0-25	
Gamma Chlordane	ND	5.000	3.740	75	3.694	74	50-135	1	0-25	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Spike/Spike Duplicate - Surrogate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/24/19
Work Order: 19-01-1600
Preparation: EPA 3541
Method: EPA 8081A

Project: City of Newport Beach - Federal Channels

Page 7 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
19-01-1512-1	Sample	Sediment	GC 51	01/30/19	02/01/19 11:54	190130S09
19-01-1512-1	Matrix Spike	Sediment	GC 51	01/30/19	01/31/19 10:56	190130S09
19-01-1512-1	Matrix Spike Duplicate	Sediment	GC 51	01/30/19	01/31/19 11:10	190130S09

Parameter	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	Qualifiers
2,4,5,6-Tetrachloro-m-Xylene	1.000	4.896	49	4.897	49	25-145	
Decachlorobiphenyl	1.000	6.672	67	6.067	61	24-168	



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/24/19
Work Order: 19-01-1600
Preparation: EPA 3541
Method: EPA 8270C SIM PAHs

Project: City of Newport Beach - Federal Channels

Page 8 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
19-01-1512-1	Sample	Sediment	GC/MS AAA	01/26/19	02/01/19 13:42	190126S02
19-01-1512-1	Matrix Spike	Sediment	GC/MS AAA	01/26/19	02/01/19 13:03	190126S02
19-01-1512-1	Matrix Spike Duplicate	Sediment	GC/MS AAA	01/26/19	02/01/19 16:37	190126S02

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Acenaphthene	ND	0.1000	0.05076	51	0.06002	60	40-160	17	0-20	
Acenaphthylene	ND	0.1000	0.05556	56	0.05471	55	40-160	2	0-20	
Anthracene	ND	0.1000	0.06414	64	0.06939	69	40-160	8	0-20	
Benzo (a) Anthracene	ND	0.1000	0.06789	68	0.06562	66	40-160	3	0-20	
Benzo (a) Pyrene	ND	0.1000	0.06911	69	0.07634	76	40-160	10	0-20	
Benzo (b) Fluoranthene	ND	0.1000	0.06175	62	0.06468	65	40-160	5	0-20	
Benzo (g,h,i) Perylene	ND	0.1000	0.04364	44	0.03685	37	40-160	17	0-20	3
Benzo (k) Fluoranthene	ND	0.1000	0.06091	61	0.05678	57	40-160	7	0-20	
Chrysene	ND	0.1000	0.06356	64	0.06537	65	40-160	3	0-20	
Dibenz (a,h) Anthracene	ND	0.1000	0.04989	50	0.04272	43	40-160	15	0-20	
Fluoranthene	ND	0.1000	0.06990	70	0.07231	72	40-160	3	0-20	
Fluorene	ND	0.1000	0.06213	62	0.07055	71	40-160	13	0-20	
Indeno (1,2,3-c,d) Pyrene	ND	0.1000	0.04702	47	0.04168	42	40-160	12	0-20	
2-Methylnaphthalene	ND	0.1000	0.04913	49	0.05416	54	40-160	10	0-20	
1-Methylnaphthalene	ND	0.1000	0.04419	44	0.04779	48	40-160	8	0-20	
Naphthalene	ND	0.1000	0.04124	41	0.04742	47	40-160	14	0-20	
Phenanthrene	ND	0.1000	0.06467	65	0.06946	69	40-160	7	0-20	
Pyrene	ND	0.1000	0.06920	69	0.05914	59	40-160	16	0-46	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Spike/Spike Duplicate - Surrogate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/24/19
Work Order: 19-01-1600
Preparation: EPA 3541
Method: EPA 8270C SIM PAHs

Project: City of Newport Beach - Federal Channels

Page 9 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
19-01-1512-1	Sample	Sediment	GC/MS AAA	01/26/19	02/01/19 13:42	190126S02
19-01-1512-1	Matrix Spike	Sediment	GC/MS AAA	01/26/19	02/01/19 13:03	190126S02
19-01-1512-1	Matrix Spike Duplicate	Sediment	GC/MS AAA	01/26/19	02/01/19 16:37	190126S02

Parameter	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	Qualifiers
2-Fluorobiphenyl	0.01000	0.06283	63	0.06076	61	14-146	
Nitrobenzene-d5	0.01000	0.04591	46	0.03646	36	18-162	
p-Terphenyl-d14	0.01000	0.08024	80	0.06664	67	34-148	


 Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/24/19
Work Order: 19-01-1600
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners

Project: City of Newport Beach - Federal Channels

Page 10 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
19-01-1512-1	Sample	Sediment	GC/MS HHH	01/26/19	02/02/19 01:54	190126S03
19-01-1512-1	Matrix Spike	Sediment	GC/MS HHH	01/26/19	02/02/19 01:06	190126S03
19-01-1512-1	Matrix Spike Duplicate	Sediment	GC/MS HHH	01/26/19	02/02/19 01:30	190126S03

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
PCB018	ND	50.00	29.59	59	33.50	67	50-150	12	0-25	
PCB028	ND	50.00	33.77	68	37.53	75	50-150	11	0-25	
PCB044	ND	50.00	32.99	66	37.42	75	50-150	13	0-25	
PCB052	ND	50.00	30.18	60	34.44	69	50-150	13	0-25	
PCB066	ND	50.00	37.80	76	42.63	85	50-150	12	0-25	
PCB077	ND	50.00	32.46	65	37.01	74	50-150	13	0-25	
PCB101	ND	50.00	32.29	65	36.25	73	50-150	12	0-25	
PCB105	ND	50.00	33.71	67	37.22	74	50-150	10	0-25	
PCB118	ND	50.00	33.34	67	37.49	75	50-150	12	0-25	
PCB126	ND	50.00	34.22	68	38.34	77	50-150	11	0-25	
PCB128	ND	50.00	36.13	72	40.71	81	50-150	12	0-25	
PCB170	ND	50.00	30.83	62	34.70	69	50-150	12	0-25	
PCB180	ND	50.00	37.56	75	41.79	84	50-150	11	0-25	
PCB187	ND	50.00	34.68	69	39.26	79	50-150	12	0-25	
PCB206	ND	50.00	32.03	64	35.80	72	50-150	11	0-25	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Spike/Spike Duplicate - Surrogate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/24/19
Work Order: 19-01-1600
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners

Project: City of Newport Beach - Federal Channels

Page 11 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number	
19-01-1512-1	Sample	Sediment	GC/MS HHH	01/26/19	02/02/19 01:54	190126S03	
19-01-1512-1	Matrix Spike	Sediment	GC/MS HHH	01/26/19	02/02/19 01:06	190126S03	
19-01-1512-1	Matrix Spike Duplicate	Sediment	GC/MS HHH	01/26/19	02/02/19 01:30	190126S03	
Parameter	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	Qualifiers
2-Fluorobiphenyl	10.00	52.01	52	54.74	55	14-146	
p-Terphenyl-d14	10.00	76.57	77	84.22	84	34-148	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/24/19
Work Order: 19-01-1600
Preparation: EPA 3550B (M)
Method: Organotins by Krone et al.

Project: City of Newport Beach - Federal Channels

Page 12 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
19-01-1512-1	Sample	Sediment	GC/MS Y	01/29/19	01/30/19 22:59	190129S04				
19-01-1512-1	Matrix Spike	Sediment	GC/MS Y	01/29/19	01/30/19 22:24	190129S04				
19-01-1512-1	Matrix Spike Duplicate	Sediment	GC/MS Y	01/29/19	01/30/19 22:41	190129S04				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Tetrabutyltin	ND	100.0	73.66	74	77.12	77	33-129	5	0-36	
Tributyltin	ND	100.0	75.13	75	78.63	79	34-142	5	0-50	



Calscience

Spike/Spike Duplicate - Surrogate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/24/19
Work Order: 19-01-1600
Preparation: EPA 3550B (M)
Method: Organotins by Krone et al.

Project: City of Newport Beach - Federal Channels

Page 13 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number	
19-01-1512-1	Sample	Sediment	GC/MS Y	01/29/19	01/30/19 22:59	190129S04	
19-01-1512-1	Matrix Spike	Sediment	GC/MS Y	01/29/19	01/30/19 22:24	190129S04	
19-01-1512-1	Matrix Spike Duplicate	Sediment	GC/MS Y	01/29/19	01/30/19 22:41	190129S04	
Parameter	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	Qualifiers
Tripentyltin	50.00	81.93	82	84.43	84	27-135	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - PDS

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/24/19
Work Order: 19-01-1600
Preparation: EPA 3050B
Method: EPA 6020

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
19-01-1512-1	Sample	Sediment	ICP/MS 05	01/28/19 00:00	01/29/19 14:08	190128S02
19-01-1512-1	PDS	Sediment	ICP/MS 05	01/28/19 00:00	01/29/19 14:01	190128S02

Parameter	Sample Conc.	Spike Added	PDS Conc.	PDS %Rec.	%Rec. CL	Qualifiers
Arsenic	2.161	25.00	30.72	114	75-125	
Cadmium	0.1162	25.00	28.07	112	75-125	
Chromium	4.979	25.00	33.00	112	75-125	
Copper	7.095	25.00	35.28	113	75-125	
Lead	4.541	25.00	33.18	115	75-125	
Nickel	3.048	25.00	30.43	110	75-125	
Selenium	0.4396	25.00	29.00	114	75-125	
Silver	ND	12.50	13.19	105	75-125	
Zinc	18.46	25.00	48.78	121	75-125	



Calscience

Quality Control - Sample Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/24/19
Work Order: 19-01-1600
Preparation: N/A
Method: SM 2540 B (M)

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
NC2-01-012419	Sample	Sediment	N/A	01/29/19 00:00	01/29/19 16:00	J0129TSD1
NC2-01-012419	Sample Duplicate	Sediment	N/A	01/29/19 00:00	01/29/19 16:00	J0129TSD1
<u>Parameter</u>		<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Solids, Total		62.40	61.60	1	0-10	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/24/19
Work Order: 19-01-1600
Preparation: N/A
Method: EPA 9060A

Project: City of Newport Beach - Federal Channels

Page 1 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-06-013-1936	LCS	Solid	TOC 10	01/29/19	01/29/19 13:19	J0129TOCL1			
099-06-013-1936	LCSD	Solid	TOC 10	01/29/19	01/29/19 13:19	J0129TOCL1			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Carbon, Total Organic	0.6000	0.5108	85	0.6206	103	80-120	19	0-20	

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/24/19
Work Order: 19-01-1600
Preparation: EPA 3541
Method: EPA 8270D (M)/TQ/EI

Project: City of Newport Beach - Federal Channels

Page 2 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-14-403-193	LCS	Solid	GCTQ 1	01/28/19	01/30/19 03:10	190127L07				
099-14-403-193	LCSD	Solid	GCTQ 1	01/28/19	01/30/19 04:02	190127L07				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Allethrin	5.000	4.961	99	4.952	99	10-148	0-171	0	0-25	
Bifenthrin	5.000	5.147	103	5.524	110	26-128	9-145	7	0-25	
Cyfluthrin	5.000	4.444	89	4.861	97	10-131	0-151	9	0-25	
Cypermethrin	5.000	3.785	76	4.104	82	10-136	0-157	8	0-25	
Deltamethrin/Tralomethrin	5.000	3.997	80	4.268	85	13-190	0-220	7	0-25	
Fenpropathrin	5.000	4.798	96	5.107	102	10-148	0-171	6	0-25	
Fenvalerate/Esfenvalerate	5.000	3.616	72	3.989	80	10-149	0-172	10	0-25	
Fluvalinate	5.000	3.427	69	3.859	77	10-121	0-140	12	0-25	
Permethrin (cis/trans)	5.000	4.604	92	5.095	102	45-123	32-136	10	0-25	
Phenothrin	5.000	5.587	112	5.883	118	45-165	25-185	5	0-25	
Resmethrin/Bioresmethrin	5.000	6.677	134	7.224	144	38-164	17-185	8	0-25	
Tetramethrin	5.000	4.990	100	5.410	108	15-153	0-176	8	0-25	
lambda-Cyhalothrin	5.000	4.582	92	4.933	99	10-123	0-142	7	0-25	

Total number of LCS compounds: 13

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

LCS/LCSD - Surrogate

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/24/19
 Work Order: 19-01-1600
 Preparation: EPA 3541
 Method: EPA 8270D (M)/TQ/EI

Project: City of Newport Beach - Federal Channels

Page 3 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-14-403-193	LCS	Solid	GCTQ 1	01/28/19	01/30/19 03:10	190127L07
099-14-403-193	LCSD	Solid	GCTQ 1	01/28/19	01/30/19 04:02	190127L07

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	Qualifiers
Dibutylchloroendate	5.000	41.53	83	45.31	91	14-116	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/24/19
 Work Order: 19-01-1600
 Preparation: EPA 3050B
 Method: EPA 6020

Project: City of Newport Beach - Federal Channels

Page 4 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-254-710	LCS	Solid	ICP/MS 05	01/28/19	01/29/19 15:40	190128L02
099-15-254-710	LCSD	Solid	ICP/MS 05	01/28/19	01/29/19 15:43	190128L02

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	25.00	25.89	104	26.49	106	80-120	2	0-20	
Cadmium	25.00	25.78	103	26.18	105	80-120	2	0-20	
Chromium	25.00	26.42	106	26.65	107	80-120	1	0-20	
Copper	25.00	25.48	102	25.29	101	80-120	1	0-20	
Lead	25.00	27.32	109	27.62	110	80-120	1	0-20	
Nickel	25.00	25.87	103	26.41	106	80-120	2	0-20	
Selenium	25.00	23.08	92	23.93	96	80-120	4	0-20	
Silver	12.50	12.75	102	12.91	103	80-120	1	0-20	
Zinc	25.00	29.49	118	28.05	112	80-120	5	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/24/19
Work Order: 19-01-1600
Preparation: EPA 7471A Total
Method: EPA 7471A

Project: City of Newport Beach - Federal Channels

Page 5 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-16-278-513	LCS	Solid	Mercury 08	01/30/19	01/30/19 16:33	190130L04E			
099-16-278-513	LCSD	Solid	Mercury 08	01/30/19	01/30/19 16:35	190130L04E			
<u>Parameter</u>	<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>LCSD Conc.</u>	<u>LCSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Mercury	0.8350	0.9560	114	0.9464	113	82-124	1	0-16	

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/24/19
 Work Order: 19-01-1600
 Preparation: EPA 3541
 Method: EPA 8081A

Project: City of Newport Beach - Federal Channels

Page 6 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-858-608	LCS	Solid	GC 51	01/30/19	02/01/19 16:22	190130L09				
099-12-858-608	LCSD	Solid	GC 51	01/30/19	01/31/19 07:35	190130L09				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Aldrin	5.000	3.630	73	2.988	60	50-135	36-149	19	0-25	
Alpha-BHC	5.000	3.819	76	3.440	69	50-135	36-149	10	0-25	
Beta-BHC	5.000	3.993	80	3.722	74	50-135	36-149	7	0-25	
Delta-BHC	5.000	4.269	85	3.955	79	50-135	36-149	8	0-25	
Gamma-BHC	5.000	3.825	77	3.584	72	50-135	36-149	7	0-25	
Dieldrin	5.000	3.750	75	3.585	72	50-135	36-149	4	0-25	
4,4'-DDD	5.000	4.118	82	4.004	80	50-135	36-149	3	0-25	
4,4'-DDE	5.000	4.079	82	3.959	79	50-135	36-149	3	0-25	
4,4'-DDT	5.000	4.171	83	4.684	94	50-135	36-149	12	0-25	
Endosulfan I	5.000	3.456	69	3.383	68	50-135	36-149	2	0-25	
Endosulfan II	5.000	3.799	76	4.056	81	50-135	36-149	7	0-25	
Endosulfan Sulfate	5.000	3.878	78	3.286	66	50-135	36-149	17	0-25	
Endrin	5.000	3.823	76	3.729	75	50-135	36-149	3	0-25	
Endrin Aldehyde	5.000	2.667	53	3.119	62	50-135	36-149	16	0-25	
Endrin Ketone	5.000	4.009	80	3.885	78	50-135	36-149	3	0-25	
Heptachlor	5.000	4.097	82	3.619	72	50-135	36-149	12	0-25	
Heptachlor Epoxide	5.000	3.764	75	3.564	71	50-135	36-149	5	0-25	
Methoxychlor	5.000	4.157	83	3.976	80	50-135	36-149	4	0-25	
Alpha Chlordane	5.000	3.689	74	3.533	71	50-135	36-149	4	0-25	
Gamma Chlordane	5.000	3.760	75	3.706	74	50-135	36-149	1	0-25	

Total number of LCS compounds: 20

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits



Calscience

LCS/LCSD - Surrogate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/24/19
Work Order: 19-01-1600
Preparation: EPA 3541
Method: EPA 8081A

Project: City of Newport Beach - Federal Channels

Page 7 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-858-608	LCS	Solid	GC 51	01/30/19	02/01/19 16:22	190130L09
099-12-858-608	LCSD	Solid	GC 51	01/30/19	01/31/19 07:35	190130L09

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	Qualifiers
2,4,5,6-Tetrachloro-m-Xylene	1.000	6.902	69	7.218	72	25-145	
Decachlorobiphenyl	1.000	8.406	84	8.572	86	24-168	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/24/19
 Work Order: 19-01-1600
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs

Project: City of Newport Beach - Federal Channels

Page 8 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number	
099-14-097-324	LCS	Solid	GC/MS AAA	01/26/19	02/01/19 17:56	190126L02	
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
Acenaphthene		0.1000	0.05284	53	40-160	20-180	
Acenaphthylene		0.1000	0.05578	56	40-160	20-180	
Anthracene		0.1000	0.05409	54	40-160	20-180	
Benzo (a) Anthracene		0.1000	0.05847	58	40-160	20-180	
Benzo (a) Pyrene		0.1000	0.06552	66	40-160	20-180	
Benzo (b) Fluoranthene		0.1000	0.06391	64	40-160	20-180	
Benzo (g,h,i) Perylene		0.1000	0.06646	66	40-160	20-180	
Benzo (k) Fluoranthene		0.1000	0.04786	48	40-160	20-180	
Chrysene		0.1000	0.05788	58	40-160	20-180	
Dibenz (a,h) Anthracene		0.1000	0.06734	67	40-160	20-180	
Fluoranthene		0.1000	0.05559	56	40-160	20-180	
Fluorene		0.1000	0.05824	58	40-160	20-180	
Indeno (1,2,3-c,d) Pyrene		0.1000	0.06401	64	40-160	20-180	
2-Methylnaphthalene		0.1000	0.05618	56	40-160	20-180	
1-Methylnaphthalene		0.1000	0.04872	49	40-160	20-180	
Naphthalene		0.1000	0.05205	52	40-160	20-180	
Phenanthrene		0.1000	0.05445	54	40-160	20-180	
Pyrene		0.1000	0.04665	47	40-160	20-180	

Total number of LCS compounds: 18

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

LCS Only - Surrogate

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/24/19
 Work Order: 19-01-1600
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs

Project: City of Newport Beach - Federal Channels

Page 9 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-097-324	LCS	Solid	GC/MS AAA	01/26/19	02/01/19 17:56	190126L02
<u>Parameter</u>		<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
2-Fluorobiphenyl		0.01000	0.05705	57	14-146	
Nitrobenzene-d5		0.01000	0.04018	40	18-162	
p-Terphenyl-d14		0.01000	0.05547	55	34-148	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/24/19
 Work Order: 19-01-1600
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners

Project: City of Newport Beach - Federal Channels

Page 10 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-16-418-354	LCS	Solid	GC/MS HHH	01/26/19	02/01/19 21:56	190126L03				
099-16-418-354	LCSD	Solid	GC/MS HHH	01/26/19	02/01/19 22:19	190126L03				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
PCB018	50.00	41.87	84	44.53	89	24-132	6-150	6	0-28	
PCB028	50.00	46.34	93	49.59	99	31-133	14-150	7	0-26	
PCB044	50.00	49.38	99	51.11	102	36-120	22-134	3	0-28	
PCB052	50.00	44.24	88	45.91	92	31-121	16-136	4	0-27	
PCB066	50.00	57.04	114	60.48	121	43-139	27-155	6	0-25	
PCB077	50.00	50.30	101	53.13	106	41-131	26-146	5	0-25	
PCB101	50.00	49.05	98	51.23	102	37-121	23-135	4	0-27	
PCB105	50.00	51.75	104	55.75	112	48-132	34-146	7	0-26	
PCB118	50.00	52.06	104	55.59	111	46-136	31-151	7	0-25	
PCB126	50.00	51.76	104	55.95	112	38-134	22-150	8	0-25	
PCB128	50.00	55.45	111	60.47	121	40-130	25-145	9	0-26	
PCB170	50.00	49.81	100	52.11	104	40-124	26-138	5	0-29	
PCB180	50.00	58.23	116	63.73	127	41-143	24-160	9	0-26	
PCB187	50.00	54.05	108	58.76	118	39-129	24-144	8	0-26	
PCB206	50.00	53.98	108	55.05	110	33-135	16-152	2	0-24	

Total number of LCS compounds: 15

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

LCS/LCSD - Surrogate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/24/19
Work Order: 19-01-1600
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners

Project: City of Newport Beach - Federal Channels

Page 11 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number	
099-16-418-354	LCS	Solid	GC/MS HHH	01/26/19	02/01/19 21:56	190126L03	
099-16-418-354	LCSD	Solid	GC/MS HHH	01/26/19	02/01/19 22:19	190126L03	
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	Qualifiers
2-Fluorobiphenyl	10.00	53.38	53	66.70	67	14-146	
p-Terphenyl-d14	10.00	75.59	76	83.95	84	34-148	

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 01/24/19
Work Order: 19-01-1600
Preparation: EPA 3550B (M)
Method: Organotins by Krone et al.

Project: City of Newport Beach - Federal Channels

Page 12 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-07-016-1662	LCS	Solid	GC/MS Y	01/29/19	01/30/19 21:50	190129L04			
099-07-016-1662	LCSD	Solid	GC/MS Y	01/29/19	01/30/19 22:07	190129L04			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Tetrabutyltin	100.0	63.86	64	72.28	72	40-142	12	0-20	
Tributyltin	100.0	55.93	56	46.79	47	33-147	18	0-20	



Calscience

LCS/LCSD - Surrogate

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 01/24/19
 Work Order: 19-01-1600
 Preparation: EPA 3550B (M)
 Method: Organotins by Krone et al.

Project: City of Newport Beach - Federal Channels

Page 13 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-07-016-1662	LCS	Solid	GC/MS Y	01/29/19	01/30/19 21:50	190129L04
099-07-016-1662	LCSD	Solid	GC/MS Y	01/29/19	01/30/19 22:07	190129L04

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	Qualifiers
Tripentyltin	50.00	73.54	74	62.69	63	27-135	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Sample Analysis Summary Report

Work Order: 19-01-1600

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
ASTM D4464 (M)	N/A	1106	LPSA 1	1
EPA 6020	EPA 3050B	598	ICP/MS 05	1
EPA 7471A	EPA 7471A Total	868	Mercury 08	1
EPA 8081A	EPA 3541	669	GC 51	1
EPA 8270C SIM PAHs	EPA 3541	1037	GC/MS AAA	1
EPA 8270C SIM PCB Congeners	EPA 3541	1037	GC/MS HHH	1
EPA 8270D (M)/TQ/EI	EPA 3541	27	GCTQ 1	3
EPA 9060A	N/A	834	TOC 10	1
Organotins by Krone et al.	EPA 3550B (M)	1117	GC/MS Y	1
SM 2540 B (M)	N/A	1136	N/A	1

Glossary of Terms and Qualifiers

Work Order: 19-01-1600

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.



Calscience

CHAIN OF CUSTODY RECORD

DATE: 1/24/19

PAGE: 1 OF 1

WFO # / LAB USE ONLY
19-01-1600

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

LABORATORY CLIENT:

Anchor QEA

ADDRESS: 27201 Puerta Real, Suite 350

CITY: Mission Viejo

STATE: CA ZIP: 92691

TEL: 949.347.2780 E-MAIL: cosuch@anchoragea.com

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

SAME DAY 24 HR 48 HR 72 HR 5 DAYS STANDARD

LOG CODE:

GLOBAL ID:

SPECIAL INSTRUCTIONS:

Report down to the MDL. Refer to SAP for parameters and QC frequency.

LAB USE ONLY	SAMPLE ID	SAMPLING		MATRIX	NO. OF CONT.
		DATE	TIME		
1	NC2-01-012419	1/24/19	0810	SED	2
2	NC2-01-2-012419		0810	SED	1
3	NC2-02-012419		1100	SED	2
4	NC2-02-2-012419		1100	SED	1
5	NC2-03-012419		1235	SED	2
6	NC2-03-2-012419		1235	SED	1

Unpreserved
Preserved
Field Filtered

CLIENT PROJECT NAME / NUMBER:

City of Newport Beach - Federal Channels

PROJECT CONTACT:

Chris Osuch

QUOTE #

963350

P.O. NO.:

180243-02.0

SAMPLER(S): (PRINT)

C. Doffpohl
C. Osuch

REQUESTED ANALYSES

Please check box or fill in blank as needed.

ARCHIVE	EPA 6020 Metals	EPA 7471A Mercury	EPA 8081A Organochlorine pesticides	EPA 8270C SIM PAHs	EPA 8270C SIM PCB Congeners	EPA 9060A Total Organic Carbon	Krone et al. Organotins	Pyrethroids by EPA 8270D (M)/TQ/EI	SM 2540 B (M) Total Solids	ASTM D464 (M) Particle Size	MS/MSD
X	X	X	X	X	X	X	X	X	X	X	
X	X	X	X	X	X	X	X	X	X	X	
X	X	X	X	X	X	X	X	X	X	X	
X	X	X	X	X	X	X	X	X	X	X	

Received by: (Signature/Affiliation)

[Signature]

Received by: (Signature/Affiliation)

[Signature]

Received by: (Signature/Affiliation)

Date: 1/24/19

Time: 1715

Date: 1/24/19

Time: 1820

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: Anchor

DATE: 01/24/2019

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: -0.5°C); Temperature (w/o CF): 2.2 °C (w/ CF): 1.7 °C; Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: Air Filter

Checked by: 1091

CUSTODY SEAL:

Cooler Present and Intact Present but Not Intact Not Present N/A

Sample(s) Present and Intact Present but Not Intact Not Present N/A

Checked by: 1091
826

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sampling date <input type="checkbox"/> Sampling time <input type="checkbox"/> Matrix <input type="checkbox"/> Number of containers			
<input type="checkbox"/> No analysis requested <input type="checkbox"/> Not relinquished <input type="checkbox"/> No relinquished date <input type="checkbox"/> No relinquished time			
Sampler's name indicated on COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sufficient volume/mass for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples for certain analyses received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfide <input type="checkbox"/> Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation chemical(s) noted on COC and/or sample container	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Unpreserved aqueous sample(s) received for certain analyses			
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Total Metals <input type="checkbox"/> Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Container(s) for certain analysis free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Dissolved Gases (RSK-175) <input type="checkbox"/> Dissolved Oxygen (SM 4500)			
<input type="checkbox"/> Carbon Dioxide (SM 4500) <input type="checkbox"/> Ferrous Iron (SM 3500) <input type="checkbox"/> Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:

(Trip Blank Lot Number: _____)

Aqueous: VOA VOA_h VOA_{na2} 100PJ 100PJ_{na2} 125AGB 125AGB_h 125AGB_p 125PB 125PB_zna (pH_9)
 250AGB 250CGB 250CGB_s (pH_2) 250PB 250PB_n (pH_2) 500AGB 500AGJ 500AGJ_s (pH_2) 500PB
 1AGB 1AGB_{na2} 1AGB_s (pH_2) 1AGB_s (O&G) 1PB 1PB_{na} (pH_12) _____ _____ _____

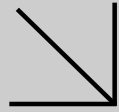
Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (____) EnCores® (____) TerraCores® (____) _____ _____

Air: Tedlar™ Canister Sorbent Tube PUF _____ Other Matrix Sediment: Z 16ozCGJ _____

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO₃, na = NaOH, na₂ = Na₂S₂O₃, p = H₃PO₄, Labeled/Checked by: 826

s = H₂SO₄, u = ultra-pure, x = Na₂SO₃+NaHSO₄.H₂O, zna = Zn (CH₃CO₂)₂ + NaOH Reviewed by: 300



WORK ORDER NUMBER: 19-02-0812

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: ANCHOR QEA, LLC

Client Project Name: City of Newport Beach - Federal Channels

Attention: Chris Osuch
9700 RESEARCH DR
IRVINE, CA 92618-4327

Approved for release on 02/26/2019 by:
Richard Villafania
Project Manager

ResultLink ▶

Email your PM ▶

Eurofins Calscience (Calscience) certifies that the test results provided in this report meet all NELAC Institute requirements for parameters for which accreditation is required or available. Any exceptions to NELAC Institute requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Contents

Client Project Name: City of Newport Beach - Federal Channels
 Work Order Number: 19-02-0812

1	Work Order Narrative.	3
2	Sample Summary.	4
3	Client Sample Data.	5
	3.1 EPA 9060A Total Organic Carbon (Solid).	5
	3.2 SM 2540 B (M) Total Solids (Solid).	6
	3.3 Pyrethroids by EPA 8270D (M)/TQ/EI (Solid).	7
	3.4 EPA 6020 ICP/MS Metals (Solid).	9
	3.5 EPA 7471A Mercury (Solid).	10
	3.6 ASTM D4464 (M) Particle Size Laser (Solid).	11
	3.7 EPA 8081A Organochlorine Pesticides (Solid).	12
	3.8 EPA 8270C SIM PAHs (Solid).	15
	3.9 EPA 8270C SIM PCB Congeners (Solid).	17
	3.10 Krone et al. Organotins (Solid).	21
4	Quality Control Sample Data.	22
	4.1 MS/MSD.	22
	4.2 PDS/PDSD.	35
	4.3 Sample Duplicate.	36
	4.4 LCS/LCSD.	37
5	Sample Analysis Summary.	50
6	Glossary of Terms and Qualifiers.	51
7	Chain-of-Custody/Sample Receipt Form.	52

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 02/12/19. They were assigned to Work Order 19-02-0812.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

DoD Projects:

The test results contained in this report are accredited under the laboratory's ISO/IEC 17025:2005 and DoD-ELAP accreditation issued by the ANSI-ASQ National Accreditation Board. Refer to certificate and scope of accreditation ADE-1864.

Sample Summary

Client: ANCHOR QEA, LLC	Work Order: 19-02-0812
9700 RESEARCH DR	Project Name: City of Newport Beach - Federal Channels
IRVINE, CA 92618-4327	PO Number:
	Date/Time Received: 02/12/19 13:30
	Number of Containers: 3

Attn: Chris Osuch

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
LA-3-021219	19-02-0812-1	02/12/19 08:00	3	Sediment

Analytical Report

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/12/19
Work Order: 19-02-0812
Preparation: N/A
Method: EPA 9060A
Units: %

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA-3-021219	19-02-0812-1-AA	02/12/19 08:00	Sediment	TOC 10	02/15/19	02/16/19 10:26	J0215TOCL1

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	2.2	0.10	0.036	1.00	

Method Blank	099-06-013-1939	N/A	Solid	TOC 10	02/15/19	02/16/19 10:26	J0215TOCL1
--------------	-----------------	-----	-------	--------	----------	-------------------	------------

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	ND	0.050	0.017	1.00	

Analytical Report

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/12/19
Work Order: 19-02-0812
Preparation: N/A
Method: SM 2540 B (M)
Units: %

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA-3-021219	19-02-0812-1-AA	02/12/19 08:00	Sediment	N/A	02/14/19	02/14/19 14:30	J0214TSB1

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	48.1	0.100	0.100	1.00	

Method Blank	099-05-019-4406	N/A	Solid	N/A	02/14/19	02/14/19 14:30	J0214TSB1
--------------	-----------------	-----	-------	-----	----------	-------------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	ND	0.100	0.100	1.00	

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/12/19
 Work Order: 19-02-0812
 Preparation: EPA 3541
 Method: EPA 8270D (M)/TQ/EI
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA-3-021219	19-02-0812-1-AA	02/12/19 08:00	Sediment	GCTQ 1	02/18/19	02/20/19 01:19	190218L15

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Allethrin	ND	1.0	0.52	1.00	
Bifenthrin	ND	1.0	0.62	1.00	
Cyfluthrin	ND	1.0	0.52	1.00	
Cypermethrin	ND	1.0	0.52	1.00	
Deltamethrin/Tralomethrin	ND	1.0	0.52	1.00	
Fenpropathrin	ND	1.0	0.52	1.00	
Fenvalerate/Esfenvalerate	ND	1.0	0.52	1.00	
Fluvalinate	ND	1.0	0.52	1.00	
Permethrin (cis/trans)	ND	2.1	1.0	1.00	
Phenothrin	ND	1.0	0.52	1.00	
Resmethrin/Bioresmethrin	ND	1.0	0.88	1.00	
Tetramethrin	ND	1.0	0.62	1.00	
lambda-Cyhalothrin	ND	1.0	0.52	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
Dibutylchloroendate	71	14-116			

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/12/19
 Work Order: 19-02-0812
 Preparation: EPA 3541
 Method: EPA 8270D (M)/TQ/EI
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-403-197	N/A	Solid	GCTQ 1	02/18/19	02/20/19 00:28	190218L15

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Allethrin	ND	0.50	0.25	1.00	
Bifenthrin	ND	0.50	0.30	1.00	
Cyfluthrin	ND	0.50	0.25	1.00	
Cypermethrin	ND	0.50	0.25	1.00	
Deltamethrin/Tralomethrin	ND	0.50	0.25	1.00	
Fenpropathrin	ND	0.50	0.25	1.00	
Fenvalerate/Esfenvalerate	ND	0.50	0.25	1.00	
Fluvalinate	ND	0.50	0.25	1.00	
Permethrin (cis/trans)	ND	1.0	0.50	1.00	
Phenothrin	ND	0.50	0.25	1.00	
Resmethrin/Bioresmethrin	ND	0.50	0.42	1.00	
Tetramethrin	ND	0.50	0.30	1.00	
lambda-Cyhalothrin	ND	0.50	0.25	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibutylchloroendate	97	14-116	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/12/19
 Work Order: 19-02-0812
 Preparation: EPA 3050B
 Method: EPA 6020
 Units: mg/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA-3-021219	19-02-0812-1-AA	02/12/19 08:00	Sediment	ICP/MS 05	02/14/19	02/16/19 02:01	190214L02

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	7.06	0.208	0.182	1.00	
Cadmium	0.655	0.208	0.119	1.00	
Chromium	38.6	0.208	0.129	1.00	
Copper	24.0	0.208	0.0871	1.00	
Lead	10.1	0.208	0.137	1.00	
Nickel	21.1	0.208	0.105	1.00	
Selenium	1.41	0.208	0.152	1.00	
Silver	0.261	0.208	0.0651	1.00	
Zinc	81.4	2.08	1.65	1.00	

Method Blank	099-15-254-716	N/A	Solid	ICP/MS 05	02/14/19	02/16/19 00:21	190214L02
--------------	----------------	-----	-------	-----------	----------	-------------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	ND	0.100	0.0873	1.00	
Cadmium	ND	0.100	0.0572	1.00	
Chromium	ND	0.100	0.0621	1.00	
Copper	ND	0.100	0.0419	1.00	
Lead	ND	0.100	0.0659	1.00	
Nickel	ND	0.100	0.0506	1.00	
Selenium	ND	0.100	0.0731	1.00	
Silver	ND	0.100	0.0313	1.00	
Zinc	ND	1.00	0.795	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/12/19
Work Order: 19-02-0812
Preparation: EPA 7471A Total
Method: EPA 7471A
Units: mg/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA-3-021219	19-02-0812-1-AA	02/12/19 08:00	Sediment	Mercury 08	02/15/19	02/15/19 15:21	190215L02E

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.0742	0.0416	0.0122	1.00	

Method Blank	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-278-520	N/A	Solid	Mercury 08	02/15/19	02/15/19 15:16	190215L02E

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	ND	0.0197	0.00578	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/12/19
Work Order: 19-02-0812
Preparation: N/A
Method: ASTM D4464 (M)
Units: %

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA-3-021219	19-02-0812-1-CC	02/12/19 08:00	Sediment	LPSA 1	N/A	02/19/19 14:23	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	11.14	
Silt (0.00391 to 0.0625mm)	71.71	
Total Silt and Clay (0 to 0.0625mm)	82.85	
Very Fine Sand (0.0625 to 0.125mm)	12.15	
Fine Sand (0.125 to 0.25mm)	4.97	
Medium Sand (0.25 to 0.5mm)	0.037	
Coarse Sand (0.5 to 1mm)	ND	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/12/19
 Work Order: 19-02-0812
 Preparation: EPA 3541
 Method: EPA 8081A
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA-3-021219	19-02-0812-1-AA	02/12/19 08:00	Sediment	GC 51	02/15/19	02/21/19 08:10	190215L02

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	2.1	0.91	1.00	
Alpha-BHC	ND	4.2	1.5	1.00	
Beta-BHC	ND	2.1	1.0	1.00	
Delta-BHC	ND	4.2	1.8	1.00	
Gamma-BHC	ND	2.1	0.93	1.00	
Dieldrin	ND	2.1	0.91	1.00	
Trans-nonachlor	ND	2.1	0.56	1.00	
2,4'-DDD	ND	2.1	0.59	1.00	
2,4'-DDE	6.1	4.2	2.1	1.00	
2,4'-DDT	ND	2.1	0.65	1.00	
4,4'-DDD	1.8	2.1	1.0	1.00	J
4,4'-DDT	ND	2.1	0.91	1.00	
Endosulfan I	ND	2.1	0.82	1.00	
Endosulfan II	ND	2.1	0.98	1.00	
Endosulfan Sulfate	ND	2.1	1.1	1.00	
Endrin	ND	2.1	1.0	1.00	
Endrin Aldehyde	ND	2.1	1.3	1.00	
Endrin Ketone	ND	2.1	1.0	1.00	
Heptachlor	ND	2.1	0.90	1.00	
Heptachlor Epoxide	ND	4.2	1.5	1.00	
Methoxychlor	ND	2.1	1.2	1.00	
Toxaphene	ND	42	19	1.00	
Alpha Chlordane	ND	2.1	0.84	1.00	
Gamma Chlordane	ND	4.2	1.8	1.00	
Cis-nonachlor	ND	2.1	0.54	1.00	
Oxychlordane	ND	2.1	0.56	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2,4,5,6-Tetrachloro-m-Xylene	107	25-145	
Decachlorobiphenyl	114	24-168	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/12/19
Work Order: 19-02-0812
Preparation: EPA 3541
Method: EPA 8081A
Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA-3-021219	19-02-0812-1-AA	02/12/19 08:00	Sediment	GC 51	02/15/19	02/21/19 12:02	190215L02

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
4,4'-DDE	17	10	4.6	5.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2,4,5,6-Tetrachloro-m-Xylene	111	25-145			
Decachlorobiphenyl	127	24-168			

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/12/19
 Work Order: 19-02-0812
 Preparation: EPA 3541
 Method: EPA 8081A
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-858-615	N/A	Solid	GC 51	02/15/19	02/20/19 14:10	190215L02

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Aldrin	ND	1.0	0.44	1.00	
Alpha-BHC	ND	2.0	0.74	1.00	
Beta-BHC	ND	1.0	0.50	1.00	
Delta-BHC	ND	2.0	0.88	1.00	
Gamma-BHC	ND	1.0	0.45	1.00	
Dieldrin	ND	1.0	0.44	1.00	
Trans-nonachlor	ND	1.0	0.27	1.00	
2,4'-DDD	ND	1.0	0.29	1.00	
2,4'-DDE	ND	2.0	0.99	1.00	
2,4'-DDT	ND	1.0	0.31	1.00	
4,4'-DDD	ND	1.0	0.50	1.00	
4,4'-DDE	ND	1.0	0.44	1.00	
4,4'-DDT	ND	1.0	0.44	1.00	
Endosulfan I	ND	1.0	0.40	1.00	
Endosulfan II	ND	1.0	0.47	1.00	
Endosulfan Sulfate	ND	1.0	0.52	1.00	
Endrin	ND	1.0	0.48	1.00	
Endrin Aldehyde	ND	1.0	0.60	1.00	
Endrin Ketone	ND	1.0	0.50	1.00	
Heptachlor	ND	1.0	0.43	1.00	
Heptachlor Epoxide	ND	2.0	0.74	1.00	
Methoxychlor	ND	1.0	0.56	1.00	
Toxaphene	ND	20	9.0	1.00	
Alpha Chlordane	ND	1.0	0.41	1.00	
Gamma Chlordane	ND	2.0	0.89	1.00	
Cis-nonachlor	ND	1.0	0.26	1.00	
Oxychlordane	ND	1.0	0.27	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
2,4,5,6-Tetrachloro-m-Xylene	96	25-145	
Decachlorobiphenyl	119	24-168	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/12/19
 Work Order: 19-02-0812
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA-3-021219	19-02-0812-1-aa	02/12/19 08:00	Sediment	GC/MS EEE	02/13/19	02/14/19 23:37	190213L05

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	ND	20	4.8	1.00	
Acenaphthylene	ND	20	3.6	1.00	
Anthracene	ND	20	7.1	1.00	
Benzo (a) Anthracene	7.8	20	4.4	1.00	J
Benzo (a) Pyrene	7.0	20	3.7	1.00	J
Benzo (b) Fluoranthene	8.2	20	5.6	1.00	J
Benzo (g,h,i) Perylene	6.6	20	3.1	1.00	J
Benzo (k) Fluoranthene	ND	20	5.7	1.00	
Chrysene	7.3	20	4.5	1.00	J
Dibenz (a,h) Anthracene	ND	20	4.0	1.00	
Fluoranthene	14	20	3.7	1.00	J
Fluorene	ND	20	6.4	1.00	
Indeno (1,2,3-c,d) Pyrene	4.7	20	3.2	1.00	J
2-Methylnaphthalene	ND	20	4.7	1.00	
1-Methylnaphthalene	ND	20	4.7	1.00	
Naphthalene	ND	20	7.1	1.00	
Phenanthrene	7.3	20	4.5	1.00	J
Pyrene	19	20	4.6	1.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	61	14-146	
Nitrobenzene-d5	55	18-162	
p-Terphenyl-d14	86	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/12/19
 Work Order: 19-02-0812
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-097-327	N/A	Solid	GC/MS EEE	02/13/19	02/14/19 19:54	190213L05

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	ND	10	2.4	1.00	
Acenaphthylene	ND	10	1.8	1.00	
Anthracene	ND	10	3.5	1.00	
Benzo (a) Anthracene	ND	10	2.2	1.00	
Benzo (a) Pyrene	ND	10	1.8	1.00	
Benzo (b) Fluoranthene	ND	10	2.7	1.00	
Benzo (g,h,i) Perylene	ND	10	1.5	1.00	
Benzo (k) Fluoranthene	ND	10	2.8	1.00	
Chrysene	ND	10	2.2	1.00	
Dibenz (a,h) Anthracene	ND	10	2.0	1.00	
Fluoranthene	ND	10	1.8	1.00	
Fluorene	ND	10	3.1	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	10	1.6	1.00	
2-Methylnaphthalene	ND	10	2.3	1.00	
1-Methylnaphthalene	ND	10	2.3	1.00	
Naphthalene	ND	10	3.5	1.00	
Phenanthrene	ND	10	2.2	1.00	
Pyrene	ND	10	2.2	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	56	14-146	
Nitrobenzene-d5	55	18-162	
p-Terphenyl-d14	60	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/12/19
 Work Order: 19-02-0812
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA-3-021219	19-02-0812-1-A	02/12/19 08:00	Sediment	GC/MS HHH	02/13/19	02/21/19 15:54	190213L06

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB018	ND	0.41	0.13	1.00	
PCB028	ND	0.41	0.14	1.00	
PCB037	ND	0.41	0.12	1.00	
PCB044	ND	0.41	0.31	1.00	
PCB049	ND	0.41	0.10	1.00	
PCB052	ND	0.41	0.39	1.00	
PCB066	ND	0.41	0.25	1.00	
PCB070	0.37	0.41	0.15	1.00	J
PCB074	ND	0.41	0.18	1.00	
PCB077	ND	0.41	0.24	1.00	
PCB081	ND	0.41	0.18	1.00	
PCB087	ND	0.41	0.23	1.00	
PCB099	ND	0.41	0.097	1.00	
PCB101	ND	0.41	0.090	1.00	
PCB105	ND	0.41	0.11	1.00	
PCB110	ND	0.41	0.069	1.00	
PCB114	ND	0.41	0.15	1.00	
PCB118	0.57	0.41	0.070	1.00	
PCB119	ND	0.41	0.13	1.00	
PCB123	ND	0.41	0.15	1.00	
PCB126	ND	0.41	0.11	1.00	
PCB128	ND	0.41	0.24	1.00	
PCB132/153	0.79	0.82	0.33	1.00	J
PCB138/158	ND	0.82	0.72	1.00	
PCB149	0.41	0.41	0.24	1.00	
PCB151	ND	0.41	0.18	1.00	
PCB156	ND	0.41	0.16	1.00	
PCB157	ND	0.41	0.17	1.00	
PCB167	ND	0.41	0.27	1.00	
PCB168	ND	0.41	0.29	1.00	
PCB169	ND	0.41	0.13	1.00	
PCB170	ND	0.41	0.23	1.00	
PCB177	ND	0.41	0.24	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/12/19
 Work Order: 19-02-0812
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 4

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB180	ND	0.41	0.19	1.00	
PCB183	ND	0.41	0.19	1.00	
PCB187	ND	0.41	0.21	1.00	
PCB189	ND	0.41	0.13	1.00	
PCB194	ND	0.41	0.15	1.00	
PCB201	ND	0.41	0.069	1.00	
PCB206	ND	0.41	0.24	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	47	14-146			
p-Terphenyl-d14	79	34-148			

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/12/19
 Work Order: 19-02-0812
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 3 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-418-359	N/A	Solid	GC/MS HHH	02/13/19	02/21/19 13:57	190213L06

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB018	ND	0.20	0.065	1.00	
PCB028	ND	0.20	0.069	1.00	
PCB037	ND	0.20	0.061	1.00	
PCB044	ND	0.20	0.15	1.00	
PCB049	ND	0.20	0.050	1.00	
PCB052	ND	0.20	0.19	1.00	
PCB066	ND	0.20	0.12	1.00	
PCB070	ND	0.20	0.072	1.00	
PCB074	ND	0.20	0.090	1.00	
PCB077	ND	0.20	0.12	1.00	
PCB081	ND	0.20	0.090	1.00	
PCB087	ND	0.20	0.11	1.00	
PCB099	ND	0.20	0.047	1.00	
PCB101	ND	0.20	0.044	1.00	
PCB105	ND	0.20	0.053	1.00	
PCB110	ND	0.20	0.034	1.00	
PCB114	ND	0.20	0.074	1.00	
PCB118	ND	0.20	0.035	1.00	
PCB119	ND	0.20	0.062	1.00	
PCB123	ND	0.20	0.073	1.00	
PCB126	ND	0.20	0.055	1.00	
PCB128	ND	0.20	0.12	1.00	
PCB132/153	ND	0.40	0.16	1.00	
PCB138/158	ND	0.40	0.35	1.00	
PCB149	ND	0.20	0.12	1.00	
PCB151	ND	0.20	0.088	1.00	
PCB156	ND	0.20	0.077	1.00	
PCB157	ND	0.20	0.085	1.00	
PCB167	ND	0.20	0.13	1.00	
PCB168	ND	0.20	0.14	1.00	
PCB169	ND	0.20	0.065	1.00	
PCB170	ND	0.20	0.11	1.00	
PCB177	ND	0.20	0.12	1.00	
PCB180	ND	0.20	0.092	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/12/19
Work Order: 19-02-0812
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners
Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 4 of 4

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB183	ND	0.20	0.093	1.00	
PCB187	ND	0.20	0.10	1.00	
PCB189	ND	0.20	0.064	1.00	
PCB194	0.16	0.20	0.074	1.00	J
PCB201	ND	0.20	0.034	1.00	
PCB206	ND	0.20	0.12	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	57	14-146			
p-Terphenyl-d14	73	34-148			

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/12/19
 Work Order: 19-02-0812
 Preparation: EPA 3550B (M)
 Method: Organotins by Krone et al.
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA-3-021219	19-02-0812-1-AA	02/12/19 08:00	Sediment	GC/MS Y	02/12/19	02/15/19 14:47	190212L04

Comment(s):
 - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	ND	6.2	1.5	1.00	
Monobutyltin	ND	6.2	2.9	1.00	
Tetrabutyltin	ND	6.2	1.5	1.00	
Tributyltin	ND	6.2	3.1	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	108	27-135	

Method Blank	099-07-016-1664	N/A	Solid	GC/MS Y	02/12/19	02/15/19 13:20	190212L04
--------------	-----------------	-----	-------	---------	----------	-------------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	ND	3.0	0.73	1.00	
Monobutyltin	ND	3.0	1.4	1.00	
Tetrabutyltin	ND	3.0	0.74	1.00	
Tributyltin	ND	3.0	1.5	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	84	27-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/12/19
Work Order: 19-02-0812
Preparation: N/A
Method: EPA 9060A

Project: City of Newport Beach - Federal Channels

Page 1 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
LA-3-021219	Sample	Sediment	TOC 10	02/15/19	02/16/19 10:26	J0215TOCS1
LA-3-021219	Matrix Spike	Sediment	TOC 10	02/15/19	02/16/19 10:26	J0215TOCS1
LA-3-021219	Matrix Spike Duplicate	Sediment	TOC 10	02/15/19	02/16/19 10:26	J0215TOCS1

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Carbon, Total Organic	1.075	3.000	4.131	102	4.113	101	75-125	0	0-25	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/12/19
Work Order: 19-02-0812
Preparation: EPA 3541
Method: EPA 8270D (M)/TQ/EI

Project: City of Newport Beach - Federal Channels

Page 2 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
LA-3-021219	Sample	Sediment	GCTQ 1	02/18/19	02/20/19 01:19	190218S15
LA-3-021219	Matrix Spike	Sediment	GCTQ 1	02/18/19	02/20/19 02:10	190218S15
LA-3-021219	Matrix Spike Duplicate	Sediment	GCTQ 1	02/18/19	02/20/19 03:02	190218S15

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Allethrin	ND	5.000	5.091	102	4.879	98	10-148	4	0-30	
Bifenthrin	ND	5.000	5.574	111	5.330	107	26-128	4	0-30	
Cyfluthrin	ND	5.000	6.955	139	6.959	139	10-131	0	0-30	3
Cypermethrin	ND	5.000	6.844	137	6.960	139	10-136	2	0-30	3
Deltamethrin/Tralomethrin	ND	5.000	6.855	137	6.938	139	13-190	1	0-30	
Fenpropathrin	ND	5.000	6.993	140	6.920	138	10-148	1	0-30	
Fenvalerate/Esfenvalerate	ND	5.000	7.392	148	7.563	151	10-149	2	0-30	3
Fluvalinate	ND	5.000	6.624	132	6.581	132	10-121	1	0-30	3
Permethrin (cis/trans)	ND	5.000	6.869	137	6.788	136	45-123	1	0-30	3
Phenothrin	ND	5.000	7.590	152	7.437	149	45-165	2	0-30	
Resmethrin/Bioresmethrin	ND	5.000	7.516	150	7.394	148	38-164	2	0-30	
Tetramethrin	ND	5.000	7.844	157	7.729	155	15-153	1	0-30	3
lambda-Cyhalothrin	ND	5.000	7.980	160	7.891	158	10-123	1	0-30	3

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Spike/Spike Duplicate - Surrogate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/12/19
Work Order: 19-02-0812
Preparation: EPA 3541
Method: EPA 8270D (M)/TQ/EI

Project: City of Newport Beach - Federal Channels

Page 3 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
LA-3-021219	Sample	Sediment	GCTQ 1	02/18/19	02/20/19 01:19	190218S15
LA-3-021219	Matrix Spike	Sediment	GCTQ 1	02/18/19	02/20/19 02:10	190218S15
LA-3-021219	Matrix Spike Duplicate	Sediment	GCTQ 1	02/18/19	02/20/19 03:02	190218S15

Parameter	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	Qualifiers
Dibutylchloroendate	5.000	41.14	82	32.95	66	14-116	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/12/19
Work Order: 19-02-0812
Preparation: EPA 3050B
Method: EPA 6020

Project: City of Newport Beach - Federal Channels

Page 4 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
LA-3-021219	Sample	Sediment	ICP/MS 05	02/14/19	02/16/19 02:01	190214S02A
LA-3-021219	Matrix Spike	Sediment	ICP/MS 05	02/14/19	02/16/19 11:46	190214S02A
LA-3-021219	Matrix Spike Duplicate	Sediment	ICP/MS 05	02/14/19	02/16/19 11:49	190214S02A

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	3.396	25.00	30.60	109	28.81	102	80-120	6	0-20	
Cadmium	0.3150	25.00	28.08	111	27.78	110	80-120	1	0-20	
Chromium	18.56	25.00	52.67	136	50.81	129	80-120	4	0-20	3
Copper	11.52	25.00	42.46	124	41.26	119	80-120	3	0-20	3
Lead	4.845	25.00	33.88	116	36.32	126	80-120	7	0-20	3
Nickel	10.17	25.00	39.68	118	37.69	110	80-120	5	0-20	
Selenium	0.6802	25.00	28.04	109	25.87	101	80-120	8	0-20	
Silver	0.1255	12.50	12.87	102	13.34	106	80-120	4	0-20	
Zinc	39.14	25.00	73.41	137	71.96	131	80-120	2	0-20	3

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/12/19
Work Order: 19-02-0812
Preparation: EPA 7471A Total
Method: EPA 7471A

Project: City of Newport Beach - Federal Channels

Page 5 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
LA-3-021219	Sample	Sediment	Mercury 08	02/15/19	02/15/19 15:21	190215S02				
LA-3-021219	Matrix Spike	Sediment	Mercury 08	02/15/19	02/15/19 15:23	190215S02				
LA-3-021219	Matrix Spike Duplicate	Sediment	Mercury 08	02/15/19	02/15/19 15:30	190215S02				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	0.03568	0.8350	0.6359	72	0.6331	72	76-136	0	0-16	3

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/12/19
Work Order: 19-02-0812
Preparation: EPA 3541
Method: EPA 8081A

Project: City of Newport Beach - Federal Channels

Page 6 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
LA-3-021219	Sample	Sediment	GC 51	02/15/19	02/21/19 08:10	190215S02
LA-3-021219	Matrix Spike	Sediment	GC 51	02/15/19	02/21/19 07:41	190215S02
LA-3-021219	Matrix Spike Duplicate	Sediment	GC 51	02/15/19	02/21/19 07:55	190215S02

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Aldrin	ND	5.000	5.444	109	5.296	106	50-135	3	0-25	
Alpha-BHC	ND	5.000	6.504	130	6.595	132	50-135	1	0-25	
Beta-BHC	ND	5.000	6.114	122	6.130	123	50-135	0	0-25	
Delta-BHC	ND	5.000	7.776	156	6.974	139	50-135	11	0-25	3
Gamma-BHC	ND	5.000	5.555	111	5.402	108	50-135	3	0-25	
Dieldrin	ND	5.000	7.693	154	7.761	155	50-135	1	0-25	3
4,4'-DDD	ND	5.000	8.120	162	8.957	179	50-135	10	0-25	3
4,4'-DDE	8.046	5.000	15.60	151	15.98	159	50-135	2	0-25	3
4,4'-DDT	ND	5.000	7.154	143	4.600	92	50-135	43	0-25	3,4
Endosulfan I	ND	5.000	5.898	118	5.898	118	50-135	0	0-25	
Endosulfan II	ND	5.000	6.796	136	6.477	130	50-135	5	0-25	3
Endosulfan Sulfate	ND	5.000	6.204	124	6.123	122	50-135	1	0-25	
Endrin	ND	5.000	6.412	128	6.178	124	50-135	4	0-25	
Endrin Aldehyde	ND	5.000	4.195	84	3.608	72	50-135	15	0-25	
Endrin Ketone	ND	5.000	6.489	130	5.593	112	50-135	15	0-25	
Heptachlor	ND	5.000	6.504	130	5.615	112	50-135	15	0-25	
Heptachlor Epoxide	ND	5.000	8.364	167	8.871	177	50-135	6	0-25	3
Methoxychlor	ND	5.000	7.129	143	4.627	93	50-135	43	0-25	3,4
Alpha Chlordane	ND	5.000	7.248	145	7.146	143	50-135	1	0-25	3
Gamma Chlordane	ND	5.000	15.62	312	15.43	309	50-135	1	0-25	3

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Spike/Spike Duplicate - Surrogate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/12/19
Work Order: 19-02-0812
Preparation: EPA 3541
Method: EPA 8081A

Project: City of Newport Beach - Federal Channels

Page 7 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
LA-3-021219	Sample	Sediment	GC 51	02/15/19	02/21/19 08:10	190215S02
LA-3-021219	Matrix Spike	Sediment	GC 51	02/15/19	02/21/19 07:41	190215S02
LA-3-021219	Matrix Spike Duplicate	Sediment	GC 51	02/15/19	02/21/19 07:55	190215S02

Parameter	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	Qualifiers
2,4,5,6-Tetrachloro-m-Xylene	1.000	9.406	94	10.13	101	25-145	
Decachlorobiphenyl	1.000	10.61	106	10.99	110	24-168	



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/12/19
Work Order: 19-02-0812
Preparation: EPA 3541
Method: EPA 8270C SIM PAHs

Project: City of Newport Beach - Federal Channels

Page 8 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
LA-3-021219	Sample	Sediment	GC/MS EEE	02/13/19	02/14/19 23:37	190213S05A
LA-3-021219	Matrix Spike	Sediment	GC/MS EEE	02/13/19	02/14/19 21:36	190213S05A
LA-3-021219	Matrix Spike Duplicate	Sediment	GC/MS EEE	02/13/19	02/14/19 21:56	190213S05A

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Acenaphthene	ND	100.0	60.94	61	65.76	66	40-160	8	0-20	
Acenaphthylene	ND	100.0	70.79	71	73.97	74	40-160	4	0-20	
Anthracene	ND	100.0	72.09	72	74.94	75	40-160	4	0-20	
Benzo (a) Anthracene	ND	100.0	73.28	73	73.95	74	40-160	1	0-20	
Benzo (a) Pyrene	ND	100.0	73.08	73	74.53	75	40-160	2	0-20	
Benzo (b) Fluoranthene	ND	100.0	71.40	71	69.20	69	40-160	3	0-20	
Benzo (g,h,i) Perylene	ND	100.0	62.03	62	65.69	66	40-160	6	0-20	
Benzo (k) Fluoranthene	ND	100.0	69.36	69	74.24	74	40-160	7	0-20	
Chrysene	ND	100.0	76.49	76	78.21	78	40-160	2	0-20	
Dibenz (a,h) Anthracene	ND	100.0	61.95	62	63.59	64	40-160	3	0-20	
Fluoranthene	ND	100.0	76.02	76	79.47	79	40-160	4	0-20	
Fluorene	ND	100.0	69.52	70	76.47	76	40-160	10	0-20	
Indeno (1,2,3-c,d) Pyrene	ND	100.0	61.55	62	61.04	61	40-160	1	0-20	
2-Methylnaphthalene	ND	100.0	64.88	65	67.95	68	40-160	5	0-20	
1-Methylnaphthalene	ND	100.0	62.04	62	67.64	68	40-160	9	0-20	
Naphthalene	ND	100.0	55.04	55	55.42	55	40-160	1	0-20	
Phenanthrene	ND	100.0	74.75	75	78.92	79	40-160	5	0-20	
Pyrene	ND	100.0	87.70	88	87.82	88	40-160	0	0-46	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Spike/Spike Duplicate - Surrogate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/12/19
Work Order: 19-02-0812
Preparation: EPA 3541
Method: EPA 8270C SIM PAHs

Project: City of Newport Beach - Federal Channels

Page 9 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
LA-3-021219	Sample	Sediment	GC/MS EEE	02/13/19	02/14/19 23:37	190213S05A
LA-3-021219	Matrix Spike	Sediment	GC/MS EEE	02/13/19	02/14/19 21:36	190213S05A
LA-3-021219	Matrix Spike Duplicate	Sediment	GC/MS EEE	02/13/19	02/14/19 21:56	190213S05A

Parameter	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	Qualifiers
2-Fluorobiphenyl	10.00	61.54	62	65.89	66	14-146	
Nitrobenzene-d5	10.00	56.97	57	61.39	61	18-162	
p-Terphenyl-d14	10.00	80.67	81	77.80	78	34-148	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/12/19
Work Order: 19-02-0812
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners

Project: City of Newport Beach - Federal Channels

Page 10 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
LA-3-021219	Sample	Sediment	GC/MS HHH	02/13/19	02/21/19 15:54	190213S06A
LA-3-021219	Matrix Spike	Sediment	GC/MS HHH	02/13/19	02/21/19 15:07	190213S06A
LA-3-021219	Matrix Spike Duplicate	Sediment	GC/MS HHH	02/13/19	02/21/19 15:31	190213S06A

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
PCB018	ND	50.00	30.59	61	31.57	63	50-150	3	0-25	
PCB028	ND	50.00	35.03	70	36.22	72	50-150	3	0-25	
PCB044	ND	50.00	35.47	71	36.79	74	50-150	4	0-25	
PCB052	ND	50.00	32.29	65	33.30	67	50-150	3	0-25	
PCB066	ND	50.00	40.93	82	42.07	84	50-150	3	0-25	
PCB077	ND	50.00	34.34	69	35.43	71	50-150	3	0-25	
PCB101	ND	50.00	35.27	71	35.94	72	50-150	2	0-25	
PCB105	ND	50.00	35.50	71	37.17	74	50-150	5	0-25	
PCB118	0.2740	50.00	36.04	72	37.53	75	50-150	4	0-25	
PCB126	ND	50.00	35.84	72	36.91	74	50-150	3	0-25	
PCB128	ND	50.00	38.54	77	40.08	80	50-150	4	0-25	
PCB170	ND	50.00	36.51	73	38.96	78	50-150	6	0-25	
PCB180	ND	50.00	38.18	76	39.97	80	50-150	5	0-25	
PCB187	ND	50.00	35.94	72	37.27	75	50-150	4	0-25	
PCB206	ND	50.00	37.20	74	39.32	79	50-150	6	0-25	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Spike/Spike Duplicate - Surrogate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/12/19
Work Order: 19-02-0812
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners

Project: City of Newport Beach - Federal Channels

Page 11 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
LA-3-021219	Sample	Sediment	GC/MS HHH	02/13/19	02/21/19 15:54	190213S06A
LA-3-021219	Matrix Spike	Sediment	GC/MS HHH	02/13/19	02/21/19 15:07	190213S06A
LA-3-021219	Matrix Spike Duplicate	Sediment	GC/MS HHH	02/13/19	02/21/19 15:31	190213S06A

Parameter	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	Qualifiers
2-Fluorobiphenyl	10.00	50.52	51	49.63	50	14-146	
p-Terphenyl-d14	10.00	81.73	82	77.89	78	34-148	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/12/19
Work Order: 19-02-0812
Preparation: EPA 3550B (M)
Method: Organotins by Krone et al.

Project: City of Newport Beach - Federal Channels

Page 12 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
LA-3-021219	Sample	Sediment	GC/MS Y	02/12/19	02/15/19 14:47	190212S04				
LA-3-021219	Matrix Spike	Sediment	GC/MS Y	02/12/19	02/15/19 14:12	190212S04				
LA-3-021219	Matrix Spike Duplicate	Sediment	GC/MS Y	02/12/19	02/15/19 14:29	190212S04				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Tetrabutyltin	ND	100.0	63.09	63	50.68	51	33-129	22	0-36	
Tributyltin	ND	100.0	69.52	70	52.48	52	34-142	28	0-50	


 Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Spike/Spike Duplicate - Surrogate

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/12/19
 Work Order: 19-02-0812
 Preparation: EPA 3550B (M)
 Method: Organotins by Krone et al.

Project: City of Newport Beach - Federal Channels

Page 13 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
LA-3-021219	Sample	Sediment	GC/MS Y	02/12/19	02/15/19 14:47	190212S04
LA-3-021219	Matrix Spike	Sediment	GC/MS Y	02/12/19	02/15/19 14:12	190212S04
LA-3-021219	Matrix Spike Duplicate	Sediment	GC/MS Y	02/12/19	02/15/19 14:29	190212S04

Parameter	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	Qualifiers
Tripentyltin	50.00	112.1	112	106.4	106	27-135	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - PDS

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/12/19
Work Order: 19-02-0812
Preparation: EPA 3050B
Method: EPA 6020

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDS Batch Number	
LA-3-021219	Sample	Sediment	ICP/MS 05	02/14/19 00:00	02/16/19 02:01	190214S02A	
LA-3-021219	PDS	Sediment	ICP/MS 05	02/14/19 00:00	02/16/19 01:55	190214S02A	
<u>Parameter</u>		<u>Sample Conc.</u>	<u>Spike Added</u>	<u>PDS Conc.</u>	<u>PDS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Arsenic		3.396	25.00	3.573	1	75-125	5
Cadmium		0.3150	25.00	0.3296	0	75-125	5
Chromium		18.56	25.00	19.70	5	75-125	5
Copper		11.52	25.00	11.81	1	75-125	5
Lead		4.845	25.00	4.887	0	75-125	5
Nickel		10.17	25.00	10.13	0	75-125	5
Selenium		0.6802	25.00	0.7259	0	75-125	5
Silver		0.1255	12.50	0.1368	0	75-125	5
Zinc		39.14	25.00	41.54	10	75-125	5



Calscience

Quality Control - Sample Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/12/19
Work Order: 19-02-0812
Preparation: N/A
Method: SM 2540 B (M)

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
LA-3-021219	Sample	Sediment	N/A	02/14/19 00:00	02/14/19 14:30	J0214TSD1
LA-3-021219	Sample Duplicate	Sediment	N/A	02/14/19 00:00	02/14/19 14:30	J0214TSD1

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Solids, Total	48.10	48.10	0	0-10	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/12/19
Work Order: 19-02-0812
Preparation: N/A
Method: EPA 9060A

Project: City of Newport Beach - Federal Channels

Page 1 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-06-013-1939	LCS	Solid	TOC 10	02/15/19	02/16/19 10:26	J0215TOCL1			
099-06-013-1939	LCSD	Solid	TOC 10	02/15/19	02/16/19 10:26	J0215TOCL1			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Carbon, Total Organic	0.6000	0.6974	116	0.6661	111	80-120	5	0-20	

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/12/19
Work Order: 19-02-0812
Preparation: EPA 3541
Method: EPA 8270D (M)/TQ/EI

Project: City of Newport Beach - Federal Channels

Page 2 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-14-403-197	LCS	Solid	GCTQ 1	02/18/19	02/19/19 22:45	190218L15				
099-14-403-197	LCSD	Solid	GCTQ 1	02/18/19	02/19/19 23:36	190218L15				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Allethrin	5.000	4.073	81	4.499	90	10-148	0-171	10	0-25	
Bifenthrin	5.000	4.612	92	4.717	94	26-128	9-145	2	0-25	
Cyfluthrin	5.000	4.738	95	5.138	103	10-131	0-151	8	0-25	
Cypermethrin	5.000	4.263	85	4.703	94	10-136	0-157	10	0-25	
Deltamethrin/Tralomethrin	5.000	4.238	85	4.292	86	13-190	0-220	1	0-25	
Fenpropathrin	5.000	4.533	91	4.665	93	10-148	0-171	3	0-25	
Fenvalerate/Esfenvalerate	5.000	4.193	84	4.510	90	10-149	0-172	7	0-25	
Fluvalinate	5.000	3.853	77	4.140	83	10-121	0-140	7	0-25	
Permethrin (cis/trans)	5.000	5.056	101	5.544	111	45-123	32-136	9	0-25	
Phenothrin	5.000	4.779	96	5.035	101	45-165	25-185	5	0-25	
Resmethrin/Bioresmethrin	5.000	5.518	110	5.816	116	38-164	17-185	5	0-25	
Tetramethrin	5.000	5.084	102	5.281	106	15-153	0-176	4	0-25	
lambda-Cyhalothrin	5.000	4.434	89	4.742	95	10-123	0-142	7	0-25	

Total number of LCS compounds: 13

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

LCS/LCSD - Surrogate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/12/19
Work Order: 19-02-0812
Preparation: EPA 3541
Method: EPA 8270D (M)/TQ/EI

Project: City of Newport Beach - Federal Channels

Page 3 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number	
099-14-403-197	LCS	Solid	GCTQ 1	02/18/19	02/19/19 22:45	190218L15	
099-14-403-197	LCSD	Solid	GCTQ 1	02/18/19	02/19/19 23:36	190218L15	
<u>Parameter</u>	<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>LCSD Conc.</u>	<u>LCSD %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Dibutylchloroendate	5.000	37.08	74	39.14	78	14-116	

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/12/19
Work Order: 19-02-0812
Preparation: EPA 3050B
Method: EPA 6020

Project: City of Newport Beach - Federal Channels

Page 4 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-15-254-716	LCS	Solid	ICP/MS 05	02/14/19	02/16/19 00:24	190214L02			
099-15-254-716	LCSD	Solid	ICP/MS 05	02/14/19	02/16/19 00:27	190214L02			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	25.00	27.38	110	27.63	111	80-120	1	0-20	
Cadmium	25.00	26.82	107	27.26	109	80-120	2	0-20	
Chromium	25.00	27.49	110	27.56	110	80-120	0	0-20	
Copper	25.00	27.85	111	27.55	110	80-120	1	0-20	
Lead	25.00	26.10	104	26.10	104	80-120	0	0-20	
Nickel	25.00	26.76	107	26.72	107	80-120	0	0-20	
Selenium	25.00	27.25	109	26.52	106	80-120	3	0-20	
Silver	12.50	11.83	95	11.95	96	80-120	1	0-20	
Zinc	25.00	28.74	115	28.22	113	80-120	2	0-20	

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/12/19
Work Order: 19-02-0812
Preparation: EPA 7471A Total
Method: EPA 7471A

Project: City of Newport Beach - Federal Channels

Page 5 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-16-278-520	LCS	Solid	Mercury 08	02/15/19	02/15/19 15:19	190215L02E			
099-16-278-520	LCSD	Solid	Mercury 08	02/15/19	02/15/19 16:18	190215L02E			
<u>Parameter</u>	<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>LCSD Conc.</u>	<u>LCSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Mercury	0.8350	0.7749	93	0.7642	92	82-124	1	0-16	

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/12/19
 Work Order: 19-02-0812
 Preparation: EPA 3541
 Method: EPA 8081A

Project: City of Newport Beach - Federal Channels

Page 6 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-858-615	LCS	Solid	GC 51	02/15/19	02/20/19 14:24	190215L02				
099-12-858-615	LCSD	Solid	GC 51	02/15/19	02/20/19 14:38	190215L02				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Aldrin	5.000	3.827	77	4.168	83	50-135	36-149	9	0-25	
Alpha-BHC	5.000	3.958	79	4.287	86	50-135	36-149	8	0-25	
Beta-BHC	5.000	4.777	96	5.461	109	50-135	36-149	13	0-25	
Delta-BHC	5.000	4.687	94	4.782	96	50-135	36-149	2	0-25	
Gamma-BHC	5.000	4.156	83	4.500	90	50-135	36-149	8	0-25	
Dieldrin	5.000	4.378	88	4.606	92	50-135	36-149	5	0-25	
4,4'-DDD	5.000	5.742	115	6.159	123	50-135	36-149	7	0-25	
4,4'-DDE	5.000	5.220	104	5.546	111	50-135	36-149	6	0-25	
4,4'-DDT	5.000	5.980	120	6.352	127	50-135	36-149	6	0-25	
Endosulfan I	5.000	5.294	106	5.762	115	50-135	36-149	8	0-25	
Endosulfan II	5.000	5.048	101	5.252	105	50-135	36-149	4	0-25	
Endosulfan Sulfate	5.000	4.799	96	5.152	103	50-135	36-149	7	0-25	
Endrin	5.000	4.678	94	4.838	97	50-135	36-149	3	0-25	
Endrin Aldehyde	5.000	3.492	70	3.553	71	50-135	36-149	2	0-25	
Endrin Ketone	5.000	5.418	108	5.635	113	50-135	36-149	4	0-25	
Heptachlor	5.000	4.350	87	4.717	94	50-135	36-149	8	0-25	
Heptachlor Epoxide	5.000	4.625	92	4.920	98	50-135	36-149	6	0-25	
Methoxychlor	5.000	5.561	111	5.637	113	50-135	36-149	1	0-25	
Alpha Chlordane	5.000	4.693	94	4.958	99	50-135	36-149	5	0-25	
Gamma Chlordane	5.000	4.762	95	5.099	102	50-135	36-149	7	0-25	

Total number of LCS compounds: 20

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

LCS/LCSD - Surrogate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/12/19
Work Order: 19-02-0812
Preparation: EPA 3541
Method: EPA 8081A

Project: City of Newport Beach - Federal Channels

Page 7 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number	
099-12-858-615	LCS	Solid	GC 51	02/15/19	02/20/19 14:24	190215L02	
099-12-858-615	LCSD	Solid	GC 51	02/15/19	02/20/19 14:38	190215L02	
<u>Parameter</u>	<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>LCSD Conc.</u>	<u>LCSD %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
2,4,5,6-Tetrachloro-m-Xylene	1.000	8.815	88	8.735	87	25-145	
Decachlorobiphenyl	1.000	11.27	113	11.37	114	24-168	

Quality Control - LCS

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/12/19
 Work Order: 19-02-0812
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs

Project: City of Newport Beach - Federal Channels

Page 8 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number	
099-14-097-327	LCS	Solid	GC/MS EEE	02/13/19	02/14/19 20:15	190213L05	
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
Acenaphthene		100.0	62.04	62	40-160	20-180	
Acenaphthylene		100.0	67.58	68	40-160	20-180	
Anthracene		100.0	62.62	63	40-160	20-180	
Benzo (a) Anthracene		100.0	69.61	70	40-160	20-180	
Benzo (a) Pyrene		100.0	73.59	74	40-160	20-180	
Benzo (b) Fluoranthene		100.0	69.58	70	40-160	20-180	
Benzo (g,h,i) Perylene		100.0	80.65	81	40-160	20-180	
Benzo (k) Fluoranthene		100.0	70.67	71	40-160	20-180	
Chrysene		100.0	68.59	69	40-160	20-180	
Dibenz (a,h) Anthracene		100.0	69.45	69	40-160	20-180	
Fluoranthene		100.0	71.51	72	40-160	20-180	
Fluorene		100.0	66.31	66	40-160	20-180	
Indeno (1,2,3-c,d) Pyrene		100.0	69.68	70	40-160	20-180	
2-Methylnaphthalene		100.0	76.75	77	40-160	20-180	
1-Methylnaphthalene		100.0	71.55	72	40-160	20-180	
Naphthalene		100.0	65.36	65	40-160	20-180	
Phenanthrene		100.0	64.29	64	40-160	20-180	
Pyrene		100.0	72.81	73	40-160	20-180	

Total number of LCS compounds: 18

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

LCS Only - Surrogate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/12/19
Work Order: 19-02-0812
Preparation: EPA 3541
Method: EPA 8270C SIM PAHs

Project: City of Newport Beach - Federal Channels

Page 9 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-097-327	LCS	Solid	GC/MS EEE	02/13/19	02/14/19 20:15	190213L05
<u>Parameter</u>		<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
2-Fluorobiphenyl		10.00	59.98	60	14-146	
Nitrobenzene-d5		10.00	62.93	63	18-162	
p-Terphenyl-d14		10.00	62.91	63	34-148	

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/12/19
 Work Order: 19-02-0812
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners

Project: City of Newport Beach - Federal Channels

Page 10 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-16-418-359	LCS	Solid	GC/MS HHH	02/13/19	02/21/19 14:21	190213L06				
099-16-418-359	LCSD	Solid	GC/MS HHH	02/13/19	02/21/19 14:44	190213L06				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
PCB018	50.00	25.38	51	31.04	62	24-132	6-150	20	0-28	
PCB028	50.00	27.68	55	33.18	66	31-133	14-150	18	0-26	
PCB044	50.00	28.60	57	35.35	71	36-120	22-134	21	0-28	
PCB052	50.00	25.93	52	31.96	64	31-121	16-136	21	0-27	
PCB066	50.00	34.25	69	41.16	82	43-139	27-155	18	0-25	
PCB077	50.00	28.32	57	34.47	69	41-131	26-146	20	0-25	
PCB101	50.00	29.13	58	34.65	69	37-121	23-135	17	0-27	
PCB105	50.00	29.90	60	36.98	74	48-132	34-146	21	0-26	
PCB118	50.00	30.41	61	36.12	72	46-136	31-151	17	0-25	
PCB126	50.00	29.09	58	35.82	72	38-134	22-150	21	0-25	
PCB128	50.00	31.82	64	38.35	77	40-130	25-145	19	0-26	
PCB170	50.00	31.22	62	36.74	73	40-124	26-138	16	0-29	
PCB180	50.00	32.41	65	38.61	77	41-143	24-160	17	0-26	
PCB187	50.00	31.02	62	37.00	74	39-129	24-144	18	0-26	
PCB206	50.00	30.82	62	36.95	74	33-135	16-152	18	0-24	

Total number of LCS compounds: 15

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

LCS/LCSD - Surrogate

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/12/19
 Work Order: 19-02-0812
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners

Project: City of Newport Beach - Federal Channels

Page 11 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-16-418-359	LCS	Solid	GC/MS HHH	02/13/19	02/21/19 14:21	190213L06
099-16-418-359	LCSD	Solid	GC/MS HHH	02/13/19	02/21/19 14:44	190213L06

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	Qualifiers
2-Fluorobiphenyl	10.00	51.90	52	58.67	59	14-146	
p-Terphenyl-d14	10.00	63.31	63	72.47	72	34-148	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/12/19
Work Order: 19-02-0812
Preparation: EPA 3550B (M)
Method: Organotins by Krone et al.

Project: City of Newport Beach - Federal Channels

Page 12 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-07-016-1664	LCS	Solid	GC/MS Y	02/12/19	02/15/19 17:24	190212L04			
099-07-016-1664	LCSD	Solid	GC/MS Y	02/12/19	02/15/19 17:42	190212L04			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Tetrabutyltin	100.0	65.97	66	65.75	66	40-142	0	0-20	
Tributyltin	100.0	35.12	35	37.13	37	33-147	6	0-20	



Calscience

LCS/LCSD - Surrogate

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/12/19
 Work Order: 19-02-0812
 Preparation: EPA 3550B (M)
 Method: Organotins by Krone et al.

Project: City of Newport Beach - Federal Channels

Page 13 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-07-016-1664	LCS	Solid	GC/MS Y	02/12/19	02/15/19 17:24	190212L04
099-07-016-1664	LCSD	Solid	GC/MS Y	02/12/19	02/15/19 17:42	190212L04

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	Qualifiers
Tripentyltin	50.00	63.80	64	61.51	62	27-135	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Sample Analysis Summary Report

Work Order: 19-02-0812

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
ASTM D4464 (M)	N/A	1106	LPSA 1	1
EPA 6020	EPA 3050B	598	ICP/MS 05	1
EPA 7471A	EPA 7471A Total	1080	Mercury 08	1
EPA 8081A	EPA 3541	669	GC 51	1
EPA 8270C SIM PAHs	EPA 3541	923	GC/MS EEE	1
EPA 8270C SIM PCB Congeners	EPA 3541	1037	GC/MS HHH	1
EPA 8270D (M)/TQ/EI	EPA 3541	27	GCTQ 1	3
EPA 9060A	N/A	1166	TOC 10	1
Organotins by Krone et al.	EPA 3550B (M)	1117	GC/MS Y	1
SM 2540 B (M)	N/A	1136	N/A	1

Glossary of Terms and Qualifiers

Work Order: 19-02-0812

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

DATE: 02/12/2019

CLIENT: Anchor

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: -0.5°C); Temperature (w/o CF): 20 °C (w/ CF): 1.5 °C; [x] Blank [] Sample

[] Sample(s) outside temperature criteria (PM/APM contacted by: _____)

[] Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

[] Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: [] Air [] Filter

Checked by: 1091

CUSTODY SEAL:

Cooler [] Present and Intact [] Present but Not Intact [x] Not Present [] N/A

Sample(s) [] Present and Intact [] Present but Not Intact [x] Not Present [] N/A

Checked by: 1091

Checked by: 1053

SAMPLE CONDITION:

Chain-of-Custody (COC) document(s) received with samples [x] Yes [] No [] N/A

COC document(s) received complete [x] Yes [] No [] N/A

[] Sampling date [] Sampling time [] Matrix [] Number of containers

[] No analysis requested [] Not relinquished [] No relinquished date [] No relinquished time

Sampler's name indicated on COC [x] Yes [] No [] N/A

Sample container label(s) consistent with COC [x] Yes [] No [] N/A

Sample container(s) intact and in good condition [x] Yes [] No [] N/A

Proper containers for analyses requested [x] Yes [] No [] N/A

Sufficient volume/mass for analyses requested [x] Yes [] No [] N/A

Samples received within holding time [x] Yes [] No [] N/A

Aqueous samples for certain analyses received within 15-minute holding time

[] pH [] Residual Chlorine [] Dissolved Sulfide [] Dissolved Oxygen [] Yes [] No [x] N/A

Proper preservation chemical(s) noted on COC and/or sample container [] Yes [] No [x] N/A

Unpreserved aqueous sample(s) received for certain analyses

[] Volatile Organics [] Total Metals [] Dissolved Metals

Acid/base preserved samples - pH within acceptable range [] Yes [] No [x] N/A

Container(s) for certain analysis free of headspace [] Yes [] No [x] N/A

[] Volatile Organics [] Dissolved Gases (RSK-175) [] Dissolved Oxygen (SM 4500)

[] Carbon Dioxide (SM 4500) [] Ferrous Iron (SM 3500) [] Hydrogen Sulfide (Hach)

Tedlar™ bag(s) free of condensation [] Yes [] No [x] N/A

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: [] VOA [] VOA_h [] VOA_{na2} [] 100PJ [] 100PJ_{na2} [] 125AGB [] 125AGB_h [] 125AGB_p [] 125PB [] 125PB_{z_{na}} (pH__9)

[] 250AGB [] 250CGB [] 250CGB_s (pH__2) [] 250PB [] 250PB_n (pH__2) [] 500AGB [] 500AGJ [] 500AGJ_s (pH__2) [] 500PB

[] 1AGB [] 1AGB_{na2} [] 1AGB_s (pH__2) [] 1AGB_s (O&G) [] 1PB [] 1PB_{na} (pH__12) [] _____ [] _____ [] _____

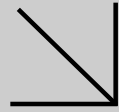
Solid: [] 4ozCGJ [] 8ozCGJ [] 16ozCGJ [] Sleeve (____) [] EnCores® (____) [] TerraCores® (____) [] _____ [] _____ [] _____

Air: [] Tedlar™ [] Canister [] Sorbent Tube [] PUF [] _____ Other Matrix sediment [x] 16ozCGJ [] _____ [] _____

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO₃, na = NaOH, na₂ = Na₂S₂O₃, p = H₃PO₄, Labeled/Checked by: 1053

s = H₂SO₄, u = ultra-pure, x = Na₂SO₃+NaHSO₄.H₂O, z_{na} = Zn (CH₃CO₂)₂ + NaOH Reviewed by: 619



WORK ORDER NUMBER: 19-02-1994

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: ANCHOR QEA, LLC

Client Project Name: City of Newport Beach - Federal Channels

Attention: Chris Osuch
9700 RESEARCH DR
IRVINE, CA 92618-4327

Approved for release on 03/12/2019 by:
Richard Villafania
Project Manager

ResultLink ▶

Email your PM ▶

Eurofins Calscience (Calscience) certifies that the test results provided in this report meet all NELAC Institute requirements for parameters for which accreditation is required or available. Any exceptions to NELAC Institute requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.



Contents

Client Project Name: City of Newport Beach - Federal Channels
 Work Order Number: 19-02-1994

1	Work Order Narrative.	3
2	Sample Summary.	4
3	Client Sample Data.	5
	3.1 EPA 9060A Total Organic Carbon (Solid).	5
	3.2 SM 2540 B (M) Total Solids (Solid).	6
	3.3 Pyrethroids by EPA 8270D (M)/TQ/EI (Solid).	7
	3.4 EPA 6020 ICP/MS Metals (Solid).	10
	3.5 EPA 7471A Mercury (Solid).	12
	3.6 ASTM D4464 (M) Particle Size Laser (Solid).	13
	3.7 EPA 8081A Organochlorine Pesticides (Solid).	14
	3.8 EPA 8270C SIM PAHs (Solid).	19
	3.9 EPA 8270C SIM PCB Congeners (Solid).	22
	3.10 Krone et al. Organotins (Solid).	28
4	Quality Control Sample Data.	29
	4.1 MS/MSD.	29
	4.2 PDS/PDSD.	42
	4.3 Sample Duplicate.	43
	4.4 LCS/LCSD.	44
5	Sample Analysis Summary.	57
6	Glossary of Terms and Qualifiers.	58
7	Chain-of-Custody/Sample Receipt Form.	59

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 02/27/19. They were assigned to Work Order 19-02-1994.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of \leq 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

DoD Projects:

The test results contained in this report are accredited under the laboratory's ISO/IEC 17025:2005 and DoD-ELAP accreditation issued by the ANSI-ASQ National Accreditation Board. Refer to certificate and scope of accreditation ADE-1864.

Sample Summary

Client: ANCHOR QEA, LLC	Work Order:	19-02-1994
9700 RESEARCH DR	Project Name:	City of Newport Beach - Federal Channels
IRVINE, CA 92618-4327	PO Number:	
	Date/Time Received:	02/27/19 18:45
	Number of Containers:	6

Attn: Chris Osuch

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
NC2-COMP	19-02-1994-1	02/26/19 17:00	3	Sediment
NC3-COMP	19-02-1994-2	02/26/19 17:00	3	Sediment

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/27/19
 Work Order: 19-02-1994
 Preparation: N/A
 Method: EPA 9060A
 Units: %

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-COMP	19-02-1994-1-BB	02/26/19 17:00	Sediment	TOC 10	03/06/19	03/06/19 17:03	J0306TOCL1

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Carbon, Total Organic	1.6	0.077	0.027	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC3-COMP	19-02-1994-2-BB	02/26/19 17:00	Sediment	TOC 10	03/06/19	03/06/19 17:03	J0306TOCL1

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Carbon, Total Organic	0.45	0.068	0.024	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-06-013-1944	N/A	Solid	TOC 10	03/06/19	03/06/19 17:03	J0306TOCL1

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Carbon, Total Organic	ND	0.050	0.017	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/27/19
Work Order: 19-02-1994
Preparation: N/A
Method: SM 2540 B (M)
Units: %

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-COMP	19-02-1994-1-BB	02/26/19 17:00	Sediment	N/A	03/01/19	03/01/19 19:00	J0301TSB1
<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>		<u>Qualifiers</u>
Solids, Total		65.3	0.100		1.00		
NC3-COMP	19-02-1994-2-BB	02/26/19 17:00	Sediment	N/A	03/01/19	03/01/19 19:00	J0301TSB1
<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>		<u>Qualifiers</u>
Solids, Total		73.1	0.100		1.00		
Method Blank	099-05-019-4417	N/A	Solid	N/A	03/01/19	03/01/19 19:00	J0301TSB1
<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>		<u>Qualifiers</u>
Solids, Total		ND	0.100		1.00		

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/27/19
 Work Order: 19-02-1994
 Preparation: EPA 3541
 Method: EPA 8270D (M)/TQ/EI
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-COMP	19-02-1994-1-BB	02/26/19 17:00	Sediment	GCTQ 1	03/06/19	03/07/19 23:28	190306L15

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Allethrin	ND	0.77	0.38	1.00	
Bifenthrin	1.1	0.77	0.46	1.00	
Cyfluthrin	ND	0.77	0.38	1.00	
Cypermethrin	ND	0.77	0.38	1.00	
Deltamethrin/Tralomethrin	ND	0.77	0.38	1.00	
Fenpropathrin	ND	0.77	0.38	1.00	
Fenvalerate/Esfenvalerate	ND	0.77	0.38	1.00	
Fluvalinate	ND	0.77	0.38	1.00	
Permethrin (cis/trans)	ND	1.5	0.77	1.00	
Phenothrin	ND	0.77	0.38	1.00	
Resmethrin/Bioresmethrin	ND	0.77	0.65	1.00	
Tetramethrin	ND	0.77	0.46	1.00	
lambda-Cyhalothrin	ND	0.77	0.38	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
Dibutylchloroendate	111	14-116			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/27/19
 Work Order: 19-02-1994
 Preparation: EPA 3541
 Method: EPA 8270D (M)/TQ/EI
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC3-COMP	19-02-1994-2-BB	02/26/19 17:00	Sediment	GCTQ 1	03/06/19	03/08/19 00:20	190306L15

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Allethrin	ND	0.68	0.34	1.00	
Bifenthrin	0.69	0.68	0.41	1.00	
Cyfluthrin	ND	0.68	0.34	1.00	
Cypermethrin	ND	0.68	0.34	1.00	
Deltamethrin/Tralomethrin	ND	0.68	0.34	1.00	
Fenpropathrin	ND	0.68	0.34	1.00	
Fenvalerate/Esfenvalerate	ND	0.68	0.34	1.00	
Fluvalinate	ND	0.68	0.34	1.00	
Permethrin (cis/trans)	ND	1.4	0.68	1.00	
Phenothrin	ND	0.68	0.34	1.00	
Resmethrin/Bioresmethrin	ND	0.68	0.58	1.00	
Tetramethrin	ND	0.68	0.41	1.00	
lambda-Cyhalothrin	ND	0.68	0.34	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
Dibutylchloroendate	112	14-116			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/27/19
 Work Order: 19-02-1994
 Preparation: EPA 3541
 Method: EPA 8270D (M)/TQ/EI
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-403-199	N/A	Solid	GCTQ 1	03/06/19	03/07/19 22:36	190306L15

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Allethrin	ND	0.50	0.25	1.00	
Bifenthrin	ND	0.50	0.30	1.00	
Cyfluthrin	ND	0.50	0.25	1.00	
Cypermethrin	ND	0.50	0.25	1.00	
Deltamethrin/Tralomethrin	ND	0.50	0.25	1.00	
Fenpropathrin	ND	0.50	0.25	1.00	
Fenvalerate/Esfenvalerate	ND	0.50	0.25	1.00	
Fluvalinate	ND	0.50	0.25	1.00	
Permethrin (cis/trans)	ND	1.0	0.50	1.00	
Phenothrin	ND	0.50	0.25	1.00	
Resmethrin/Bioresmethrin	ND	0.50	0.42	1.00	
Tetramethrin	ND	0.50	0.30	1.00	
lambda-Cyhalothrin	ND	0.50	0.25	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibutylchloroendate	91	14-116	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/27/19
 Work Order: 19-02-1994
 Preparation: EPA 3050B
 Method: EPA 6020
 Units: mg/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-COMP	19-02-1994-1-BB	02/26/19 17:00	Sediment	ICP/MS 05	03/04/19	03/06/19 12:43	190304L03

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Arsenic	5.73	0.153	0.134	1.00	
Cadmium	0.457	0.153	0.0876	1.00	
Chromium	16.5	0.153	0.0951	1.00	
Copper	45.2	0.153	0.0642	1.00	
Lead	19.9	0.153	0.101	1.00	
Nickel	10.2	0.153	0.0775	1.00	
Selenium	1.07	0.153	0.112	1.00	
Silver	0.113	0.153	0.0479	1.00	J
Zinc	82.7	1.53	1.22	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC3-COMP	19-02-1994-2-BB	02/26/19 17:00	Sediment	ICP/MS 05	03/04/19	03/06/19 12:46	190304L03

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Arsenic	3.68	0.137	0.119	1.00	
Cadmium	0.325	0.137	0.0783	1.00	
Chromium	9.19	0.137	0.0849	1.00	
Copper	16.8	0.137	0.0573	1.00	
Lead	10.2	0.137	0.0902	1.00	
Nickel	5.73	0.137	0.0693	1.00	
Selenium	0.556	0.137	0.100	1.00	
Silver	0.0709	0.137	0.0428	1.00	J
Zinc	39.0	1.37	1.09	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/27/19
Work Order: 19-02-1994
Preparation: EPA 3050B
Method: EPA 6020
Units: mg/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-15-254-721	N/A	Solid	ICP/MS 05	03/04/19	03/05/19 20:20	190304L03

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Arsenic	ND	0.100	0.0873	1.00	
Cadmium	ND	0.100	0.0572	1.00	
Chromium	ND	0.100	0.0621	1.00	
Copper	ND	0.100	0.0419	1.00	
Lead	ND	0.100	0.0659	1.00	
Nickel	ND	0.100	0.0506	1.00	
Selenium	ND	0.100	0.0731	1.00	
Silver	ND	0.100	0.0313	1.00	
Zinc	ND	1.00	0.795	1.00	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/27/19
 Work Order: 19-02-1994
 Preparation: EPA 7471A Total
 Method: EPA 7471A
 Units: mg/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-COMP	19-02-1994-1-BB	02/26/19 17:00	Sediment	Mercury 08	03/06/19	03/06/19 13:00	190306L01E

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Mercury	0.529	0.0306	0.00899	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC3-COMP	19-02-1994-2-BB	02/26/19 17:00	Sediment	Mercury 08	03/06/19	03/06/19 13:07	190306L01E

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Mercury	0.173	0.0261	0.00765	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-278-522	N/A	Solid	Mercury 08	03/06/19	03/06/19 12:55	190306L01E

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Mercury	ND	0.0200	0.00587	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/27/19
 Work Order: 19-02-1994
 Preparation: N/A
 Method: ASTM D4464 (M)
 Units: %

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-COMP	19-02-1994-1-A	02/26/19 17:00	Sediment	LPSA 1	N/A	02/28/19 15:43	

<u>Parameter</u>	<u>Result</u>	<u>Qualifiers</u>
Clay (less than 0.00391mm)	28.29	
Silt (0.00391 to 0.0625mm)	53.65	
Total Silt and Clay (0 to 0.0625mm)	81.94	
Very Fine Sand (0.0625 to 0.125mm)	17.82	
Fine Sand (0.125 to 0.25mm)	0.24	
Medium Sand (0.25 to 0.5mm)	ND	
Coarse Sand (0.5 to 1mm)	ND	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC3-COMP	19-02-1994-2-A	02/26/19 17:00	Sediment	LPSA 1	N/A	02/28/19 17:14	

<u>Parameter</u>	<u>Result</u>	<u>Qualifiers</u>
Clay (less than 0.00391mm)	26.78	
Silt (0.00391 to 0.0625mm)	58.46	
Total Silt and Clay (0 to 0.0625mm)	85.25	
Very Fine Sand (0.0625 to 0.125mm)	10.01	
Fine Sand (0.125 to 0.25mm)	4.75	
Medium Sand (0.25 to 0.5mm)	ND	
Coarse Sand (0.5 to 1mm)	ND	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/27/19
 Work Order: 19-02-1994
 Preparation: EPA 3541
 Method: EPA 8081A
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-COMP	19-02-1994-1-BB	02/26/19 17:00	Sediment	GC 51	03/05/19	03/08/19 09:19	190305L10

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Aldrin	ND	1.5	0.67	1.00	
Alpha-BHC	ND	3.0	1.1	1.00	
Beta-BHC	ND	1.5	0.76	1.00	
Delta-BHC	ND	3.0	1.3	1.00	
Gamma-BHC	ND	1.5	0.68	1.00	
Dieldrin	ND	1.5	0.67	1.00	
Trans-nonachlor	ND	1.5	0.41	1.00	
2,4'-DDD	ND	1.5	0.44	1.00	
2,4'-DDE	ND	3.0	1.5	1.00	
2,4'-DDT	ND	1.5	0.48	1.00	
4,4'-DDD	7.0	1.5	0.76	1.00	
4,4'-DDT	ND	1.5	0.67	1.00	
Endosulfan I	ND	1.5	0.60	1.00	
Endosulfan II	ND	1.5	0.72	1.00	
Endosulfan Sulfate	ND	1.5	0.80	1.00	
Endrin	ND	1.5	0.73	1.00	
Endrin Aldehyde	ND	1.5	0.92	1.00	
Endrin Ketone	ND	1.5	0.77	1.00	
Heptachlor	ND	1.5	0.66	1.00	
Heptachlor Epoxide	ND	3.0	1.1	1.00	
Methoxychlor	ND	1.5	0.85	1.00	
Toxaphene	ND	30	14	1.00	
Alpha Chlordane	ND	1.5	0.62	1.00	
Gamma Chlordane	ND	3.0	1.4	1.00	
Cis-nonachlor	ND	1.5	0.39	1.00	
Oxychlordane	ND	1.5	0.41	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
2,4,5,6-Tetrachloro-m-Xylene	87	25-145	
Decachlorobiphenyl	102	24-168	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/27/19
Work Order: 19-02-1994
Preparation: EPA 3541
Method: EPA 8081A
Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-COMP	19-02-1994-1-BB	02/26/19 17:00	Sediment	GC 51	03/05/19	03/08/19 11:41	190305L10

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
4,4'-DDE	14	7.6	3.4	5.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2,4,5,6-Tetrachloro-m-Xylene	76	25-145			
Decachlorobiphenyl	87	24-168			

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/27/19
 Work Order: 19-02-1994
 Preparation: EPA 3541
 Method: EPA 8081A
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 3 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC3-COMP	19-02-1994-2-BB	02/26/19 17:00	Sediment	GC 51	03/05/19	03/08/19 09:33	190305L10

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	1.3	0.59	1.00	
Alpha-BHC	ND	2.7	0.99	1.00	
Beta-BHC	ND	1.3	0.67	1.00	
Delta-BHC	ND	2.7	1.2	1.00	
Gamma-BHC	ND	1.3	0.60	1.00	
Dieldrin	ND	1.3	0.59	1.00	
Trans-nonachlor	ND	1.3	0.36	1.00	
2,4'-DDD	ND	1.3	0.38	1.00	
2,4'-DDE	ND	2.7	1.3	1.00	
2,4'-DDT	ND	1.3	0.42	1.00	
4,4'-DDD	4.9	1.3	0.67	1.00	
4,4'-DDT	ND	1.3	0.59	1.00	
Endosulfan I	ND	1.3	0.53	1.00	
Endosulfan II	ND	1.3	0.63	1.00	
Endosulfan Sulfate	ND	1.3	0.70	1.00	
Endrin	ND	1.3	0.65	1.00	
Endrin Aldehyde	ND	1.3	0.81	1.00	
Endrin Ketone	ND	1.3	0.67	1.00	
Heptachlor	ND	1.3	0.58	1.00	
Heptachlor Epoxide	ND	2.7	0.99	1.00	
Methoxychlor	ND	1.3	0.75	1.00	
Toxaphene	ND	27	12	1.00	
Alpha Chlordane	ND	1.3	0.54	1.00	
Gamma Chlordane	ND	2.7	1.2	1.00	
Cis-nonachlor	ND	1.3	0.35	1.00	
Oxychlordane	ND	1.3	0.36	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
2,4,5,6-Tetrachloro-m-Xylene	88	25-145			
Decachlorobiphenyl	104	24-168			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/27/19
 Work Order: 19-02-1994
 Preparation: EPA 3541
 Method: EPA 8081A
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 4 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC3-COMP	19-02-1994-2-BB	02/26/19 17:00	Sediment	GC 51	03/05/19	03/08/19 11:56	190305L10

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	13	6.7	3.0	5.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
2,4,5,6-Tetrachloro-m-Xylene	84	25-145			
Decachlorobiphenyl	101	24-168			

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/27/19
 Work Order: 19-02-1994
 Preparation: EPA 3541
 Method: EPA 8081A
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 5 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-858-618	N/A	Solid	GC 51	03/05/19	03/08/19 06:00	190305L10

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	1.0	0.44	1.00	
Alpha-BHC	ND	2.0	0.74	1.00	
Beta-BHC	ND	1.0	0.50	1.00	
Delta-BHC	ND	2.0	0.88	1.00	
Gamma-BHC	ND	1.0	0.45	1.00	
Dieldrin	ND	1.0	0.44	1.00	
Trans-nonachlor	ND	1.0	0.27	1.00	
2,4'-DDD	ND	1.0	0.29	1.00	
2,4'-DDE	ND	2.0	0.99	1.00	
2,4'-DDT	ND	1.0	0.31	1.00	
4,4'-DDD	ND	1.0	0.50	1.00	
4,4'-DDE	ND	1.0	0.44	1.00	
4,4'-DDT	ND	1.0	0.44	1.00	
Endosulfan I	ND	1.0	0.40	1.00	
Endosulfan II	ND	1.0	0.47	1.00	
Endosulfan Sulfate	ND	1.0	0.52	1.00	
Endrin	ND	1.0	0.48	1.00	
Endrin Aldehyde	ND	1.0	0.60	1.00	
Endrin Ketone	ND	1.0	0.50	1.00	
Heptachlor	ND	1.0	0.43	1.00	
Heptachlor Epoxide	ND	2.0	0.74	1.00	
Methoxychlor	ND	1.0	0.56	1.00	
Toxaphene	ND	20	9.0	1.00	
Alpha Chlordane	ND	1.0	0.41	1.00	
Gamma Chlordane	ND	2.0	0.89	1.00	
Cis-nonachlor	ND	1.0	0.26	1.00	
Oxychlordane	ND	1.0	0.27	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2,4,5,6-Tetrachloro-m-Xylene	95	25-145	
Decachlorobiphenyl	111	24-168	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/27/19
 Work Order: 19-02-1994
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-COMP	19-02-1994-1-BB	02/26/19 17:00	Sediment	GC/MS AAA	03/06/19	03/08/19 13:17	190306L13

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	ND	15	3.6	1.00	
Acenaphthylene	ND	15	2.7	1.00	
Anthracene	ND	15	5.3	1.00	
Benzo (a) Anthracene	9.0	15	3.3	1.00	J
Benzo (a) Pyrene	14	15	2.8	1.00	J
Benzo (b) Fluoranthene	18	15	4.1	1.00	
Benzo (g,h,i) Perylene	7.2	15	2.3	1.00	J
Benzo (k) Fluoranthene	11	15	4.2	1.00	J
Chrysene	12	15	3.4	1.00	J
Dibenz (a,h) Anthracene	ND	15	3.0	1.00	
Fluoranthene	12	15	2.8	1.00	J
Fluorene	ND	15	4.7	1.00	
Indeno (1,2,3-c,d) Pyrene	7.0	15	2.4	1.00	J
2-Methylnaphthalene	ND	15	3.5	1.00	
1-Methylnaphthalene	ND	15	3.5	1.00	
Naphthalene	ND	15	5.3	1.00	
Phenanthrene	5.2	15	3.4	1.00	J
Pyrene	16	15	3.4	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	66	14-146	
Nitrobenzene-d5	53	18-162	
p-Terphenyl-d14	110	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/27/19
 Work Order: 19-02-1994
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC3-COMP	19-02-1994-2-BB	02/26/19 17:00	Sediment	GC/MS AAA	03/06/19	03/08/19 13:37	190306L13

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	ND	14	3.2	1.00	
Acenaphthylene	ND	14	2.4	1.00	
Anthracene	ND	14	4.7	1.00	
Benzo (a) Anthracene	6.1	14	2.9	1.00	J
Benzo (a) Pyrene	9.2	14	2.5	1.00	J
Benzo (b) Fluoranthene	9.1	14	3.7	1.00	J
Benzo (g,h,i) Perylene	6.4	14	2.1	1.00	J
Benzo (k) Fluoranthene	7.0	14	3.8	1.00	J
Chrysene	6.3	14	3.0	1.00	J
Dibenz (a,h) Anthracene	ND	14	2.6	1.00	
Fluoranthene	8.1	14	2.5	1.00	J
Fluorene	ND	14	4.2	1.00	
Indeno (1,2,3-c,d) Pyrene	5.4	14	2.2	1.00	J
2-Methylnaphthalene	ND	14	3.2	1.00	
1-Methylnaphthalene	ND	14	3.2	1.00	
Naphthalene	ND	14	4.7	1.00	
Phenanthrene	3.8	14	3.0	1.00	J
Pyrene	11	14	3.0	1.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	67	14-146	
Nitrobenzene-d5	54	18-162	
p-Terphenyl-d14	108	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/27/19
 Work Order: 19-02-1994
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-097-328	N/A	Solid	GC/MS AAA	03/06/19	03/08/19 11:40	190306L13

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	ND	10	2.4	1.00	
Acenaphthylene	ND	10	1.8	1.00	
Anthracene	ND	10	3.5	1.00	
Benzo (a) Anthracene	ND	10	2.2	1.00	
Benzo (a) Pyrene	ND	10	1.8	1.00	
Benzo (b) Fluoranthene	ND	10	2.7	1.00	
Benzo (g,h,i) Perylene	ND	10	1.5	1.00	
Benzo (k) Fluoranthene	ND	10	2.8	1.00	
Chrysene	ND	10	2.2	1.00	
Dibenz (a,h) Anthracene	ND	10	2.0	1.00	
Fluoranthene	ND	10	1.8	1.00	
Fluorene	ND	10	3.1	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	10	1.6	1.00	
2-Methylnaphthalene	ND	10	2.3	1.00	
1-Methylnaphthalene	ND	10	2.3	1.00	
Naphthalene	ND	10	3.5	1.00	
Phenanthrene	ND	10	2.2	1.00	
Pyrene	ND	10	2.2	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	80	14-146	
Nitrobenzene-d5	61	18-162	
p-Terphenyl-d14	103	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/27/19
 Work Order: 19-02-1994
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-COMP	19-02-1994-1-bb	02/26/19 17:00	Sediment	GC/MS HHH	03/06/19	03/08/19 17:45	190306L14

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB018	0.95	0.30	0.098	1.00	
PCB028	0.97	0.30	0.11	1.00	
PCB037	0.17	0.30	0.092	1.00	J
PCB044	0.66	0.30	0.23	1.00	
PCB049	0.87	0.30	0.075	1.00	
PCB052	0.81	0.30	0.29	1.00	
PCB066	1.3	0.30	0.19	1.00	
PCB070	0.66	0.30	0.11	1.00	
PCB074	0.54	0.30	0.14	1.00	
PCB077	ND	0.30	0.18	1.00	
PCB081	ND	0.30	0.14	1.00	
PCB087	0.74	0.30	0.17	1.00	
PCB099	1.2	0.30	0.072	1.00	
PCB101	1.3	0.30	0.067	1.00	
PCB105	0.65	0.30	0.081	1.00	
PCB110	1.2	0.30	0.051	1.00	
PCB114	ND	0.30	0.11	1.00	
PCB118	1.0	0.30	0.052	1.00	
PCB119	ND	0.30	0.095	1.00	
PCB123	ND	0.30	0.11	1.00	
PCB126	ND	0.30	0.083	1.00	
PCB128	ND	0.30	0.18	1.00	
PCB132/153	2.3	0.61	0.25	1.00	
PCB138/158	1.5	0.61	0.53	1.00	
PCB149	1.4	0.30	0.18	1.00	
PCB151	0.58	0.30	0.13	1.00	
PCB156	ND	0.30	0.12	1.00	
PCB157	ND	0.30	0.13	1.00	
PCB167	ND	0.30	0.20	1.00	
PCB168	ND	0.30	0.22	1.00	
PCB169	ND	0.30	0.099	1.00	
PCB170	0.75	0.30	0.17	1.00	
PCB177	0.49	0.30	0.18	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/27/19
Work Order: 19-02-1994
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners
Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 6

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB180	1.0	0.30	0.14	1.00	
PCB183	0.37	0.30	0.14	1.00	
PCB187	0.93	0.30	0.16	1.00	
PCB189	ND	0.30	0.097	1.00	
PCB194	0.41	0.30	0.11	1.00	
PCB201	ND	0.30	0.052	1.00	
PCB206	ND	0.30	0.18	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	57	14-146			
p-Terphenyl-d14	106	34-148			

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/27/19
 Work Order: 19-02-1994
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 3 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC3-COMP	19-02-1994-2-bb	02/26/19 17:00	Sediment	GC/MS HHH	03/06/19	03/08/19 18:09	190306L14

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB018	ND	0.27	0.088	1.00	
PCB028	0.21	0.27	0.094	1.00	J
PCB037	ND	0.27	0.082	1.00	
PCB044	0.23	0.27	0.21	1.00	J
PCB049	0.25	0.27	0.067	1.00	J
PCB052	0.55	0.27	0.26	1.00	
PCB066	0.35	0.27	0.17	1.00	
PCB070	0.20	0.27	0.097	1.00	J
PCB074	ND	0.27	0.12	1.00	
PCB077	ND	0.27	0.16	1.00	
PCB081	ND	0.27	0.12	1.00	
PCB087	0.41	0.27	0.15	1.00	
PCB099	0.31	0.27	0.064	1.00	
PCB101	0.63	0.27	0.060	1.00	
PCB105	ND	0.27	0.072	1.00	
PCB110	0.61	0.27	0.046	1.00	
PCB114	ND	0.27	0.10	1.00	
PCB118	0.56	0.27	0.047	1.00	
PCB119	ND	0.27	0.085	1.00	
PCB123	ND	0.27	0.099	1.00	
PCB126	ND	0.27	0.074	1.00	
PCB128	ND	0.27	0.16	1.00	
PCB132/153	0.78	0.54	0.22	1.00	
PCB138/158	0.87	0.54	0.48	1.00	
PCB149	0.60	0.27	0.16	1.00	
PCB151	ND	0.27	0.12	1.00	
PCB156	ND	0.27	0.10	1.00	
PCB157	ND	0.27	0.11	1.00	
PCB167	ND	0.27	0.18	1.00	
PCB168	ND	0.27	0.19	1.00	
PCB169	ND	0.27	0.088	1.00	
PCB170	ND	0.27	0.15	1.00	
PCB177	0.36	0.27	0.16	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/27/19
Work Order: 19-02-1994
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners
Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 4 of 6

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB180	0.66	0.27	0.12	1.00	
PCB183	ND	0.27	0.13	1.00	
PCB187	0.42	0.27	0.14	1.00	
PCB189	ND	0.27	0.087	1.00	
PCB194	ND	0.27	0.10	1.00	
PCB201	ND	0.27	0.046	1.00	
PCB206	ND	0.27	0.16	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	54	14-146			
p-Terphenyl-d14	99	34-148			

Analytical Report

ANCHOR QEA, LLC	Date Received:	02/27/19
9700 RESEARCH DR	Work Order:	19-02-1994
IRVINE, CA 92618-4327	Preparation:	EPA 3541
	Method:	EPA 8270C SIM PCB Congeners
	Units:	ug/kg

Project: City of Newport Beach - Federal Channels

Page 5 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-418-363	N/A	Solid	GC/MS HHH	03/06/19	03/08/19 13:43	190306L14

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB018	ND	0.20	0.065	1.00	
PCB028	ND	0.20	0.069	1.00	
PCB037	ND	0.20	0.061	1.00	
PCB044	ND	0.20	0.15	1.00	
PCB049	ND	0.20	0.050	1.00	
PCB052	ND	0.20	0.19	1.00	
PCB066	ND	0.20	0.12	1.00	
PCB070	ND	0.20	0.072	1.00	
PCB074	ND	0.20	0.090	1.00	
PCB077	ND	0.20	0.12	1.00	
PCB081	ND	0.20	0.090	1.00	
PCB087	ND	0.20	0.11	1.00	
PCB099	ND	0.20	0.047	1.00	
PCB101	ND	0.20	0.044	1.00	
PCB105	ND	0.20	0.053	1.00	
PCB110	ND	0.20	0.034	1.00	
PCB114	ND	0.20	0.074	1.00	
PCB118	ND	0.20	0.035	1.00	
PCB119	ND	0.20	0.062	1.00	
PCB123	ND	0.20	0.073	1.00	
PCB126	ND	0.20	0.055	1.00	
PCB128	ND	0.20	0.12	1.00	
PCB132/153	ND	0.40	0.16	1.00	
PCB138/158	ND	0.40	0.35	1.00	
PCB149	ND	0.20	0.12	1.00	
PCB151	ND	0.20	0.088	1.00	
PCB156	ND	0.20	0.077	1.00	
PCB157	ND	0.20	0.085	1.00	
PCB167	ND	0.20	0.13	1.00	
PCB168	ND	0.20	0.14	1.00	
PCB169	ND	0.20	0.065	1.00	
PCB170	ND	0.20	0.11	1.00	
PCB177	ND	0.20	0.12	1.00	
PCB180	ND	0.20	0.092	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/27/19
Work Order: 19-02-1994
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners
Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 6 of 6

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB183	ND	0.20	0.093	1.00	
PCB187	ND	0.20	0.10	1.00	
PCB189	ND	0.20	0.064	1.00	
PCB194	ND	0.20	0.074	1.00	
PCB201	ND	0.20	0.034	1.00	
PCB206	ND	0.20	0.12	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	67	14-146			
p-Terphenyl-d14	99	34-148			

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/27/19
 Work Order: 19-02-1994
 Preparation: EPA 3550B (M)
 Method: Organotins by Krone et al.
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-COMP	19-02-1994-1-BB	02/26/19 17:00	Sediment	GC/MS Y	03/06/19	03/07/19 19:48	190306L02

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	13	4.5	1.1	1.00	
Monobutyltin	ND	4.5	2.1	1.00	
Tetrabutyltin	ND	4.5	1.1	1.00	
Tributyltin	ND	4.5	2.3	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Tripentyltin	64	27-135			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC3-COMP	19-02-1994-2-BB	02/26/19 17:00	Sediment	GC/MS Y	03/06/19	03/07/19 20:05	190306L02

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	6.6	4.0	0.98	1.00	
Monobutyltin	ND	4.0	1.9	1.00	
Tetrabutyltin	ND	4.0	1.0	1.00	
Tributyltin	ND	4.0	2.0	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Tripentyltin	69	27-135			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-07-016-1667	N/A	Solid	GC/MS Y	03/06/19	03/07/19 18:17	190306L02

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	ND	3.0	0.73	1.00	
Monobutyltin	ND	3.0	1.4	1.00	
Tetrabutyltin	ND	3.0	0.74	1.00	
Tributyltin	ND	3.0	1.5	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Tripentyltin	61	27-135			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/27/19
Work Order: 19-02-1994
Preparation: N/A
Method: EPA 9060A

Project: City of Newport Beach - Federal Channels

Page 1 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
NC2-COMP	Sample	Sediment	TOC 10	03/06/19	03/06/19 17:03	J0306TOCS1
NC2-COMP	Matrix Spike	Sediment	TOC 10	03/06/19	03/06/19 17:03	J0306TOCS1
NC2-COMP	Matrix Spike Duplicate	Sediment	TOC 10	03/06/19	03/06/19 17:03	J0306TOCS1

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Carbon, Total Organic	1.026	3.000	34.12	1103	3.298	76	75-125	165	0-25	3,4


 Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/27/19
Work Order: 19-02-1994
Preparation: EPA 3541
Method: EPA 8270D (M)/TQ/EI

Project: City of Newport Beach - Federal Channels

Page 2 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
NC2-COMP	Sample	Sediment	GCTQ 1	03/06/19	03/07/19 23:28	190306S15				
NC2-COMP	Matrix Spike	Sediment	GCTQ 1	03/06/19	03/08/19 01:11	190306S15				
NC2-COMP	Matrix Spike Duplicate	Sediment	GCTQ 1	03/06/19	03/08/19 02:03	190306S15				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Allethrin	ND	5.000	4.878	98	5.132	103	10-148	5	0-30	
Bifenthrin	0.6902	5.000	5.797	102	5.887	104	26-128	2	0-30	
Cyfluthrin	ND	5.000	6.545	131	7.102	142	10-131	8	0-30	3
Cypermethrin	ND	5.000	6.122	122	6.681	134	10-136	9	0-30	
Deltamethrin/Tralomethrin	ND	5.000	6.189	124	6.960	139	13-190	12	0-30	
Fenpropathrin	ND	5.000	6.290	126	6.585	132	10-148	5	0-30	
Fenvalerate/Esfenvalerate	ND	5.000	7.585	152	7.809	156	10-149	3	0-30	3
Fluvalinate	ND	5.000	6.151	123	7.036	141	10-121	13	0-30	3
Permethrin (cis/trans)	ND	5.000	6.821	136	7.292	146	45-123	7	0-30	3
Phenothrin	ND	5.000	7.110	142	7.259	145	45-165	2	0-30	
Resmethrin/Bioresmethrin	ND	5.000	6.721	134	6.836	137	38-164	2	0-30	
Tetramethrin	ND	5.000	6.197	124	6.474	129	15-153	4	0-30	
lambda-Cyhalothrin	ND	5.000	6.892	138	7.164	143	10-123	4	0-30	3

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Spike/Spike Duplicate - Surrogate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/27/19
Work Order: 19-02-1994
Preparation: EPA 3541
Method: EPA 8270D (M)/TQ/EI

Project: City of Newport Beach - Federal Channels

Page 3 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number	
NC2-COMP	Sample	Sediment	GCTQ 1	03/06/19	03/07/19 23:28	190306S15	
NC2-COMP	Matrix Spike	Sediment	GCTQ 1	03/06/19	03/08/19 01:11	190306S15	
NC2-COMP	Matrix Spike Duplicate	Sediment	GCTQ 1	03/06/19	03/08/19 02:03	190306S15	
Parameter	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	Qualifiers
Dibutylchloroendate	5.000	58.12	116	59.14	118	14-116	1,2

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/27/19
Work Order: 19-02-1994
Preparation: EPA 3050B
Method: EPA 6020

Project: City of Newport Beach - Federal Channels

Page 4 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
NC2-COMP	Sample	Sediment	ICP/MS 05	03/04/19	03/06/19 12:43	190304S3A				
NC2-COMP	Matrix Spike	Sediment	ICP/MS 05	03/04/19	03/06/19 12:31	190304S3A				
NC2-COMP	Matrix Spike Duplicate	Sediment	ICP/MS 05	03/04/19	03/06/19 12:34	190304S3A				
<u>Parameter</u>	<u>Sample Conc.</u>	<u>Spike Added</u>	<u>MS Conc.</u>	<u>MS %Rec.</u>	<u>MSD Conc.</u>	<u>MSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Arsenic	3.743	25.00	29.90	105	29.99	105	80-120	0	0-20	
Cadmium	0.2983	25.00	28.26	112	27.87	110	80-120	1	0-20	
Chromium	10.76	25.00	37.40	107	37.61	107	80-120	1	0-20	
Copper	29.51	25.00	54.65	101	54.00	98	80-120	1	0-20	
Lead	13.01	25.00	40.17	109	39.31	105	80-120	2	0-20	
Nickel	6.638	25.00	31.60	100	31.57	100	80-120	0	0-20	
Selenium	0.6968	25.00	29.37	115	28.66	112	80-120	2	0-20	
Silver	ND	12.50	13.32	107	13.07	105	80-120	2	0-20	
Zinc	53.97	25.00	80.86	108	78.88	100	80-120	2	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/27/19
Work Order: 19-02-1994
Preparation: EPA 7471A Total
Method: EPA 7471A

Project: City of Newport Beach - Federal Channels

Page 5 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
NC2-COMP	Sample	Sediment	Mercury 08	03/06/19	03/06/19 13:00	190306S01				
NC2-COMP	Matrix Spike	Sediment	Mercury 08	03/06/19	03/06/19 13:02	190306S01				
NC2-COMP	Matrix Spike Duplicate	Sediment	Mercury 08	03/06/19	03/06/19 13:05	190306S01				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	0.3453	0.8350	1.045	84	1.059	85	76-136	1	0-16	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/27/19
Work Order: 19-02-1994
Preparation: EPA 3541
Method: EPA 8081A

Project: City of Newport Beach - Federal Channels

Page 6 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
NC2-COMP	Sample	Sediment	GC 51	03/05/19	03/08/19 09:19	190305S10				
NC2-COMP	Matrix Spike	Sediment	GC 51	03/05/19	03/08/19 08:51	190305S10				
NC2-COMP	Matrix Spike Duplicate	Sediment	GC 51	03/05/19	03/08/19 09:05	190305S10				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Aldrin	ND	5.000	5.062	101	4.932	99	50-135	3	0-25	
Alpha-BHC	ND	5.000	5.712	114	5.518	110	50-135	3	0-25	
Beta-BHC	ND	5.000	6.259	125	6.170	123	50-135	1	0-25	
Delta-BHC	ND	5.000	5.186	104	5.208	104	50-135	0	0-25	
Gamma-BHC	ND	5.000	5.177	104	4.917	98	50-135	5	0-25	
Dieldrin	ND	5.000	5.519	110	5.445	109	50-135	1	0-25	
4,4'-DDD	4.547	5.000	11.21	133	11.32	135	50-135	1	0-25	
4,4'-DDE	8.972	5.000	16.43	149	16.78	156	50-135	2	0-25	3
4,4'-DDT	ND	5.000	2.708	54	2.594	52	50-135	4	0-25	
Endosulfan I	ND	5.000	5.597	112	5.498	110	50-135	2	0-25	
Endosulfan II	ND	5.000	5.288	106	5.277	106	50-135	0	0-25	
Endosulfan Sulfate	ND	5.000	5.423	108	5.453	109	50-135	1	0-25	
Endrin	ND	5.000	5.359	107	5.361	107	50-135	0	0-25	
Endrin Aldehyde	ND	5.000	4.676	94	4.634	93	50-135	1	0-25	
Endrin Ketone	ND	5.000	4.871	97	4.783	96	50-135	2	0-25	
Heptachlor	ND	5.000	4.985	100	4.284	86	50-135	15	0-25	
Heptachlor Epoxide	ND	5.000	6.217	124	6.132	123	50-135	1	0-25	
Methoxychlor	ND	5.000	2.236	45	2.312	46	50-135	3	0-25	3
Alpha Chlordane	ND	5.000	5.277	106	5.307	106	50-135	1	0-25	
Gamma Chlordane	ND	5.000	5.703	114	5.577	112	50-135	2	0-25	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Spike/Spike Duplicate - Surrogate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/27/19
Work Order: 19-02-1994
Preparation: EPA 3541
Method: EPA 8081A

Project: City of Newport Beach - Federal Channels

Page 7 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number	
NC2-COMP	Sample	Sediment	GC 51	03/05/19	03/08/19 09:19	190305S10	
NC2-COMP	Matrix Spike	Sediment	GC 51	03/05/19	03/08/19 08:51	190305S10	
NC2-COMP	Matrix Spike Duplicate	Sediment	GC 51	03/05/19	03/08/19 09:05	190305S10	
Parameter	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	Qualifiers
2,4,5,6-Tetrachloro-m-Xylene	1.000	9.200	92	8.758	88	25-145	
Decachlorobiphenyl	1.000	10.47	105	10.45	104	24-168	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/27/19
Work Order: 19-02-1994
Preparation: EPA 3541
Method: EPA 8270C SIM PAHs

Project: City of Newport Beach - Federal Channels

Page 8 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
NC2-COMP	Sample	Sediment	GC/MS AAA	03/06/19	03/08/19 13:17	190306S13				
NC2-COMP	Matrix Spike	Sediment	GC/MS AAA	03/06/19	03/08/19 12:38	190306S13				
NC2-COMP	Matrix Spike Duplicate	Sediment	GC/MS AAA	03/06/19	03/08/19 12:58	190306S13				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Acenaphthene	ND	100.0	79.93	80	79.14	79	40-160	1	0-20	
Acenaphthylene	ND	100.0	90.07	90	89.87	90	40-160	0	0-20	
Anthracene	ND	100.0	106.5	107	107.7	108	40-160	1	0-20	
Benzo (a) Anthracene	ND	100.0	108.4	108	110.1	110	40-160	2	0-20	
Benzo (a) Pyrene	ND	100.0	105.1	105	109.0	109	40-160	4	0-20	
Benzo (b) Fluoranthene	11.59	100.0	105.3	94	108.5	97	40-160	3	0-20	
Benzo (g,h,i) Perylene	ND	100.0	48.51	49	52.69	53	40-160	8	0-20	
Benzo (k) Fluoranthene	ND	100.0	83.45	83	86.11	86	40-160	3	0-20	
Chrysene	ND	100.0	106.8	107	108.7	109	40-160	2	0-20	
Dibenz (a,h) Anthracene	ND	100.0	65.08	65	68.55	69	40-160	5	0-20	
Fluoranthene	ND	100.0	110.2	110	111.1	111	40-160	1	0-20	
Fluorene	ND	100.0	90.68	91	89.77	90	40-160	1	0-20	
Indeno (1,2,3-c,d) Pyrene	ND	100.0	60.44	60	64.49	64	40-160	6	0-20	
2-Methylnaphthalene	ND	100.0	83.14	83	80.27	80	40-160	4	0-20	
1-Methylnaphthalene	ND	100.0	75.23	75	72.87	73	40-160	3	0-20	
Naphthalene	ND	100.0	70.25	70	64.58	65	40-160	8	0-20	
Phenanthrene	ND	100.0	106.2	106	107.3	107	40-160	1	0-20	
Pyrene	10.31	100.0	115.5	105	117.3	107	40-160	2	0-46	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Spike/Spike Duplicate - Surrogate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/27/19
Work Order: 19-02-1994
Preparation: EPA 3541
Method: EPA 8270C SIM PAHs

Project: City of Newport Beach - Federal Channels

Page 9 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number	
NC2-COMP	Sample	Sediment	GC/MS AAA	03/06/19	03/08/19 13:17	190306S13	
NC2-COMP	Matrix Spike	Sediment	GC/MS AAA	03/06/19	03/08/19 12:38	190306S13	
NC2-COMP	Matrix Spike Duplicate	Sediment	GC/MS AAA	03/06/19	03/08/19 12:58	190306S13	
<u>Parameter</u>	<u>Spike Added</u>	<u>MS Conc.</u>	<u>MS %Rec.</u>	<u>MSD Conc.</u>	<u>MSD %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
2-Fluorobiphenyl	10.00	85.06	85	81.59	82	14-146	
Nitrobenzene-d5	10.00	72.53	73	66.93	67	18-162	
p-Terphenyl-d14	10.00	112.8	113	111.4	111	34-148	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/27/19
Work Order: 19-02-1994
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners

Project: City of Newport Beach - Federal Channels

Page 10 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
NC2-COMP	Sample	Sediment	GC/MS HHH	03/06/19	03/08/19 17:45	190306S14
NC2-COMP	Matrix Spike	Sediment	GC/MS HHH	03/06/19	03/08/19 14:56	190306S14
NC2-COMP	Matrix Spike Duplicate	Sediment	GC/MS HHH	03/06/19	03/08/19 15:20	190306S14

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
PCB018	0.6236	50.00	38.47	76	37.73	74	50-150	2	0-25	
PCB028	0.6341	50.00	44.22	87	43.79	86	50-150	1	0-25	
PCB044	0.4336	50.00	44.55	88	43.46	86	50-150	2	0-25	
PCB052	0.5310	50.00	40.26	79	39.80	79	50-150	1	0-25	
PCB066	0.8581	50.00	51.37	101	49.61	97	50-150	3	0-25	
PCB077	ND	50.00	43.90	88	42.43	85	50-150	3	0-25	
PCB101	0.8662	50.00	43.80	86	43.26	85	50-150	1	0-25	
PCB105	0.4276	50.00	46.21	92	44.46	88	50-150	4	0-25	
PCB118	0.6803	50.00	46.83	92	45.80	90	50-150	2	0-25	
PCB126	ND	50.00	46.51	93	45.16	90	50-150	3	0-25	
PCB128	ND	50.00	49.06	98	47.07	94	50-150	4	0-25	
PCB170	0.4890	50.00	41.07	81	39.98	79	50-150	3	0-25	
PCB180	0.6549	50.00	48.94	97	47.81	94	50-150	2	0-25	
PCB187	0.6072	50.00	44.35	87	44.25	87	50-150	0	0-25	
PCB206	ND	50.00	45.92	92	45.64	91	50-150	1	0-25	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Spike/Spike Duplicate - Surrogate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/27/19
Work Order: 19-02-1994
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners

Project: City of Newport Beach - Federal Channels

Page 11 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number	
NC2-COMP	Sample	Sediment	GC/MS HHH	03/06/19	03/08/19 17:45	190306S14	
NC2-COMP	Matrix Spike	Sediment	GC/MS HHH	03/06/19	03/08/19 14:56	190306S14	
NC2-COMP	Matrix Spike Duplicate	Sediment	GC/MS HHH	03/06/19	03/08/19 15:20	190306S14	
<u>Parameter</u>	<u>Spike Added</u>	<u>MS Conc.</u>	<u>MS %Rec.</u>	<u>MSD Conc.</u>	<u>MSD %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
2-Fluorobiphenyl	10.00	62.87	63	65.30	65	14-146	
p-Terphenyl-d14	10.00	99.92	100	98.64	99	34-148	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/27/19
Work Order: 19-02-1994
Preparation: EPA 3550B (M)
Method: Organotins by Krone et al.

Project: City of Newport Beach - Federal Channels

Page 12 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
NC2-COMP	Sample	Sediment	GC/MS Y	03/06/19	03/07/19 19:48	190306S02				
NC2-COMP	Matrix Spike	Sediment	GC/MS Y	03/06/19	03/07/19 19:10	190306S02				
NC2-COMP	Matrix Spike Duplicate	Sediment	GC/MS Y	03/06/19	03/07/19 19:29	190306S02				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Tetrabutyltin	ND	100.0	70.31	70	71.03	71	33-129	1	0-36	
Tributyltin	ND	100.0	64.90	65	63.17	63	34-142	3	0-50	


 Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Spike/Spike Duplicate - Surrogate

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/27/19
 Work Order: 19-02-1994
 Preparation: EPA 3550B (M)
 Method: Organotins by Krone et al.

Project: City of Newport Beach - Federal Channels

Page 13 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
NC2-COMP	Sample	Sediment	GC/MS Y	03/06/19	03/07/19 19:48	190306S02
NC2-COMP	Matrix Spike	Sediment	GC/MS Y	03/06/19	03/07/19 19:10	190306S02
NC2-COMP	Matrix Spike Duplicate	Sediment	GC/MS Y	03/06/19	03/07/19 19:29	190306S02

Parameter	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	Qualifiers
Tripentyltin	50.00	61.52	62	63.31	63	27-135	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - PDS

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/27/19
Work Order: 19-02-1994
Preparation: EPA 3050B
Method: EPA 6020

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number	
NC2-COMP	Sample	Sediment	ICP/MS 05	03/04/19 00:00	03/06/19 12:43	190304S3A	
NC2-COMP	PDS	Sediment	ICP/MS 05	03/04/19 00:00	03/06/19 12:37	190304S3A	
<u>Parameter</u>		<u>Sample Conc.</u>	<u>Spike Added</u>	<u>PDS Conc.</u>	<u>PDS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Arsenic		3.743	25.00	29.25	102	75-125	
Cadmium		0.2983	25.00	27.07	107	75-125	
Chromium		10.76	25.00	38.33	110	75-125	
Copper		29.51	25.00	56.05	106	75-125	
Lead		13.01	25.00	39.45	106	75-125	
Nickel		6.638	25.00	31.01	97	75-125	
Selenium		0.6968	25.00	28.41	111	75-125	
Silver		ND	12.50	12.31	98	75-125	
Zinc		53.97	25.00	82.20	113	75-125	



Calscience

Quality Control - Sample Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/27/19
Work Order: 19-02-1994
Preparation: N/A
Method: SM 2540 B (M)

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
NC2-COMP	Sample	Sediment	N/A	03/01/19 00:00	03/01/19 19:00	J0301TSD1
NC2-COMP	Sample Duplicate	Sediment	N/A	03/01/19 00:00	03/01/19 19:00	J0301TSD1
<u>Parameter</u>		<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Solids, Total		65.30	65.40	0	0-10	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/27/19
 Work Order: 19-02-1994
 Preparation: N/A
 Method: EPA 9060A

Project: City of Newport Beach - Federal Channels

Page 1 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-06-013-1944	LCS	Solid	TOC 10	03/06/19	03/06/19 17:03	J0306TOCL1
099-06-013-1944	LCSD	Solid	TOC 10	03/06/19	03/06/19 17:03	J0306TOCL1

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Carbon, Total Organic	0.6000	0.6887	115	0.6914	115	80-120	0	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/27/19
 Work Order: 19-02-1994
 Preparation: EPA 3541
 Method: EPA 8270D (M)/TQ/EI

Project: City of Newport Beach - Federal Channels

Page 2 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-14-403-199	LCS	Solid	GCTQ 1	03/06/19	03/07/19 20:53	190306L15				
099-14-403-199	LCSD	Solid	GCTQ 1	03/06/19	03/07/19 21:44	190306L15				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Allethrin	5.000	3.102	62	3.342	67	10-148	0-171	7	0-25	
Bifenthrin	5.000	4.599	92	5.205	104	26-128	9-145	12	0-25	
Cyfluthrin	5.000	4.819	96	5.316	106	10-131	0-151	10	0-25	
Cypermethrin	5.000	4.255	85	4.725	95	10-136	0-157	10	0-25	
Deltamethrin/Tralomethrin	5.000	4.699	94	4.892	98	13-190	0-220	4	0-25	
Fenpropathrin	5.000	4.671	93	5.047	101	10-148	0-171	8	0-25	
Fenvalerate/Esfenvalerate	5.000	3.987	80	4.421	88	10-149	0-172	10	0-25	
Fluvalinate	5.000	3.566	71	3.914	78	10-121	0-140	9	0-25	
Permethrin (cis/trans)	5.000	4.490	90	5.237	105	45-123	32-136	15	0-25	
Phenothrin	5.000	3.769	75	4.165	83	45-165	25-185	10	0-25	
Resmethrin/Bioresmethrin	5.000	4.238	85	4.867	97	38-164	17-185	14	0-25	
Tetramethrin	5.000	4.276	86	4.817	96	15-153	0-176	12	0-25	
lambda-Cyhalothrin	5.000	4.787	96	4.929	99	10-123	0-142	3	0-25	

Total number of LCS compounds: 13

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

LCS/LCSD - Surrogate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/27/19
Work Order: 19-02-1994
Preparation: EPA 3541
Method: EPA 8270D (M)/TQ/EI

Project: City of Newport Beach - Federal Channels

Page 3 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number	
099-14-403-199	LCS	Solid	GCTQ 1	03/06/19	03/07/19 20:53	190306L15	
099-14-403-199	LCSD	Solid	GCTQ 1	03/06/19	03/07/19 21:44	190306L15	
<u>Parameter</u>	<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>LCSD Conc.</u>	<u>LCSD %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Dibutylchloroendate	5.000	49.29	99	43.01	86	14-116	

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/27/19
 Work Order: 19-02-1994
 Preparation: EPA 3050B
 Method: EPA 6020

Project: City of Newport Beach - Federal Channels

Page 4 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-15-254-721	LCS	Solid	ICP/MS 05	03/04/19	03/05/19 20:23	190304L03			
099-15-254-721	LCSD	Solid	ICP/MS 05	03/04/19	03/05/19 20:26	190304L03			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	25.00	26.13	105	25.27	101	80-120	3	0-20	
Cadmium	25.00	26.08	104	25.65	103	80-120	2	0-20	
Chromium	25.00	26.80	107	25.89	104	80-120	3	0-20	
Copper	25.00	27.24	109	25.80	103	80-120	5	0-20	
Lead	25.00	26.41	106	26.31	105	80-120	0	0-20	
Nickel	25.00	24.92	100	24.68	99	80-120	1	0-20	
Selenium	25.00	26.15	105	24.73	99	80-120	6	0-20	
Silver	12.50	12.38	99	12.14	97	80-120	2	0-20	
Zinc	25.00	27.62	110	26.95	108	80-120	2	0-20	

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/27/19
Work Order: 19-02-1994
Preparation: EPA 7471A Total
Method: EPA 7471A

Project: City of Newport Beach - Federal Channels

Page 5 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-16-278-522	LCS	Solid	Mercury 08	03/06/19	03/06/19 12:58	190306L01E			
099-16-278-522	LCSD	Solid	Mercury 08	03/06/19	03/06/19 14:17	190306L01E			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	0.8350	0.7890	94	0.7785	93	82-124	1	0-16	

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/27/19
Work Order: 19-02-1994
Preparation: EPA 3541
Method: EPA 8081A

Project: City of Newport Beach - Federal Channels

Page 6 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-858-618	LCS	Solid	GC 51	03/05/19	03/08/19 06:14	190305L10				
099-12-858-618	LCSD	Solid	GC 51	03/05/19	03/08/19 14:04	190305L10				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Aldrin	5.000	4.395	88	4.211	84	50-135	36-149	4	0-25	
Alpha-BHC	5.000	4.487	90	4.424	88	50-135	36-149	1	0-25	
Beta-BHC	5.000	4.907	98	4.607	92	50-135	36-149	6	0-25	
Delta-BHC	5.000	5.218	104	5.003	100	50-135	36-149	4	0-25	
Gamma-BHC	5.000	4.822	96	4.589	92	50-135	36-149	5	0-25	
Dieldrin	5.000	5.441	109	5.289	106	50-135	36-149	3	0-25	
4,4'-DDD	5.000	5.848	117	5.671	113	50-135	36-149	3	0-25	
4,4'-DDE	5.000	5.479	110	5.387	108	50-135	36-149	2	0-25	
4,4'-DDT	5.000	6.108	122	5.866	117	50-135	36-149	4	0-25	
Endosulfan I	5.000	5.448	109	5.269	105	50-135	36-149	3	0-25	
Endosulfan II	5.000	5.633	113	5.565	111	50-135	36-149	1	0-25	
Endosulfan Sulfate	5.000	5.463	109	5.409	108	50-135	36-149	1	0-25	
Endrin	5.000	5.504	110	5.503	110	50-135	36-149	0	0-25	
Endrin Aldehyde	5.000	3.706	74	3.630	73	50-135	36-149	2	0-25	
Endrin Ketone	5.000	6.091	122	5.965	119	50-135	36-149	2	0-25	
Heptachlor	5.000	5.144	103	4.954	99	50-135	36-149	4	0-25	
Heptachlor Epoxide	5.000	5.192	104	5.080	102	50-135	36-149	2	0-25	
Methoxychlor	5.000	5.800	116	5.771	115	50-135	36-149	0	0-25	
Alpha Chlordane	5.000	5.265	105	5.093	102	50-135	36-149	3	0-25	
Gamma Chlordane	5.000	5.187	104	5.009	100	50-135	36-149	3	0-25	

Total number of LCS compounds: 20

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

LCS/LCSD - Surrogate

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/27/19
 Work Order: 19-02-1994
 Preparation: EPA 3541
 Method: EPA 8081A

Project: City of Newport Beach - Federal Channels

Page 7 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-858-618	LCS	Solid	GC 51	03/05/19	03/08/19 06:14	190305L10
099-12-858-618	LCSD	Solid	GC 51	03/05/19	03/08/19 14:04	190305L10

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	Qualifiers
2,4,5,6-Tetrachloro-m-Xylene	1.000	8.974	90	8.798	88	25-145	
Decachlorobiphenyl	1.000	11.17	112	10.83	108	24-168	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/27/19
 Work Order: 19-02-1994
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs

Project: City of Newport Beach - Federal Channels

Page 8 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-14-097-328	LCS	Solid	GC/MS AAA	03/06/19	03/08/19 11:59	190306L13				
099-14-097-328	LCSD	Solid	GC/MS AAA	03/06/19	03/08/19 12:19	190306L13				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Acenaphthene	100.0	79.09	79	76.41	76	40-160	20-180	3	0-20	
Acenaphthylene	100.0	87.71	88	86.54	87	40-160	20-180	1	0-20	
Anthracene	100.0	94.30	94	90.36	90	40-160	20-180	4	0-20	
Benzo (a) Anthracene	100.0	105.5	105	101.2	101	40-160	20-180	4	0-20	
Benzo (a) Pyrene	100.0	123.9	124	119.4	119	40-160	20-180	4	0-20	
Benzo (b) Fluoranthene	100.0	111.5	111	107.4	107	40-160	20-180	4	0-20	
Benzo (g,h,i) Perylene	100.0	111.3	111	105.6	106	40-160	20-180	5	0-20	
Benzo (k) Fluoranthene	100.0	95.07	95	90.38	90	40-160	20-180	5	0-20	
Chrysene	100.0	100.1	100	95.78	96	40-160	20-180	4	0-20	
Dibenz (a,h) Anthracene	100.0	112.3	112	108.1	108	40-160	20-180	4	0-20	
Fluoranthene	100.0	94.32	94	90.72	91	40-160	20-180	4	0-20	
Fluorene	100.0	85.43	85	84.40	84	40-160	20-180	1	0-20	
Indeno (1,2,3-c,d) Pyrene	100.0	108.2	108	104.1	104	40-160	20-180	4	0-20	
2-Methylnaphthalene	100.0	87.78	88	88.18	88	40-160	20-180	0	0-20	
1-Methylnaphthalene	100.0	80.44	80	80.45	80	40-160	20-180	0	0-20	
Naphthalene	100.0	78.99	79	78.15	78	40-160	20-180	1	0-20	
Phenanthrene	100.0	94.36	94	89.84	90	40-160	20-180	5	0-20	
Pyrene	100.0	98.68	99	98.63	99	40-160	20-180	0	0-20	

Total number of LCS compounds: 18

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

LCS/LCSD - Surrogate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/27/19
Work Order: 19-02-1994
Preparation: EPA 3541
Method: EPA 8270C SIM PAHs

Project: City of Newport Beach - Federal Channels

Page 9 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number	
099-14-097-328	LCS	Solid	GC/MS AAA	03/06/19	03/08/19 11:59	190306L13	
099-14-097-328	LCSD	Solid	GC/MS AAA	03/06/19	03/08/19 12:19	190306L13	
<u>Parameter</u>	<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>LCSD Conc.</u>	<u>LCSD %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
2-Fluorobiphenyl	10.00	77.92	78	68.16	68	14-146	
Nitrobenzene-d5	10.00	72.24	72	56.31	56	18-162	
p-Terphenyl-d14	10.00	96.30	96	90.00	90	34-148	

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/27/19
Work Order: 19-02-1994
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners

Project: City of Newport Beach - Federal Channels

Page 10 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-16-418-363	LCS	Solid	GC/MS HHH	03/06/19	03/08/19 14:08	190306L14
099-16-418-363	LCSD	Solid	GC/MS HHH	03/06/19	03/08/19 14:32	190306L14

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
PCB018	50.00	34.94	70	38.61	77	24-132	6-150	10	0-28	
PCB028	50.00	37.53	75	41.91	84	31-133	14-150	11	0-26	
PCB044	50.00	38.55	77	42.52	85	36-120	22-134	10	0-28	
PCB052	50.00	34.98	70	38.15	76	31-121	16-136	9	0-27	
PCB066	50.00	46.40	93	51.09	102	43-139	27-155	10	0-25	
PCB077	50.00	40.81	82	43.50	87	41-131	26-146	6	0-25	
PCB101	50.00	40.31	81	42.77	86	37-121	23-135	6	0-27	
PCB105	50.00	42.79	86	46.13	92	48-132	34-146	8	0-26	
PCB118	50.00	42.28	85	45.84	92	46-136	31-151	8	0-25	
PCB126	50.00	42.99	86	46.08	92	38-134	22-150	7	0-25	
PCB128	50.00	44.18	88	47.80	96	40-130	25-145	8	0-26	
PCB170	50.00	36.48	73	37.60	75	40-124	26-138	3	0-29	
PCB180	50.00	44.35	89	48.05	96	41-143	24-160	8	0-26	
PCB187	50.00	42.42	85	46.08	92	39-129	24-144	8	0-26	
PCB206	50.00	41.78	84	41.66	83	33-135	16-152	0	0-24	

Total number of LCS compounds: 15
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

LCS/LCSD - Surrogate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/27/19
Work Order: 19-02-1994
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners

Project: City of Newport Beach - Federal Channels

Page 11 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number	
099-16-418-363	LCS	Solid	GC/MS HHH	03/06/19	03/08/19 14:08	190306L14	
099-16-418-363	LCSD	Solid	GC/MS HHH	03/06/19	03/08/19 14:32	190306L14	
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	Qualifiers
2-Fluorobiphenyl	10.00	71.17	71	71.29	71	14-146	
p-Terphenyl-d14	10.00	98.00	98	99.91	100	34-148	

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 02/27/19
Work Order: 19-02-1994
Preparation: EPA 3550B (M)
Method: Organotins by Krone et al.

Project: City of Newport Beach - Federal Channels

Page 12 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-07-016-1667	LCS	Solid	GC/MS Y	03/06/19	03/07/19 18:35	190306L02
099-07-016-1667	LCSD	Solid	GC/MS Y	03/06/19	03/07/19 18:53	190306L02

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Tetrabutyltin	100.0	68.75	69	66.25	66	40-142	4	0-20	
Tributyltin	100.0	58.50	58	59.36	59	33-147	1	0-20	



Calscience

LCS/LCSD - Surrogate

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 02/27/19
 Work Order: 19-02-1994
 Preparation: EPA 3550B (M)
 Method: Organotins by Krone et al.

Project: City of Newport Beach - Federal Channels

Page 13 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-07-016-1667	LCS	Solid	GC/MS Y	03/06/19	03/07/19 18:35	190306L02
099-07-016-1667	LCSD	Solid	GC/MS Y	03/06/19	03/07/19 18:53	190306L02

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	Qualifiers
Tripentyltin	50.00	63.27	63	64.42	64	27-135	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Sample Analysis Summary Report

Work Order: 19-02-1994

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
ASTM D4464 (M)	N/A	1106	LPSA 1	1
EPA 6020	EPA 3050B	598	ICP/MS 05	1
EPA 7471A	EPA 7471A Total	868	Mercury 08	1
EPA 8081A	EPA 3541	669	GC 51	1
EPA 8270C SIM PAHs	EPA 3541	923	GC/MS AAA	1
EPA 8270C SIM PCB Congeners	EPA 3541	923	GC/MS HHH	1
EPA 8270D (M)/TQ/EI	EPA 3541	27	GCTQ 1	3
EPA 9060A	N/A	1166	TOC 10	1
Organotins by Krone et al.	EPA 3550B (M)	1117	GC/MS Y	1
SM 2540 B (M)	N/A	1136	N/A	1

Glossary of Terms and Qualifiers

Work Order: 19-02-1994

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.



Calscience

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
For courier service / sample drop off information, contact us28_sales@eurofins.com or call us.

LABORATORY CLIENT:

Anchor QEA

ADDRESS: 27201 Puerta Real, Suite 350

CITY: Mission Viejo

STATE: CA

ZIP: 92691

TEL: 949.347.2780

E-MAIL: cosuch@anchorage.com

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

SAME DAY 24 HR 48 HR 72 HR 5 DAYS STANDARD

COELT EDF

LOG CODE:

SPECIAL INSTRUCTIONS:

Report down to the MDL. Refer to SAP for parameters and QC frequency.

LAB USE ONLY	SAMPLE ID	SAMPLING		MATRIX	NO. OF CONT.	LOG CODE:		
		DATE	TIME			Unpreserved	Preserved	Field Filtered
1	NC2-COMP	2/25/19	1700	SED	2 Srs 1 bag	<input checked="" type="checkbox"/>		
2	NC3-COMP	2/15/19	1700	SED	2 Srs 1 bag	<input checked="" type="checkbox"/>		

Received by: (Signature) *[Signature]*

Relinquished by: (Signature) *[Signature]*

Received by: (Signature/Affiliation) *[Signature]*

Relinquished by: (Signature/Affiliation) *[Signature]*

CHAIN OF CUSTODY RECORD

DATE: 2/26/19

PAGE: 1 OF 1

WORK LAB USE ONLY
19-02-1994

CLIENT PROJECT NAME/NUMBER: City of Newport Beach - Federal Channels
 PROJECT CONTACT: Chris Osuch
 QUOTE #: 963350
 P.O. NO.:
 SAMPLER(S): (PRINT) Yosey Skivseth

REQUESTED ANALYSES

Please check box or fill in blank as needed.

ANALYSIS	ARCHIVE	EPA 7471A Mercury	EPA 8081A Organochlorine pesticides	EPA 8270C SIM PAHs	EPA 8270C SIM PCB Congeners	EPA 9060A Total Organic Carbon	Krone et al. Organotins	Pyrethroids by EPA 8270D (M)/TQ/EI	SM 2540 B (M) Total Solids	ASTM D4464 (M) Particle Size	MS/MSD
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Page 59 of 60
Date: 2/27/19 Time: 1309
Date: 2/27/19 Time: 1845

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: ANCHOR QEA

DATE: 02/27/2019

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: -0.5°C); Temperature (w/o CF): 3.8°C (w/ CF): 3.3°C; Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: Air Filter

Checked by: 671

CUSTODY SEAL:

Cooler Present and Intact Present but Not Intact Not Present N/A

Sample(s) Present and Intact Present but Not Intact Not Present N/A

Checked by: 671

Checked by: 1163

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sampling date <input type="checkbox"/> Sampling time <input type="checkbox"/> Matrix <input type="checkbox"/> Number of containers			
<input type="checkbox"/> No analysis requested <input type="checkbox"/> Not relinquished <input type="checkbox"/> No relinquished date <input type="checkbox"/> No relinquished time			
Sampler's name indicated on COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sufficient volume/mass for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples for certain analyses received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfide <input type="checkbox"/> Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation chemical(s) noted on COC and/or sample container	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Unpreserved aqueous sample(s) received for certain analyses			
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Total Metals <input type="checkbox"/> Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Container(s) for certain analysis free of headspace	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Dissolved Gases (RSK-175) <input type="checkbox"/> Dissolved Oxygen (SM 4500)			
<input type="checkbox"/> Carbon Dioxide (SM 4500) <input type="checkbox"/> Ferrous Iron (SM 3500) <input type="checkbox"/> Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: VOA VOAh VOAna₂ 100PJ 100PJna₂ 125AGB 125AGBh 125AGBp 125PB 125PBz_{na} (pH__9)

250AGB 250CGB 250CGBs (pH__2) 250PB 250PBn (pH__2) 500AGB 500AGJ 500AGJs (pH__2) 500PB

1AGB 1AGBna₂ 1AGBs (pH__2) 1AGBs (O&G) 1PB 1PBna (pH__12) _____ _____ _____

Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (____) EnCores® (____) TerraCores® (____) _____ _____ _____

Air: Tedlar™ Canister Sorbent Tube PUF _____ **Other Matrix** (____): _____ _____ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO₃, **na** = NaOH, **na₂** = Na₂S₂O₃, **p** = H₃PO₄, Labeled/Checked by: 1163

s = H₂SO₄, **u** = ultra-pure, **x** = Na₂SO₃+NaHSO₄.H₂O, **z_{na}** = Zn (CH₃CO₂)₂ + NaOH Reviewed by: 1017



WORK ORDER NUMBER: 19-03-2269

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: ANCHOR QEA, LLC

Client Project Name: Newport Bay - Tissue (Zero Time)

Attention: Chris Osuch
9700 RESEARCH DR
IRVINE, CA 92618-4327

Approved for release on 04/23/2019 by:
Richard Villafania
Project Manager

ResultLink ▶

Email your PM ▶

Eurofins Calscience (Calscience) certifies that the test results provided in this report meet all NELAC Institute requirements for parameters for which accreditation is required or available. Any exceptions to NELAC Institute requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Contents

Client Project Name: Newport Bay - Tissue (Zero Time)
 Work Order Number: 19-03-2269

1	Work Order Narrative.	3
2	Sample Summary.	4
3	Client Sample Data.	6
	3.1 % Lipids via MeCl ₂ Ext. (NOAA 1993a) (Tissue).	6
	3.2 EPA 7471A Mercury (Tissue).	12
4	Quality Control Sample Data.	18
	4.1 MS/MSD.	18
	4.2 Sample Duplicate.	20
	4.3 LCS/LCSD.	22
5	Sample Analysis Summary.	24
6	Glossary of Terms and Qualifiers.	25
7	Chain-of-Custody/Sample Receipt Form.	26

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 03/28/19. They were assigned to Work Order 19-03-2269.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Sample Summary

Client: ANCHOR QEA, LLC	Work Order:	19-03-2269
9700 RESEARCH DR	Project Name:	Newport Bay - Tissue (Zero Time)
IRVINE, CA 92618-4327	PO Number:	
	Date/Time Received:	03/28/19 20:00
	Number of Containers:	46

Attn: Chris Osuch

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
T0-A-MACOMA-022619	19-03-2269-1	02/26/19 12:00	1	Tissue
T0-B-MACOMA-022619	19-03-2269-2	02/26/19 12:00	1	Tissue
T0-C-MACOMA-022619	19-03-2269-3	02/26/19 12:00	1	Tissue
T0-A-NEREIS-022619	19-03-2269-4	02/26/19 14:30	1	Tissue
T0-B-NEREIS-022619	19-03-2269-5	02/26/19 14:30	1	Tissue
T0-C-NEREIS-022619	19-03-2269-6	02/26/19 14:30	1	Tissue
CONTROL-A-MACOMA-032719	19-03-2269-7	03/27/19 12:30	1	Tissue
CONTROL-B-MACOMA-032719	19-03-2269-8	03/27/19 12:30	1	Tissue
CONTROL-C-MACOMA-032719	19-03-2269-9	03/27/19 12:30	1	Tissue
CONTROL-D-MACOMA-032719	19-03-2269-10	03/27/19 12:30	1	Tissue
CONTROL-E-MACOMA-032719	19-03-2269-11	03/27/19 12:30	1	Tissue
LA3-REF-A-MACOMA-032719	19-03-2269-12	03/27/19 12:30	1	Tissue
LA3-REF-B-MACOMA-032719	19-03-2269-13	03/27/19 12:30	1	Tissue
LA3-REF-C-MACOMA-032719	19-03-2269-14	03/27/19 12:30	1	Tissue
LA3-REF-D-MACOMA-032719	19-03-2269-15	03/27/19 12:30	1	Tissue
LA3-REF-E-MACOMA-032719	19-03-2269-16	03/27/19 12:30	1	Tissue
NC2-COMP-A-MACOMA-032719	19-03-2269-17	03/27/19 12:30	1	Tissue
NC2-COMP-B-MACOMA-032719	19-03-2269-18	03/27/19 12:30	1	Tissue
NC2-COMP-C-MACOMA-032719	19-03-2269-19	03/27/19 12:30	1	Tissue
NC2-COMP-D-MACOMA-032719	19-03-2269-20	03/27/19 12:30	1	Tissue
NC2-COMP-E-MACOMA-032719	19-03-2269-21	03/27/19 12:30	1	Tissue
NC3-COMP-A-MACOMA-032719	19-03-2269-22	03/27/19 12:30	1	Tissue
NC3-COMP-B-MACOMA-032719	19-03-2269-23	03/27/19 12:30	1	Tissue
NC3-COMP-C-MACOMA-032719	19-03-2269-24	03/27/19 12:30	1	Tissue
NC3-COMP-D-MACOMA-032719	19-03-2269-25	03/27/19 12:30	1	Tissue
NC3-COMP-E-MACOMA-032719	19-03-2269-26	03/27/19 12:30	1	Tissue
CONTROL-A-NEREIS-032719	19-03-2269-27	03/27/19 12:30	1	Tissue
CONTROL-B-NEREIS-032719	19-03-2269-28	03/27/19 12:30	1	Tissue
CONTROL-C-NEREIS-032719	19-03-2269-29	03/27/19 12:30	1	Tissue
CONTROL-D-NEREIS-032719	19-03-2269-30	03/27/19 12:30	1	Tissue
CONTROL-E-NEREIS-032719	19-03-2269-31	03/27/19 12:30	1	Tissue
LA3-REF-A-NEREIS-032719	19-03-2269-32	03/27/19 12:30	1	Tissue
LA3-REF-B-NEREIS-032719	19-03-2269-33	03/27/19 12:30	1	Tissue
LA3-REF-C-NEREIS-032719	19-03-2269-34	03/27/19 12:30	1	Tissue
LA3-REF-D-NEREIS-032719	19-03-2269-35	03/27/19 12:30	1	Tissue
LA3-REF-E-NEREIS-032719	19-03-2269-36	03/27/19 12:30	1	Tissue
NC2-COMP-A-NEREIS-032719	19-03-2269-37	03/27/19 12:30	1	Tissue
NC2-COMP-B-NEREIS-032719	19-03-2269-38	03/27/19 12:30	1	Tissue
NC2-COMP-C-NEREIS-032719	19-03-2269-39	03/27/19 12:30	1	Tissue
NC2-COMP-D-NEREIS-032719	19-03-2269-40	03/27/19 12:30	1	Tissue
NC2-COMP-E-NEREIS-032719	19-03-2269-41	03/27/19 12:30	1	Tissue
NC3-COMP-A-NEREIS-032719	19-03-2269-42	03/27/19 12:30	1	Tissue

Sample Summary

Client: ANCHOR QEA, LLC	Work Order: 19-03-2269
9700 RESEARCH DR	Project Name: Newport Bay - Tissue (Zero Time)
IRVINE, CA 92618-4327	PO Number:
	Date/Time Received: 03/28/19 20:00
	Number of Containers: 46

Attn: Chris Osuch

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
NC3-COMP-B-NEREIS-032719	19-03-2269-43	03/27/19 12:30	1	Tissue
NC3-COMP-C-NEREIS-032719	19-03-2269-44	03/27/19 12:30	1	Tissue
NC3-COMP-D-NEREIS-032719	19-03-2269-45	03/27/19 12:30	1	Tissue
NC3-COMP-E-NEREIS-032719	19-03-2269-46	03/27/19 12:30	1	Tissue

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 03/28/19
 Work Order: 19-03-2269
 Preparation: N/A
 Method: MeCl2 Ext. (NOAA 1993a)
 Units: %

Project: Newport Bay - Tissue (Zero Time)

Page 1 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
T0-A-MACOMA-022619	19-03-2269-1-AA	02/26/19 12:00	Tissue	N/A	04/10/19	04/19/19 00:00	190410B03

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
% Lipids	0.72	0.10	0.10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
T0-A-NEREIS-022619	19-03-2269-4-AA	02/26/19 14:30	Tissue	N/A	04/10/19	04/19/19 00:00	190410B04

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
% Lipids	0.96	0.10	0.10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA3-REF-A-MACOMA-032719	19-03-2269-12-AA	03/27/19 12:30	Tissue	N/A	04/10/19	04/19/19 00:00	190410B03

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
% Lipids	0.63	0.10	0.10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA3-REF-B-MACOMA-032719	19-03-2269-13-AA	03/27/19 12:30	Tissue	N/A	04/10/19	04/19/19 00:00	190410B03

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
% Lipids	0.32	0.10	0.10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA3-REF-C-MACOMA-032719	19-03-2269-14-AA	03/27/19 12:30	Tissue	N/A	04/10/19	04/19/19 00:00	190410B04

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
% Lipids	0.39	0.10	0.10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA3-REF-D-MACOMA-032719	19-03-2269-15-AA	03/27/19 12:30	Tissue	N/A	04/10/19	04/19/19 00:00	190410B03

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
% Lipids	0.53	0.10	0.10	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 03/28/19
 Work Order: 19-03-2269
 Preparation: N/A
 Method: MeCl2 Ext. (NOAA 1993a)
 Units: %

Project: Newport Bay - Tissue (Zero Time)

Page 2 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA3-REF-E-MACOMA-032719	19-03-2269-16-AA	03/27/19 12:30	Tissue	N/A	04/10/19	04/19/19 00:00	190410B04

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
% Lipids	0.38	0.10	0.10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-COMP-A-MACOMA-032719	19-03-2269-17-AA	03/27/19 12:30	Tissue	N/A	04/10/19	04/19/19 00:00	190410B04

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
% Lipids	0.34	0.10	0.10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-COMP-B-MACOMA-032719	19-03-2269-18-AA	03/27/19 12:30	Tissue	N/A	04/10/19	04/19/19 00:00	190410B04

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
% Lipids	0.32	0.10	0.10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-COMP-C-MACOMA-032719	19-03-2269-19-AA	03/27/19 12:30	Tissue	N/A	04/10/19	04/19/19 00:00	190410B04

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
% Lipids	0.38	0.10	0.10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-COMP-D-MACOMA-032719	19-03-2269-20-AA	03/27/19 12:30	Tissue	N/A	04/10/19	04/19/19 00:00	190410B04

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
% Lipids	0.34	0.10	0.10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-COMP-E-MACOMA-032719	19-03-2269-21-AA	03/27/19 12:30	Tissue	N/A	04/10/19	04/19/19 00:00	190410B03

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
% Lipids	0.49	0.10	0.10	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 03/28/19
 Work Order: 19-03-2269
 Preparation: N/A
 Method: MeCl2 Ext. (NOAA 1993a)
 Units: %

Project: Newport Bay - Tissue (Zero Time)

Page 3 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC3-COMP-A-MACOMA-032719	19-03-2269-22-AA	03/27/19 12:30	Tissue	N/A	04/10/19	04/19/19 00:00	190410B03

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
% Lipids	0.25	0.10	0.10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC3-COMP-B-MACOMA-032719	19-03-2269-23-AA	03/27/19 12:30	Tissue	N/A	04/10/19	04/19/19 00:00	190410B04

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
% Lipids	0.54	0.10	0.10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC3-COMP-C-MACOMA-032719	19-03-2269-24-AA	03/27/19 12:30	Tissue	N/A	04/10/19	04/19/19 00:00	190410B03

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
% Lipids	0.38	0.10	0.10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC3-COMP-D-MACOMA-032719	19-03-2269-25-AA	03/27/19 12:30	Tissue	N/A	04/10/19	04/19/19 00:00	190410B03

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
% Lipids	0.44	0.10	0.10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC3-COMP-E-MACOMA-032719	19-03-2269-26-AA	03/27/19 12:30	Tissue	N/A	04/10/19	04/19/19 00:00	190410B04

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
% Lipids	0.48	0.10	0.10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA3-REF-A-NEREIS-032719	19-03-2269-32-AA	03/27/19 12:30	Tissue	N/A	04/10/19	04/19/19 00:00	190410B03

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
% Lipids	0.82	0.10	0.10	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 03/28/19
 Work Order: 19-03-2269
 Preparation: N/A
 Method: MeCl2 Ext. (NOAA 1993a)
 Units: %

Project: Newport Bay - Tissue (Zero Time)

Page 4 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA3-REF-B-NEREIS-032719	19-03-2269-33-AA	03/27/19 12:30	Tissue	N/A	04/10/19	04/19/19 00:00	190410B04

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
% Lipids	0.90	0.10	0.10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA3-REF-C-NEREIS-032719	19-03-2269-34-AA	03/27/19 12:30	Tissue	N/A	04/10/19	04/19/19 00:00	190410B04

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
% Lipids	0.86	0.10	0.10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA3-REF-D-NEREIS-032719	19-03-2269-35-AA	03/27/19 12:30	Tissue	N/A	04/10/19	04/19/19 00:00	190410B03

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
% Lipids	0.77	0.10	0.10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA3-REF-E-NEREIS-032719	19-03-2269-36-AA	03/27/19 12:30	Tissue	N/A	04/10/19	04/19/19 00:00	190410B03

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
% Lipids	0.52	0.10	0.10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-COMP-A-NEREIS-032719	19-03-2269-37-AA	03/27/19 12:30	Tissue	N/A	04/10/19	04/19/19 00:00	190410B04

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
% Lipids	0.71	0.10	0.10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-COMP-B-NEREIS-032719	19-03-2269-38-AA	03/27/19 12:30	Tissue	N/A	04/10/19	04/19/19 00:00	190410B03

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
% Lipids	0.54	0.10	0.10	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 03/28/19
 Work Order: 19-03-2269
 Preparation: N/A
 Method: MeCl2 Ext. (NOAA 1993a)
 Units: %

Project: Newport Bay - Tissue (Zero Time)

Page 5 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-COMP-C-NEREIS-032719	19-03-2269-39-AA	03/27/19 12:30	Tissue	N/A	04/10/19	04/19/19 00:00	190410B03

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
% Lipids	0.50	0.10	0.10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-COMP-D-NEREIS-032719	19-03-2269-40-AA	03/27/19 12:30	Tissue	N/A	04/10/19	04/19/19 00:00	190410B04

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
% Lipids	0.68	0.10	0.10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-COMP-E-NEREIS-032719	19-03-2269-41-AA	03/27/19 12:30	Tissue	N/A	04/10/19	04/19/19 00:00	190410B03

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
% Lipids	0.54	0.10	0.10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC3-COMP-A-NEREIS-032719	19-03-2269-42-AA	03/27/19 12:30	Tissue	N/A	04/10/19	04/19/19 00:00	190410B04

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
% Lipids	1.1	0.10	0.10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC3-COMP-B-NEREIS-032719	19-03-2269-43-AA	03/27/19 12:30	Tissue	N/A	04/10/19	04/19/19 00:00	190410B03

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
% Lipids	0.41	0.10	0.10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC3-COMP-C-NEREIS-032719	19-03-2269-44-AA	03/27/19 12:30	Tissue	N/A	04/10/19	04/19/19 00:00	190410B03

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
% Lipids	0.42	0.10	0.10	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 03/28/19
 Work Order: 19-03-2269
 Preparation: N/A
 Method: MeCl2 Ext. (NOAA 1993a)
 Units: %

Project: Newport Bay - Tissue (Zero Time)

Page 6 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC3-COMP-D-NEREIS-032719	19-03-2269-45-AA	03/27/19 12:30	Tissue	N/A	04/10/19	04/19/19 00:00	190410B03

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
% Lipids	0.96	0.10	0.10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC3-COMP-E-NEREIS-032719	19-03-2269-46-AA	03/27/19 12:30	Tissue	N/A	04/10/19	04/19/19 00:00	190410B03

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
% Lipids	0.52	0.10	0.10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-104-261	N/A	Tissue	N/A	04/10/19	04/19/19 00:00	190410B03

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
% Lipids	ND	0.10	0.10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-104-262	N/A	Tissue	N/A	04/10/19	04/19/19 00:00	190410B04

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
% Lipids	ND	0.10	0.10	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 03/28/19
 Work Order: 19-03-2269
 Preparation: EPA 7471A Total
 Method: EPA 7471A
 Units: mg/kg

Project: Newport Bay - Tissue (Zero Time)

Page 1 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
T0-A-MACOMA-022619	19-03-2269-1-AA	02/26/19 12:00	Tissue	Mercury 07	04/10/19	04/10/19 17:39	190410L02T

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.00535	0.00978	0.00359	1.00	J

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
T0-A-NEREIS-022619	19-03-2269-4-AA	02/26/19 14:30	Tissue	Mercury 07	04/10/19	04/10/19 17:46	190410L02T

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.0302	0.00958	0.00352	1.00	J

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA3-REF-A-MACOMA-032719	19-03-2269-12-AA	03/27/19 12:30	Tissue	Mercury 07	04/10/19	04/10/19 17:48	190410L02T

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.00721	0.00958	0.00352	1.00	J

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA3-REF-B-MACOMA-032719	19-03-2269-13-AA	03/27/19 12:30	Tissue	Mercury 07	04/10/19	04/10/19 17:50	190410L02T

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.00707	0.00988	0.00363	1.00	J

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA3-REF-C-MACOMA-032719	19-03-2269-14-AA	03/27/19 12:30	Tissue	Mercury 07	04/10/19	04/10/19 17:52	190410L02T

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.0175	0.00930	0.00342	1.00	J

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA3-REF-D-MACOMA-032719	19-03-2269-15-AA	03/27/19 12:30	Tissue	Mercury 07	04/10/19	04/10/19 17:55	190410L02T

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.00919	0.00968	0.00356	1.00	J

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 03/28/19
 Work Order: 19-03-2269
 Preparation: EPA 7471A Total
 Method: EPA 7471A
 Units: mg/kg

Project: Newport Bay - Tissue (Zero Time)

Page 2 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA3-REF-E-MACOMA-032719	19-03-2269-16-AA	03/27/19 12:30	Tissue	Mercury 07	04/10/19	04/10/19 18:01	190410L02T

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.0143	0.00958	0.00352	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-COMP-A-MACOMA-032719	19-03-2269-17-AA	03/27/19 12:30	Tissue	Mercury 07	04/10/19	04/10/19 18:04	190410L02T

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.0197	0.00978	0.00359	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-COMP-B-MACOMA-032719	19-03-2269-18-AA	03/27/19 12:30	Tissue	Mercury 07	04/10/19	04/10/19 18:06	190410L02T

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.0155	0.00939	0.00345	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-COMP-C-MACOMA-032719	19-03-2269-19-AA	03/27/19 12:30	Tissue	Mercury 07	04/10/19	04/10/19 18:08	190410L02T

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.0224	0.00930	0.00342	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-COMP-D-MACOMA-032719	19-03-2269-20-AA	03/27/19 12:30	Tissue	Mercury 07	04/10/19	04/10/19 18:10	190410L02T

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.0137	0.00949	0.00349	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-COMP-E-MACOMA-032719	19-03-2269-21-AA	03/27/19 12:30	Tissue	Mercury 07	04/10/19	04/10/19 18:13	190410L02T

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.0228	0.00939	0.00345	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 03/28/19
 Work Order: 19-03-2269
 Preparation: EPA 7471A Total
 Method: EPA 7471A
 Units: mg/kg

Project: Newport Bay - Tissue (Zero Time)

Page 3 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC3-COMP-A-MACOMA-032719	19-03-2269-22-AA	03/27/19 12:30	Tissue	Mercury 07	04/10/19	04/10/19 18:15	190410L02T

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.0122	0.00988	0.00363	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC3-COMP-B-MACOMA-032719	19-03-2269-23-AA	03/27/19 12:30	Tissue	Mercury 07	04/10/19	04/10/19 18:17	190410L02T

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.0127	0.00930	0.00342	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC3-COMP-C-MACOMA-032719	19-03-2269-24-AA	03/27/19 12:30	Tissue	Mercury 07	04/10/19	04/10/19 18:20	190410L02T

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.0150	0.00930	0.00342	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC3-COMP-D-MACOMA-032719	19-03-2269-25-AA	03/27/19 12:30	Tissue	Mercury 07	04/10/19	04/10/19 18:22	190410L02T

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.0124	0.00930	0.00342	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC3-COMP-E-MACOMA-032719	19-03-2269-26-AA	03/27/19 12:30	Tissue	Mercury 07	04/10/19	04/10/19 18:29	190410L02T

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.0144	0.00988	0.00363	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA3-REF-A-NEREIS-032719	19-03-2269-32-AA	03/27/19 12:30	Tissue	Mercury 07	04/10/19	04/10/19 18:31	190410L02T

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.00628	0.00958	0.00352	1.00	J

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 03/28/19
 Work Order: 19-03-2269
 Preparation: EPA 7471A Total
 Method: EPA 7471A
 Units: mg/kg

Project: Newport Bay - Tissue (Zero Time)

Page 4 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA3-REF-B-NEREIS-032719	19-03-2269-33-AA	03/27/19 12:30	Tissue	Mercury 07	04/10/19	04/10/19 18:33	190410L02T

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.0218	0.00988	0.00363	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA3-REF-C-NEREIS-032719	19-03-2269-34-AA	03/27/19 12:30	Tissue	Mercury 07	04/10/19	04/10/19 18:35	190410L02T

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.00519	0.00968	0.00356	1.00	J

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA3-REF-D-NEREIS-032719	19-03-2269-35-AA	03/27/19 12:30	Tissue	Mercury 07	04/10/19	04/11/19 12:53	190410L03T

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.0230	0.00968	0.00356	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA3-REF-E-NEREIS-032719	19-03-2269-36-AA	03/27/19 12:30	Tissue	Mercury 07	04/10/19	04/11/19 12:55	190410L03T

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.0254	0.00988	0.00363	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-COMP-A-NEREIS-032719	19-03-2269-37-AA	03/27/19 12:30	Tissue	Mercury 07	04/10/19	04/11/19 12:58	190410L03T

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.0239	0.00968	0.00356	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-COMP-B-NEREIS-032719	19-03-2269-38-AA	03/27/19 12:30	Tissue	Mercury 07	04/10/19	04/11/19 13:04	190410L03T

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.0213	0.00968	0.00356	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 03/28/19
 Work Order: 19-03-2269
 Preparation: EPA 7471A Total
 Method: EPA 7471A
 Units: mg/kg

Project: Newport Bay - Tissue (Zero Time)

Page 5 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-COMP-C-NEREIS-032719	19-03-2269-39-AA	03/27/19 12:30	Tissue	Mercury 07	04/10/19	04/11/19 13:07	190410L03T

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.00924	0.00968	0.00356	1.00	J

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-COMP-D-NEREIS-032719	19-03-2269-40-AA	03/27/19 12:30	Tissue	Mercury 07	04/10/19	04/11/19 13:09	190410L03T

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.0235	0.00978	0.00359	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC2-COMP-E-NEREIS-032719	19-03-2269-41-AA	03/27/19 12:30	Tissue	Mercury 07	04/10/19	04/11/19 13:11	190410L03T

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.0110	0.00958	0.00352	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC3-COMP-A-NEREIS-032719	19-03-2269-42-AA	03/27/19 12:30	Tissue	Mercury 07	04/10/19	04/11/19 13:13	190410L03T

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.0197	0.00939	0.00345	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC3-COMP-B-NEREIS-032719	19-03-2269-43-AA	03/27/19 12:30	Tissue	Mercury 07	04/10/19	04/11/19 13:16	190410L03T

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.0229	0.00958	0.00352	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC3-COMP-C-NEREIS-032719	19-03-2269-44-AA	03/27/19 12:30	Tissue	Mercury 07	04/10/19	04/11/19 13:18	190410L03T

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.0253	0.00930	0.00342	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC	Date Received:	03/28/19
9700 RESEARCH DR	Work Order:	19-03-2269
IRVINE, CA 92618-4327	Preparation:	EPA 7471A Total
	Method:	EPA 7471A
	Units:	mg/kg

Project: Newport Bay - Tissue (Zero Time)

Page 6 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC3-COMP-D-NEREIS-032719	19-03-2269-45-AA	03/27/19 12:30	Tissue	Mercury 07	04/10/19	04/11/19 12:46	190410L03T

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.00842	0.00958	0.00352	1.00	J

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
NC3-COMP-E-NEREIS-032719	19-03-2269-46-AA	03/27/19 12:30	Tissue	Mercury 07	04/10/19	04/11/19 13:20	190410L03T

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.0259	0.00978	0.00359	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-276-74	N/A	Tissue	Mercury 07	04/10/19	04/10/19 17:34	190410L02T

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	ND	0.00958	0.00352	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-276-75	N/A	Tissue	Mercury 07	04/10/19	04/11/19 15:32	190410L03T

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	ND	0.00958	0.00352	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 03/28/19
Work Order: 19-03-2269
Preparation: EPA 7471A Total
Method: EPA 7471A

Project: Newport Bay - Tissue (Zero Time)

Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
T0-A-NEREIS-022619	Sample	Tissue	Mercury 07	04/10/19	04/10/19 17:46	190410S02
T0-A-NEREIS-022619	Matrix Spike	Tissue	Mercury 07	04/10/19	04/10/19 17:41	190410S02
T0-A-NEREIS-022619	Matrix Spike Duplicate	Tissue	Mercury 07	04/10/19	04/10/19 17:43	190410S02

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	0.03021	0.5000	0.3915	72	0.4051	75	76-136	3	0-16	3

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 03/28/19
Work Order: 19-03-2269
Preparation: EPA 7471A Total
Method: EPA 7471A

Project: Newport Bay - Tissue (Zero Time)

Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
NC3-COMP-D-NEREIS-032719	Sample	Tissue	Mercury 07	04/10/19	04/11/19 12:46	190410S03
NC3-COMP-D-NEREIS-032719	Matrix Spike	Tissue	Mercury 07	04/10/19	04/11/19 12:49	190410S03
NC3-COMP-D-NEREIS-032719	Matrix Spike Duplicate	Tissue	Mercury 07	04/10/19	04/11/19 12:51	190410S03

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	ND	0.5000	0.3312	66	0.3642	73	76-136	9	0-16	3

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Sample Duplicate

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 03/28/19
 Work Order: 19-03-2269
 Preparation: N/A
 Method: MeCl2 Ext. (NOAA 1993a)

Project: Newport Bay - Tissue (Zero Time)

Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
T0-A-MACOMA-022619	Sample	Tissue	N/A	04/10/19 00:00	04/19/19 00:00	190410D03
T0-A-MACOMA-022619	Sample Duplicate	Tissue	N/A	04/10/19 00:00	04/19/19 00:00	190410D03

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
% Lipids	0.7150	0.6090	16	0-25	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Sample Duplicate

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 03/28/19
 Work Order: 19-03-2269
 Preparation: N/A
 Method: MeCl2 Ext. (NOAA 1993a)

Project: Newport Bay - Tissue (Zero Time)

Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
NC3-COMP-E-MACOMA-032719	Sample	Tissue	N/A	04/10/19 00:00	04/19/19 00:00	190410D04
NC3-COMP-E-MACOMA-032719	Sample Duplicate	Tissue	N/A	04/10/19 00:00	04/19/19 00:00	190410D04

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
% Lipids	0.4750	0.3880	20	0-25	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

ANCHOR QEA, LLC
 9700 RESEARCH DR
 IRVINE, CA 92618-4327

Date Received: 03/28/19
 Work Order: 19-03-2269
 Preparation: EPA 7471A Total
 Method: EPA 7471A

Project: Newport Bay - Tissue (Zero Time)

Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-16-276-74	LCS	Tissue	Mercury 07	04/10/19	04/10/19 17:37	190410L02T
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Mercury		0.8350	0.8375	100	82-124	

Quality Control - LCS

ANCHOR QEA, LLC
9700 RESEARCH DR
IRVINE, CA 92618-4327

Date Received: 03/28/19
Work Order: 19-03-2269
Preparation: EPA 7471A Total
Method: EPA 7471A

Project: Newport Bay - Tissue (Zero Time)

Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-16-276-75	LCS	Tissue	Mercury 07	04/10/19	04/11/19 12:44	190410L03T
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Mercury		0.8350	0.8023	96	82-124	

Sample Analysis Summary Report

Work Order: 19-03-2269

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
EPA 7471A	EPA 7471A Total	868	Mercury 07	1
MeCl2 Ext. (NOAA 1993a)	N/A	681	N/A	1

Glossary of Terms and Qualifiers

Work Order: 19-03-2269

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.



Calscience

CHAIN OF CUSTODY RECORD

DATE: 03/22/19 PAGE: 1 OF 5

WO# / LAB USE ONLY: 19-03-2269

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494

For courier service / sample drop off information, contact us26_sales@eurofins.com or call us.

LABORATORY CLIENT: Anchor QEA ADDRESS: 9700 Research Drive CITY: Irvine STATE: CA ZIP: 92618

TEL: 949-347-2780 E-MAIL: cosuch@anchoragea.com

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"): SAME DAY 24 HR 48 HR 72 HR 5 DAYS STANDARD

SPECIAL INSTRUCTIONS: Frozen zero time tissue from 2/26/19 bioaccumulation study. Performed at Nautilus Environmental's San Diego Laboratory.

Table with columns: LAB USE ONLY, SAMPLE ID, SAMPLING DATE, TIME, MATRIX, NO. OF CONT., Field Filtered, Preserved, Unpreserved

Requested Analyses: VOCs (8260), BTEX / MTBE (8260), TPH, SVOCs (8270), PCBs (8082), Pesticides (8081), PAHs (8270), T22 Metals, Cr(VI)

Received by: (Signature/Affiliation) Nathius

Relinquished by: (Signature) [Signature]



Calscience

7440 Lincoln Way, Garden Grove, CA 92641-1427 • (714) 895-5494
For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

CHAIN OF CUSTODY RECORD

DATE: 03/22/19

PAGE: 2 OF 5

WO # / LAB USE ONLY
19-03-2269

LABORATORY CLIENT: **Anchor QEA** P.O. NO.:

ADDRESS: **9700 Research Drive** PROJECT CONTACT: **Chris Osuch**

CITY: **Irvine** STATE: **CA** ZIP: **92618** SAMPLER(S): (PRINT)

TEL: **949-347-2780** E-MAIL: **cosuch@anchorqea.com**

REQUESTED ANALYSES

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
 SAME DAY 24 HR 48 HR 72 HR 5 DAYS STANDARD

COELT EDF GLOBAL ID:

SPECIAL INSTRUCTIONS:
 Frozen tissue from 2/26/19 bioaccumulation study.
 Test ended 3/26/19. Organisms depurated for 24 hrs prior to freezing.
 Performed at Nautilus Environmental's San Diego Laboratory.

LAB USE ONLY	SAMPLE ID	SAMPLING		MATRIX	NO. OF CONT.	LOG CODE:			Field Filtered	Preserved	Unpreserved
		DATE	TIME			Unpreserved	Preserved	Field Filtered			
7	CONTROL-A-MACOMA-032719	3/27/2019	12:30	Tissue	1						
8	CONTROL-B-MACOMA-032719	3/27/2019		Tissue	1						
9	CONTROL-C-MACOMA-032719	3/27/2019		Tissue	1						
10	CONTROL-D-MACOMA-032719	3/27/2019		Tissue	1						
11	CONTROL-E-MACOMA-032719	3/27/2019		Tissue	1						
12	LA3-REF-A-MACOMA-032719	3/27/2019		Tissue	1						
13	LA3-REF-B-MACOMA-032719	3/27/2019		Tissue	1						
14	LA3-REF-C-MACOMA-032719	3/27/2019		Tissue	1						
15	LA3-REF-D-MACOMA-032719	3/27/2019		Tissue	1						
16	LA3-REF-E-MACOMA-032719	3/27/2019		Tissue	1						

CLIENT PROJECT NAME / NUMBER: **Newport Bay - Bioaccumulation Tissue**

TPH C6-C36 C6-C44

TPH(d) DRO

TPH(g) GRO

BTEX / MTBE 8260

VOCs (8260)

Oxygenates (8260)

Prep (5035) En Core Terra Core

SVOCs (8270)

Pesticides (8081)

PCBs (8082)

PAHs 8270 SIM

T22 Metals 6010/747X 6020/747X

Cr(VI) 7196 7199 218.6

Contact Anchor QEA for specific analyses

Relinquished by: (Signature) *[Signature]* Nautilus Date: **03/28/19** Time: **14:30**

Relinquished by: (Signature) *[Signature]* Date: **3/28/19** Time: **20:00**

Relinquished by: (Signature) *[Signature]* Date: _____ Time: _____





Calscience

CHAIN OF CUSTODY RECORD

DATE: 03/22/19

PAGE: 4 OF 5

WO # / LAB USE ONLY
19-03-2269

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
For courier service / sample drop off information, contact us26_sales@eurofins.com or call us.

LABORATORY CLIENT: Anchor QEA

CLIENT PROJECT NAME / NUMBER:

P.O. NO.:

ADDRESS: 9700 Research Drive

Newport Bay - Bioaccumulation Tissue

PROJECT CONTACT:

SAMPLER(S): (PRINT)

CITY: Irvine

STATE: CA ZIP: 92618

Chris Osuch

TEL: 949-347-2780

E-MAIL: cosuch@anchorqea.com

REQUESTED ANALYSES

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

SAME DAY 24 HR 48 HR 72 HR 5 DAYS STANDARD

COELT EDF

LOG CODE:

SPECIAL INSTRUCTIONS:

Frozen tissue from 2/26/19 bioaccumulation study.
Test ended 3/26/19. Organisms depurated for 24 hrs prior to freezing.
Performed at Nautilus Environmental's San Diego Laboratory.

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING		MATRIX	NO. OF CONT.	LOG CODE:			Field Filtered	Preserved	Unpreserved	Cr(VI) <input type="checkbox"/> 7196 <input type="checkbox"/> 7199 <input type="checkbox"/> 218.6	T22 Metals <input type="checkbox"/> 6010/747X <input type="checkbox"/> 6020/747X	PAHs <input type="checkbox"/> 8270 <input type="checkbox"/> 8270 SIM	PCBs (8082)	Pesticides (8081)	SVOCs (8270)	Prep (5035) <input type="checkbox"/> En Core <input type="checkbox"/> Terra Core	Oxygenates (8260)	VOCs (8260)	BTEX / MTBE <input type="checkbox"/> 8260 <input type="checkbox"/>	TPH	TPH <input type="checkbox"/> C6-C36 <input type="checkbox"/> C6-C44	TPH(d) <input type="checkbox"/> DRO	TPH(g) <input type="checkbox"/> GRO	Contact Anchor QEA for specific analyses	Time:					
		DATE	TIME			Unpreserved	Preserved	Field Filtered																				Date:	Time:			
27	CONTROL-A-NEREIS-032719	3/27/2019	12:30	Tissue	1																										14:30	
28	CONTROL-B-NEREIS-032719	3/27/2019		Tissue	1																										20:00	
29	CONTROL-C-NEREIS-032719	3/27/2019		Tissue	1																											
30	CONTROL-D-NEREIS-032719	3/27/2019		Tissue	1																											
31	CONTROL-E-NEREIS-032719	3/27/2019		Tissue	1																											
32	LA3-REF-A-NEREIS-032719	3/27/2019		Tissue	1																											
33	LA3-REF-B-NEREIS-032719	3/27/2019		Tissue	1																											
34	LA3-REF-C-NEREIS-032719	3/27/2019		Tissue	1																											
35	LA3-REF-D-NEREIS-032719	3/27/2019		Tissue	1																											
36	LA3-REF-E-NEREIS-032719	3/27/2019		Tissue	1																											

Received by: (Signature/Affiliation) *Nautilus*

Received by: (Signature/Affiliation) *DAVING*

Received by: (Signature/Affiliation)





Calscience

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
For courier service / sample drop off information, contact us26_sales@eurofins.com or call us.

CHAIN OF CUSTODY RECORD

DATE: 03/22/19

PAGE: 5 OF 5

WO # / LAB USE ONLY
19-03-2269

LABORATORY CLIENT: Anchor QEA

CLIENT PROJECT NAME / NUMBER: Newport Bay - Bioaccumulation Tissue
PROJECT CONTACT: Chris Osuch
P.O. NO.:
SAMPLER(S): (PRINT)

ADDRESS: 9700 Research Drive
CITY: Irvine STATE: CA ZIP: 92618
E-MAIL: cosuch@anchorqea.com

TEL: 949-347-2780

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
 SAME DAY 24 HR 48 HR 72 HR 5 DAYS STANDARD

COELT EDF GLOBAL ID: LOG CODE:
Unpreserved Preserved Field Filtered

SPECIAL INSTRUCTIONS:
Frozen tissue from 2/26/19 bioaccumulation study.
Test ended 3/26/19. Organisms depurated for 24 hrs prior to freezing.
Performed at Nautlius Environmental's San Diego Laboratory.

LAB USE ONLY	SAMPLE ID	SAMPLING		MATRIX	NO. OF CONT.
		DATE	TIME		
37	NC2-COMP-A-NEREIS-032719	3/27/2019	12:30	Tissue	1
38	NC2-COMP-B-NEREIS-032719	3/27/2019		Tissue	1
39	NC2-COMP-C-NEREIS-032719	3/27/2019		Tissue	1
40	NC2-COMP-D-NEREIS-032719	3/27/2019		Tissue	1
41	NC2-COMP-E-NEREIS-032719	3/27/2019		Tissue	1
42	NC3-COMP-A-NEREIS-032719	3/27/2019		Tissue	1
43	NC3-COMP-B-NEREIS-032719	3/27/2019		Tissue	1
44	NC3-COMP-C-NEREIS-032719	3/27/2019		Tissue	1
45	NC3-COMP-D-NEREIS-032719	3/27/2019		Tissue	1
46	NC3-COMP-E-NEREIS-032719	3/27/2019		Tissue	1

REQUESTED ANALYSES

Please check box or fill in blank as needed.

TPH (g) <input type="checkbox"/> GRO	TPH(d) <input type="checkbox"/> DRO	TPH <input type="checkbox"/> C6-C36 <input type="checkbox"/> C6-C44	BTEX / MNC2E <input type="checkbox"/> 8260	VOCs (8260)	Oxygenates (8260)	Prep (5035) <input type="checkbox"/> En Core <input type="checkbox"/> Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs <input type="checkbox"/> 8270 <input type="checkbox"/> 8270 SIM	T22 Metals <input type="checkbox"/> 6010/747X <input type="checkbox"/> 6020/747X	Cr(VI) <input type="checkbox"/> 7196 <input type="checkbox"/> 7199 <input type="checkbox"/> 218.6	Contact Anchor QEA for specific analyses
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Relinquished by: (Signature) *[Signature]* Nautlius Date: 03/28/19 Time: 20:00

Relinquished by: (Signature) *[Signature]* Date: 3/28/19 Time: 20:00

Relinquished by: (Signature) *[Signature]* Date: 3/28/19 Time: 20:00

Page 30 of 34



Richard Villafania

From: Cindy Fields <cfields@anchorqea.com>
Sent: Friday, April 05, 2019 2:27 PM
To: Richard Villafania
Cc: Chris Osuch
Subject: FW: Newport Bay - Tissue (Zero Time) / ECI 19-03-2269 Sample Receipt
Attachments: 19-03-2269.PDF; Tissue_Analytical_Request_04.05.19.xlsx

EXTERNAL EMAIL*

Hi Richard,

Please find our analytical request for the bioaccumulation tissues for Newport Bay. Please note that we are mass limited on several of these samples. In cases where there is not enough for a full aliquot for each analysis, please use the full aliquot for mercury, and reduce the aliquots for lipids, as necessary.

Please reach out with any questions.

Thank you!

Cindy Fields

Senior Scientist

ANCHOR QEA, LLC

cfields@anchorqea.com

D 206.903.3394

C 206.326.8170

This electronic message transmission contains information that may be confidential and/or privileged work product prepared in anticipation of litigation. The information is intended for the use of the individual or entity named above. If you are not the intended recipient, please be aware that any disclosure, copying distribution or use of the contents of this information is prohibited. If you have received this electronic transmission in error, please notify us by telephone at (206) 287-9130.

From: Richard Villafania <RichardVillafania@eurofinsUS.com>
Sent: Friday, March 29, 2019 9:28 AM
To: Chris Osuch <cosuch@anchorqea.com>; Cindy Fields <cfields@anchorqea.com>
Cc: Lab Data Attachments <LabDataAttachments@anchorqea.com>
Subject: RE: Newport Bay - Tissue (Zero Time) / ECI 19-03-2269 Sample Receipt

Greetings,

This time with an attachment. Thank you.

Regards.

Richard Villafania
 Project Manager

Eurofins Calscience, LLC

7440 Lincoln Way
GARDEN GROVE, CA 92841
USA
Phone: +1 714 895 5494

RichardVillafania@EurofinsUS.com
Website: www.eurofinsUS.com/Calscience

From: Richard Villafania
Sent: Friday, March 29, 2019 9:28 AM
To: Chris Osuch; Cindy Fields
Cc: labdata@anchorage.com
Subject: Newport Bay - Tissue (Zero Time) / ECI 19-03-2269 Sample Receipt

Regards.

Richard Villafania
Project Manager

Eurofins Calscience, LLC
7440 Lincoln Way
Garden Grove, CA 92841
USA
Phone: +1 714 895 5494

RichardVillafania@eurofinsUS.com
Website: www.eurofinsUS.com/Env

The information transmitted is intended only for the person or entity to which it is addressed and may contain confidential and/or privileged material. Any review, retransmission, dissemination or other use of, or taking of any action in reliance upon this information by persons or entities other than the intended recipient is prohibited. If you receive this in error, please contact the sender and delete the material from any computer. Email transmission cannot be guaranteed to be secure or error free as information could be intercepted, corrupted, lost, destroyed, arrive late or incomplete. The sender therefore is in no way liable for any errors or omissions in the content of this message which may arise as a result of email transmission. If verification is required, please request a hard copy. We take reasonable precautions to ensure our emails are free from viruses. You need, however, to verify that this email and any attachments are free of viruses, as we can take no responsibility for any computer viruses, which might be transferred by way of this email. We may monitor all email communication through our networks. If you contact us by email, we may store your name and address to facilitate communication.

Notify us [here](#) to report this email as spam.

* WARNING - EXTERNAL: This email originated from outside of Eurofins. Do not click any links or open any attachments unless you trust the sender and know that the content is safe!

Anchor QEA ID	ECI ID	Individual Replicate Tissue Analysis
T0-A-MACOMA-022619	19-03-2269-1	Lipids, Mercury
T0-A-NEREIS-022619	19-03-2269-4	Lipids, Mercury
LA-3-REF-A-MACOMA-032719	19-03-2269-12	Lipids, Mercury
LA-3-REF-B-MACOMA-032719	19-03-2269-13	Lipids, Mercury
LA-3-REF-C-MACOMA-032719	19-03-2269-14	Lipids, Mercury
LA-3-REF-D-MACOMA-032719	19-03-2269-15	Lipids, Mercury
LA-3-REF-E-MACOMA-032719	19-03-2269-16	Lipids, Mercury
NC2-COMP-A-MACOMA-032719	19-03-2269-17	Lipids, Mercury
NC2-COMP-B-MACOMA-032719	19-03-2269-18	Lipids, Mercury
NC2-COMP-C-MACOMA-032719	19-03-2269-19	Lipids, Mercury
NC2-COMP-D-MACOMA-032719	19-03-2269-20	Lipids, Mercury
NC2-COMP-E-MACOMA-032719	19-03-2269-21	Lipids, Mercury
NC3-COMP-A-MACOMA-032719	19-03-2269-22	Lipids, Mercury
NC3-COMP-B-MACOMA-032719	19-03-2269-23	Lipids, Mercury
NC3-COMP-C-MACOMA-032719	19-03-2269-24	Lipids, Mercury
NC3-COMP-D-MACOMA-032719	19-03-2269-25	Lipids, Mercury
NC3-COMP-E-MACOMA-032719	19-03-2269-26	Lipids, Mercury
LA-3-REF-A-NEREIS-032719	19-03-2269-32	Lipids, Mercury
LA-3-REF-B-NEREIS-032719	19-03-2269-33	Lipids, Mercury
LA-3-REF-C-NEREIS-032719	19-03-2269-34	Lipids, Mercury
LA-3-REF-D-NEREIS-032719	19-03-2269-35	Lipids, Mercury
LA-3-REF-E-NEREIS-032719	19-03-2269-36	Lipids, Mercury
NC2-COMP-A-NEREIS-032719	19-03-2269-37	Lipids, Mercury
NC2-COMP-B-NEREIS-032719	19-03-2269-38	Lipids, Mercury
NC2-COMP-C-NEREIS-032719	19-03-2269-39	Lipids, Mercury
NC2-COMP-D-NEREIS-032719	19-03-2269-40	Lipids, Mercury
NC2-COMP-E-NEREIS-032719	19-03-2269-41	Lipids, Mercury
NC3-COMP-A-NEREIS-032719	19-03-2269-37	Lipids, Mercury
NC3-COMP-B-NEREIS-032719	19-03-2269-38	Lipids, Mercury
NC3-COMP-C-NEREIS-032719	19-03-2269-39	Lipids, Mercury
NC3-COMP-D-NEREIS-032719	19-03-2269-40	Lipids, Mercury
NC3-COMP-E-NEREIS-032719	19-03-2269-41	Lipids, Mercury

Sample	Individual Replicate Tissue Analysis
Time Zero (T0)	Lipids, Mercury (analyze 1 replicate for each species)
Control	--
LA3-REF	Lipids, Mercury
NC2	Lipids, Mercury
NC3	Lipids, Mercury

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: ANCHOR QEA

DATE: 03/28/2019

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: -0.5°C); Temperature (w/o CF): -4.3 °C (w/ CF): -4.8 °C; Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: Air Filter

Checked by: 671

CUSTODY SEAL:

Cooler Present and Intact Present but Not Intact Not Present N/A Checked by: 671

Sample(s) Present and Intact Present but Not Intact Not Present N/A Checked by: 1103

SAMPLE CONDITION:

Chain-of-Custody (COC) document(s) received with samples Yes No N/A

COC document(s) received complete Yes No N/A

Sampling date Sampling time Matrix Number of containers

No analysis requested Not relinquished No relinquished date No relinquished time

Sampler's name indicated on COC Yes No N/A

Sample container label(s) consistent with COC Yes No N/A

Sample container(s) intact and in good condition Yes No N/A

Proper containers for analyses requested Yes No N/A

Sufficient volume/mass for analyses requested Yes No N/A

Samples received within holding time Yes No N/A

Aqueous samples for certain analyses received within 15-minute holding time

pH Residual Chlorine Dissolved Sulfide Dissolved Oxygen Yes No N/A

Proper preservation chemical(s) noted on COC and/or sample container Yes No N/A

Unpreserved aqueous sample(s) received for certain analyses

Volatile Organics Total Metals Dissolved Metals

Acid/base preserved samples - pH within acceptable range Yes No N/A

Container(s) for certain analysis free of headspace Yes No N/A

Volatile Organics Dissolved Gases (RSK-175) Dissolved Oxygen (SM 4500)

Carbon Dioxide (SM 4500) Ferrous Iron (SM 3500) Hydrogen Sulfide (Hach)

Tedlar™ bag(s) free of condensation Yes No N/A

CONTAINER TYPE:

(Trip Blank Lot Number: _____)

Aqueous: VOA VOAh VOAna₂ 100PJ 100PJna₂ 125AGB 125AGBh 125AGBp 125PB 125PBz_{na} (pH_9)

250AGB 250CGB 250CGBs (pH_2) 250PB 250PBn (pH_2) 500AGB 500AGJ 500AGJs (pH_2) 500PB

1AGB 1AGBna₂ 1AGBs (pH_2) 1AGBs (O&G) 1PB 1PBna (pH_12) _____ _____ _____

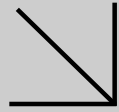
Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (____) EnCores® (____) TerraCores® (____) Z _____ _____

Air: Tedlar™ Canister Sorbent Tube PUF _____ Other Matrix (Tissue): Z _____ _____

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO₃, na = NaOH, na₂ = Na₂S₂O₃, p = H₃PO₄, Labeled/Checked by: 689

s = H₂SO₄, u = ultra-pure, x = Na₂SO₃+NaHSO₄.H₂O, z_{na} = Zn (CH₃CO₂)₂ + NaOH Reviewed by: 1167



WORK ORDER NUMBER: 18-01-0375

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: ANCHOR QEA, LLC

Client Project Name: City of Newport Beach - Federal Channels

Attention: Chris Osuch
27201 Puerta Real
Suite 350
Mission Viejo, CA 92691-8306

Approved for release on 01/23/2018 by:
Richard Villafania
Project Manager

ResultLink ▶

Email your PM ▶

Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Contents

Client Project Name: City of Newport Beach - Federal Channels
 Work Order Number: 18-01-0375

1	Work Order Narrative.	3
2	Sample Summary.	4
3	Client Sample Data.	5
	3.1 EPA 9060A Total Organic Carbon (Solid).	5
	3.2 SM 2540 B (M) Total Solids (Solid).	6
	3.3 Pyrethroids by EPA 8270D (M)/TQ/EI (Solid).	7
	3.4 EPA 6020 ICP/MS Metals (Solid).	9
	3.5 EPA 7471A Mercury (Solid).	10
	3.6 ASTM D4464 (M) Particle Size Laser (Solid).	11
	3.7 EPA 8081A Organochlorine Pesticides (Solid).	12
	3.8 EPA 8270C SIM PAHs (Solid).	14
	3.9 EPA 8270C SIM PCB Congeners (Solid).	16
	3.10 Krone et al. Organotins (Solid).	20
4	Quality Control Sample Data.	21
	4.1 MS/MSD.	21
	4.2 PDS/PDSD.	29
	4.3 Sample Duplicate.	30
	4.4 LCS/LCSD.	31
5	Sample Analysis Summary.	39
6	Glossary of Terms and Qualifiers.	40
7	Chain-of-Custody/Sample Receipt Form.	41

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 01/08/18. They were assigned to Work Order 18-01-0375.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Sample Summary

Client: ANCHOR QEA, LLC	Work Order:	18-01-0375
27201 Puerta Real, Suite 350	Project Name:	City of Newport Beach - Federal Channels
Mission Viejo, CA 92691-8306	PO Number:	CLF-121417
	Date/Time Received:	01/08/18 18:10
	Number of Containers:	3

Attn: Chris Osuch

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
LA-3-REF-010618	18-01-0375-1	01/06/18 08:00	3	Sediment

Analytical Report

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/08/18
Work Order: 18-01-0375
Preparation: N/A
Method: EPA 9060A
Units: %

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA-3-REF-010618	18-01-0375-1-AA	01/06/18 08:00	Sediment	TOC 9	01/11/18	01/11/18 10:52	I0111TOCL1

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	2.7	0.096	0.033	1.00	

Method Blank	099-06-013-1789	N/A	Solid	TOC 9	01/11/18	01/11/18 10:52	I0111TOCL1
--------------	-----------------	-----	-------	-------	----------	-------------------	------------

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	ND	0.050	0.017	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/08/18
Work Order: 18-01-0375
Preparation: N/A
Method: SM 2540 B (M)
Units: %

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA-3-REF-010618	18-01-0375-1-BB	01/06/18 08:00	Sediment	N/A	01/10/18	01/10/18 19:00	I0110TSB1

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	52.3	0.100	0.100	1.00	

Method Blank	099-05-019-3912	N/A	Solid	N/A	01/10/18	01/10/18 19:00	I0110TSB1
--------------	-----------------	-----	-------	-----	----------	-------------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	ND	0.100	0.100	1.00	

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/08/18
 Work Order: 18-01-0375
 Preparation: EPA 3541
 Method: EPA 8270D (M)/TQ/EI
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA-3-REF-010618	18-01-0375-1-AA	01/06/18 08:00	Sediment	GCTQ 2	01/11/18	01/13/18 02:14	180111L18

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Allethrin	ND	0.96	0.48	1.00	
Bifenthrin	ND	0.96	0.57	1.00	
Cyfluthrin	ND	0.96	0.48	1.00	
Cypermethrin	ND	0.96	0.48	1.00	
Deltamethrin/Tralomethrin	ND	0.96	0.48	1.00	
Fenpropathrin	ND	0.96	0.48	1.00	
Fenvalerate/Esfenvalerate	ND	0.96	0.48	1.00	
Fluvalinate	ND	0.96	0.48	1.00	
Permethrin (cis/trans)	ND	1.9	0.96	1.00	
Phenothrin	ND	0.96	0.48	1.00	
Resmethrin/Bioresmethrin	ND	0.96	0.81	1.00	
Tetramethrin	ND	0.96	0.57	1.00	
lambda-Cyhalothrin	ND	0.96	0.48	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
Dibutylchloroendate	101	40-160			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/08/18
 Work Order: 18-01-0375
 Preparation: EPA 3541
 Method: EPA 8270D (M)/TQ/EI
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-403-142	N/A	Solid	GCTQ 2	01/11/18	01/13/18 01:28	180111L18

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Allethrin	ND	0.50	0.25	1.00	
Bifenthrin	ND	0.50	0.30	1.00	
Cyfluthrin	ND	0.50	0.25	1.00	
Cypermethrin	ND	0.50	0.25	1.00	
Deltamethrin/Tralomethrin	ND	0.50	0.25	1.00	
Fenpropathrin	ND	0.50	0.25	1.00	
Fenvalerate/Esfenvalerate	ND	0.50	0.25	1.00	
Fluvalinate	ND	0.50	0.25	1.00	
Permethrin (cis/trans)	ND	1.0	0.50	1.00	
Phenothrin	ND	0.50	0.25	1.00	
Resmethrin/Bioresmethrin	ND	0.50	0.42	1.00	
Tetramethrin	ND	0.50	0.30	1.00	
lambda-Cyhalothrin	ND	0.50	0.25	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibutylchloroendate	95	40-160	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/08/18
 Work Order: 18-01-0375
 Preparation: EPA 3050B
 Method: EPA 6020
 Units: mg/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA-3-REF-010618	18-01-0375-1-AA	01/06/18 08:00	Sediment	ICP/MS 03	01/09/18	01/09/18 12:33	180109L01E

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	5.27	0.191	0.167	1.00	
Cadmium	0.824	0.191	0.109	1.00	
Chromium	38.5	0.191	0.119	1.00	
Copper	21.0	0.191	0.0801	1.00	
Lead	9.54	0.191	0.126	1.00	
Nickel	21.6	0.191	0.0968	1.00	
Selenium	1.42	0.191	0.140	1.00	
Silver	0.245	0.191	0.0598	1.00	
Zinc	82.9	1.91	1.52	1.00	

Method Blank	099-15-254-565	N/A	Solid	ICP/MS 03	01/09/18	01/09/18 12:58	180109L01E
--------------	----------------	-----	-------	-----------	----------	-------------------	------------

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	ND	0.100	0.0873	1.00	
Cadmium	ND	0.100	0.0572	1.00	
Chromium	ND	0.100	0.0621	1.00	
Copper	ND	0.100	0.0419	1.00	
Lead	ND	0.100	0.0659	1.00	
Nickel	ND	0.100	0.0506	1.00	
Selenium	ND	0.100	0.0731	1.00	
Silver	ND	0.100	0.0313	1.00	
Zinc	ND	1.00	0.795	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC 27201 Puerta Real, Suite 350 Mission Viejo, CA 92691-8306	Date Received: 01/08/18 Work Order: 18-01-0375 Preparation: EPA 7471A Total Method: EPA 7471A Units: mg/kg
Project: City of Newport Beach - Federal Channels	Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA-3-REF-010618	18-01-0375-1-AA	01/06/18 08:00	Sediment	Mercury 07	01/09/18	01/09/18 13:42	180109L01E

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Mercury	0.0494	0.0370	0.0109	1.00	

Method Blank	099-16-278-362	N/A	Solid	Mercury 07	01/09/18	01/09/18 13:44	180109L01E
---------------------	-----------------------	------------	--------------	-------------------	-----------------	-----------------------	-------------------

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Mercury	ND	0.0200	0.00587	1.00	

Return to Contents 

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/08/18
 Work Order: 18-01-0375
 Preparation: N/A
 Method: ASTM D4464 (M)
 Units: %

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA-3-REF-010618	18-01-0375-1-C	01/06/18 08:00	Sediment	LPSA 1	N/A	01/11/18 17:47	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	9.14	
Silt (0.00391 to 0.0625mm)	67.65	
Total Silt and Clay (0 to 0.0625mm)	76.79	
Very Fine Sand (0.0625 to 0.125mm)	12.59	
Fine Sand (0.125 to 0.25mm)	5.91	
Medium Sand (0.25 to 0.5mm)	2.44	
Coarse Sand (0.5 to 1mm)	2.28	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/08/18
 Work Order: 18-01-0375
 Preparation: EPA 3541
 Method: EPA 8081A
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA-3-REF-010618	18-01-0375-1-BB	01/06/18 08:00	Sediment	GC 41	01/11/18	01/12/18 14:47	180111L15

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	1.9	0.83	1.00	
Alpha-BHC	ND	3.8	1.4	1.00	
Beta-BHC	ND	1.9	0.95	1.00	
Delta-BHC	ND	3.8	1.7	1.00	
Gamma-BHC	ND	1.9	0.85	1.00	
Dieldrin	ND	1.9	0.83	1.00	
Trans-nonachlor	ND	1.9	0.52	1.00	
2,4'-DDD	ND	1.9	0.54	1.00	
2,4'-DDE	2.7	3.8	1.9	1.00	J
2,4'-DDT	ND	1.9	0.60	1.00	
4,4'-DDD	1.2	1.9	0.95	1.00	J
4,4'-DDE	9.3	1.9	0.85	1.00	
4,4'-DDT	ND	1.9	0.83	1.00	
Endosulfan I	ND	1.9	0.75	1.00	
Endosulfan II	ND	1.9	0.90	1.00	
Endosulfan Sulfate	ND	1.9	0.99	1.00	
Endrin	ND	1.9	0.92	1.00	
Endrin Aldehyde	ND	1.9	1.2	1.00	
Endrin Ketone	ND	1.9	0.96	1.00	
Heptachlor	ND	1.9	0.82	1.00	
Heptachlor Epoxide	1.9	3.8	1.4	1.00	J
Methoxychlor	ND	1.9	1.1	1.00	
Toxaphene	ND	38	17	1.00	
Alpha Chlordane	ND	1.9	0.77	1.00	
Gamma Chlordane	ND	3.8	1.7	1.00	
Cis-nonachlor	ND	1.9	0.49	1.00	
Oxychlordane	ND	1.9	0.51	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
2,4,5,6-Tetrachloro-m-Xylene	69	25-145			
Decachlorobiphenyl	87	24-168			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/08/18
 Work Order: 18-01-0375
 Preparation: EPA 3541
 Method: EPA 8081A
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-858-511	N/A	Solid	GC 41	01/11/18	01/12/18 11:47	180111L15

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	1.0	0.44	1.00	
Alpha-BHC	ND	2.0	0.74	1.00	
Beta-BHC	ND	1.0	0.50	1.00	
Delta-BHC	ND	2.0	0.88	1.00	
Gamma-BHC	ND	1.0	0.45	1.00	
Dieldrin	ND	1.0	0.44	1.00	
Trans-nonachlor	ND	1.0	0.27	1.00	
2,4'-DDD	ND	1.0	0.29	1.00	
2,4'-DDE	ND	2.0	0.99	1.00	
2,4'-DDT	ND	1.0	0.31	1.00	
4,4'-DDD	ND	1.0	0.50	1.00	
4,4'-DDE	ND	1.0	0.44	1.00	
4,4'-DDT	ND	1.0	0.44	1.00	
Endosulfan I	ND	1.0	0.40	1.00	
Endosulfan II	ND	1.0	0.47	1.00	
Endosulfan Sulfate	ND	1.0	0.52	1.00	
Endrin	ND	1.0	0.48	1.00	
Endrin Aldehyde	ND	1.0	0.60	1.00	
Endrin Ketone	ND	1.0	0.50	1.00	
Heptachlor	ND	1.0	0.43	1.00	
Heptachlor Epoxide	ND	2.0	0.74	1.00	
Methoxychlor	ND	1.0	0.56	1.00	
Toxaphene	ND	20	9.0	1.00	
Alpha Chlordane	ND	1.0	0.41	1.00	
Gamma Chlordane	ND	2.0	0.89	1.00	
Cis-nonachlor	ND	1.0	0.26	1.00	
Oxychlordane	ND	1.0	0.27	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2,4,5,6-Tetrachloro-m-Xylene	93	25-145	
Decachlorobiphenyl	106	24-168	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/08/18
 Work Order: 18-01-0375
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA-3-REF-010618	18-01-0375-1-BB	01/06/18 08:00	Sediment	GC/MS AAA	01/11/18	01/12/18 12:00	180111L16

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	ND	19	4.5	1.00	
Acenaphthylene	ND	19	3.4	1.00	
Anthracene	ND	19	6.6	1.00	
Benzo (a) Anthracene	7.4	19	4.1	1.00	J
Benzo (a) Pyrene	7.9	19	3.5	1.00	J
Benzo (b) Fluoranthene	8.7	19	5.2	1.00	J
Benzo (g,h,i) Perylene	11	19	2.9	1.00	J
Benzo (k) Fluoranthene	6.2	19	5.3	1.00	J
Chrysene	7.4	19	4.2	1.00	J
Dibenz (a,h) Anthracene	ND	19	3.7	1.00	
Fluoranthene	14	19	3.5	1.00	J
Fluorene	ND	19	5.9	1.00	
Indeno (1,2,3-c,d) Pyrene	7.7	19	3.0	1.00	J
2-Methylnaphthalene	ND	19	4.4	1.00	
1-Methylnaphthalene	ND	19	4.4	1.00	
Naphthalene	ND	19	6.6	1.00	
Phenanthrene	6.7	19	4.2	1.00	J
Pyrene	16	19	4.3	1.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	70	14-146	
Nitrobenzene-d5	54	18-162	
p-Terphenyl-d14	88	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/08/18
 Work Order: 18-01-0375
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-097-251	N/A	Solid	GC/MS AAA	01/11/18	01/12/18 10:23	180111L16

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	ND	10	2.4	1.00	
Acenaphthylene	ND	10	1.8	1.00	
Anthracene	ND	10	3.5	1.00	
Benzo (a) Anthracene	ND	10	2.2	1.00	
Benzo (a) Pyrene	ND	10	1.8	1.00	
Benzo (b) Fluoranthene	ND	10	2.7	1.00	
Benzo (g,h,i) Perylene	ND	10	1.5	1.00	
Benzo (k) Fluoranthene	ND	10	2.8	1.00	
Chrysene	ND	10	2.2	1.00	
Dibenz (a,h) Anthracene	ND	10	2.0	1.00	
Fluoranthene	ND	10	1.8	1.00	
Fluorene	ND	10	3.1	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	10	1.6	1.00	
2-Methylnaphthalene	ND	10	2.3	1.00	
1-Methylnaphthalene	ND	10	2.3	1.00	
Naphthalene	ND	10	3.5	1.00	
Phenanthrene	ND	10	2.2	1.00	
Pyrene	ND	10	2.2	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	84	14-146	
Nitrobenzene-d5	72	18-162	
p-Terphenyl-d14	92	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/08/18
 Work Order: 18-01-0375
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA-3-REF-010618	18-01-0375-1-BB	01/06/18 08:00	Sediment	GC/MS HHH	01/11/18	01/17/18 03:12	180111L17

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB018	ND	0.38	0.12	1.00	
PCB028	ND	0.38	0.13	1.00	
PCB037	ND	0.38	0.11	1.00	
PCB044	ND	0.38	0.29	1.00	
PCB049	ND	0.38	0.094	1.00	
PCB052	ND	0.38	0.36	1.00	
PCB066	ND	0.38	0.23	1.00	
PCB070	ND	0.38	0.14	1.00	
PCB074	ND	0.38	0.17	1.00	
PCB077	ND	0.38	0.22	1.00	
PCB081	ND	0.38	0.17	1.00	
PCB087	ND	0.38	0.21	1.00	
PCB099	ND	0.38	0.090	1.00	
PCB101	ND	0.38	0.084	1.00	
PCB105	ND	0.38	0.10	1.00	
PCB110	ND	0.38	0.064	1.00	
PCB114	ND	0.38	0.14	1.00	
PCB118	0.65	0.38	0.065	1.00	
PCB119	ND	0.38	0.12	1.00	
PCB123	ND	0.38	0.14	1.00	
PCB126	ND	0.38	0.10	1.00	
PCB128	ND	0.38	0.23	1.00	
PCB132/153	0.62	0.76	0.31	1.00	J
PCB138/158	ND	0.76	0.67	1.00	
PCB149	0.46	0.38	0.22	1.00	
PCB151	ND	0.38	0.17	1.00	
PCB156	ND	0.38	0.15	1.00	
PCB157	ND	0.38	0.16	1.00	
PCB167	ND	0.38	0.25	1.00	
PCB168	ND	0.38	0.27	1.00	
PCB169	ND	0.38	0.12	1.00	
PCB170	ND	0.38	0.21	1.00	
PCB177	ND	0.38	0.22	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/08/18
 Work Order: 18-01-0375
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 4

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB180	ND	0.38	0.17	1.00	
PCB183	ND	0.38	0.18	1.00	
PCB187	ND	0.38	0.19	1.00	
PCB189	ND	0.38	0.12	1.00	
PCB194	ND	0.38	0.14	1.00	
PCB201	ND	0.38	0.064	1.00	
PCB206	ND	0.38	0.22	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	87	14-146			
p-Terphenyl-d14	106	34-148			

Return to Contents 

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC	Date Received:	01/08/18
27201 Puerta Real, Suite 350	Work Order:	18-01-0375
Mission Viejo, CA 92691-8306	Preparation:	EPA 3541
	Method:	EPA 8270C SIM PCB Congeners
	Units:	ug/kg

Project: City of Newport Beach - Federal Channels

Page 3 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-418-283	N/A	Solid	GC/MS HHH	01/11/18	01/12/18 14:44	180111L17

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB018	ND	0.20	0.065	1.00	
PCB028	ND	0.20	0.069	1.00	
PCB037	ND	0.20	0.061	1.00	
PCB044	ND	0.20	0.15	1.00	
PCB049	ND	0.20	0.050	1.00	
PCB052	ND	0.20	0.19	1.00	
PCB066	ND	0.20	0.12	1.00	
PCB070	ND	0.20	0.072	1.00	
PCB074	ND	0.20	0.090	1.00	
PCB077	ND	0.20	0.12	1.00	
PCB081	ND	0.20	0.090	1.00	
PCB087	ND	0.20	0.11	1.00	
PCB099	ND	0.20	0.047	1.00	
PCB101	ND	0.20	0.044	1.00	
PCB105	ND	0.20	0.053	1.00	
PCB110	ND	0.20	0.034	1.00	
PCB114	ND	0.20	0.074	1.00	
PCB118	ND	0.20	0.035	1.00	
PCB119	ND	0.20	0.062	1.00	
PCB123	ND	0.20	0.073	1.00	
PCB126	ND	0.20	0.055	1.00	
PCB128	ND	0.20	0.12	1.00	
PCB132/153	ND	0.40	0.16	1.00	
PCB138/158	ND	0.40	0.35	1.00	
PCB149	ND	0.20	0.12	1.00	
PCB151	ND	0.20	0.088	1.00	
PCB156	ND	0.20	0.077	1.00	
PCB157	ND	0.20	0.085	1.00	
PCB167	ND	0.20	0.13	1.00	
PCB168	ND	0.20	0.14	1.00	
PCB169	ND	0.20	0.065	1.00	
PCB170	ND	0.20	0.11	1.00	
PCB177	ND	0.20	0.12	1.00	
PCB180	ND	0.20	0.092	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/08/18
 Work Order: 18-01-0375
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 4 of 4

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB183	ND	0.20	0.093	1.00	
PCB187	ND	0.20	0.10	1.00	
PCB189	ND	0.20	0.064	1.00	
PCB194	ND	0.20	0.074	1.00	
PCB201	ND	0.20	0.034	1.00	
PCB206	ND	0.20	0.12	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	109	14-146			
p-Terphenyl-d14	102	34-148			

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/08/18
 Work Order: 18-01-0375
 Preparation: EPA 3550B (M)
 Method: Organotins by Krone et al.
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LA-3-REF-010618	18-01-0375-1-BB	01/06/18 08:00	Sediment	GC/MS Y	01/11/18	01/12/18 21:18	180111L11

Comment(s):
 - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	ND	5.7	1.4	1.00	
Monobutyltin	ND	5.7	2.6	1.00	
Tetrabutyltin	ND	5.7	1.4	1.00	
Tributyltin	ND	5.7	2.8	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	38	27-135	

Method Blank	099-07-016-1551	N/A	Solid	GC/MS Y	01/11/18	01/12/18 16:08	180111L11
--------------	-----------------	-----	-------	---------	----------	-------------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	ND	3.0	0.73	1.00	
Monobutyltin	ND	3.0	1.4	1.00	
Tetrabutyltin	ND	3.0	0.74	1.00	
Tributyltin	ND	3.0	1.5	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	54	27-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/08/18
Work Order: 18-01-0375
Preparation: N/A
Method: EPA 9060A

Project: City of Newport Beach - Federal Channels

Page 1 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
LA-3-REF-010618	Sample	Sediment	TOC 9	01/11/18	01/11/18 10:52	I0111TOCS1
LA-3-REF-010618	Matrix Spike	Sediment	TOC 9	01/11/18	01/11/18 10:52	I0111TOCS1
LA-3-REF-010618	Matrix Spike Duplicate	Sediment	TOC 9	01/11/18	01/11/18 10:52	I0111TOCS1

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Carbon, Total Organic	1.410	3.000	3.874	82	3.734	77	75-125	4	0-25	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/08/18
Work Order: 18-01-0375
Preparation: EPA 3541
Method: EPA 8270D (M)/TQ/EI

Project: City of Newport Beach - Federal Channels

Page 2 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
18-01-0688-1	Sample	Sediment	GCTQ 2	01/11/18	01/13/18 03:00	180111S18
18-01-0688-1	Matrix Spike	Sediment	GCTQ 2	01/11/18	01/13/18 05:19	180111S18
18-01-0688-1	Matrix Spike Duplicate	Sediment	GCTQ 2	01/11/18	01/13/18 06:05	180111S18

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Allethrin	ND	5.000	1.315	26	2.393	48	10-148	58	0-30	4
Bifenthrin	ND	5.000	2.768	55	4.376	88	26-128	45	0-30	4
Cyfluthrin	ND	5.000	2.119	42	4.263	85	10-131	67	0-30	4
Cypermethrin	ND	5.000	1.891	38	3.681	74	10-136	64	0-30	4
Deltamethrin/Tralomethrin	ND	5.000	3.096	62	5.362	107	13-190	54	0-30	4
Fenpropathrin	ND	5.000	2.359	47	4.595	92	10-148	64	0-30	4
Fenvalerate/Esfenvalerate	ND	5.000	2.807	56	4.375	87	10-149	44	0-30	4
Fluvalinate	ND	5.000	2.476	50	3.763	75	10-121	41	0-30	4
Permethrin (cis/trans)	ND	5.000	3.156	63	5.683	114	45-123	57	0-30	4
Phenothrin	ND	5.000	3.254	65	5.164	103	45-165	45	0-30	4
Resmethrin/Bioresmethrin	ND	5.000	2.552	51	5.076	102	38-164	66	0-30	4
Tetramethrin	ND	5.000	3.448	69	5.645	113	15-153	48	0-30	4
lambda-Cyhalothrin	ND	5.000	5.359	107	4.291	86	10-123	22	0-30	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/08/18
Work Order: 18-01-0375
Preparation: EPA 3050B
Method: EPA 6020

Project: City of Newport Beach - Federal Channels

Page 3 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
LA-3-REF-010618	Sample	Sediment	ICP/MS 03	01/09/18	01/09/18 12:33	180109S01
LA-3-REF-010618	Matrix Spike	Sediment	ICP/MS 03	01/09/18	01/09/18 12:16	180109S01
LA-3-REF-010618	Matrix Spike Duplicate	Sediment	ICP/MS 03	01/09/18	01/09/18 12:18	180109S01

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	2.757	25.00	29.28	106	28.64	104	80-120	2	0-20	
Cadmium	0.4312	25.00	27.99	110	27.12	107	80-120	3	0-20	
Chromium	20.16	25.00	46.41	105	46.88	107	80-120	1	0-20	
Copper	10.96	25.00	36.93	104	36.05	100	80-120	2	0-20	
Lead	4.988	25.00	32.50	110	31.52	106	80-120	3	0-20	
Nickel	11.31	25.00	36.70	102	36.84	102	80-120	0	0-20	
Selenium	0.7433	25.00	28.67	112	28.17	110	80-120	2	0-20	
Silver	0.1281	12.50	13.67	108	12.83	102	80-120	6	0-20	
Zinc	43.38	25.00	70.94	110	73.78	122	80-120	4	0-20	3

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/08/18
Work Order: 18-01-0375
Preparation: EPA 7471A Total
Method: EPA 7471A

Project: City of Newport Beach - Federal Channels

Page 4 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-09-2048-2	Sample	Sediment	Mercury 07	01/09/18	01/09/18 13:49	180109S01
17-09-2048-2	Matrix Spike	Sediment	Mercury 07	01/09/18	01/09/18 13:51	180109S01
17-09-2048-2	Matrix Spike Duplicate	Sediment	Mercury 07	01/09/18	01/10/18 13:14	180109S01

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	0.6150	0.8350	1.217	72	1.592	117	76-136	27	0-16	3,4

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/08/18
Work Order: 18-01-0375
Preparation: EPA 3541
Method: EPA 8081A

Project: City of Newport Beach - Federal Channels

Page 5 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
LA-3-REF-010618	Sample	Sediment	GC 41	01/11/18	01/12/18 14:47	180111S15
LA-3-REF-010618	Matrix Spike	Sediment	GC 41	01/11/18	01/12/18 13:02	180111S15
LA-3-REF-010618	Matrix Spike Duplicate	Sediment	GC 41	01/11/18	01/12/18 13:17	180111S15

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Aldrin	ND	5.000	3.287	66	4.280	86	50-135	26	0-25	4
Alpha-BHC	ND	5.000	4.020	80	5.102	102	50-135	24	0-25	
Beta-BHC	ND	5.000	3.775	76	5.097	102	50-135	30	0-25	4
Delta-BHC	ND	5.000	4.190	84	5.327	107	50-135	24	0-25	
Gamma-BHC	ND	5.000	3.571	71	4.623	92	50-135	26	0-25	4
Dieldrin	ND	5.000	4.487	90	6.012	120	50-135	29	0-25	4
4,4'-DDD	ND	5.000	4.193	84	6.099	122	50-135	37	0-25	4
4,4'-DDE	4.848	5.000	8.239	68	10.98	123	50-135	29	0-25	4
4,4'-DDT	ND	5.000	3.722	74	2.202	44	50-135	51	0-25	3,4
Endosulfan I	ND	5.000	3.736	75	4.715	94	50-135	23	0-25	
Endosulfan II	ND	5.000	3.974	79	5.009	100	50-135	23	0-25	
Endosulfan Sulfate	ND	5.000	3.776	76	4.859	97	50-135	25	0-25	
Endrin	ND	5.000	3.889	78	4.874	97	50-135	22	0-25	
Endrin Aldehyde	ND	5.000	3.008	60	3.191	64	50-135	6	0-25	
Endrin Ketone	ND	5.000	4.297	86	5.409	108	50-135	23	0-25	
Heptachlor	ND	5.000	4.174	83	5.071	101	50-135	19	0-25	
Heptachlor Epoxide	ND	5.000	5.192	104	7.119	142	50-135	31	0-25	3,4
Methoxychlor	ND	5.000	3.381	68	2.129	43	50-135	45	0-25	3,4
Alpha Chlordane	ND	5.000	3.865	77	4.916	98	50-135	24	0-25	
Gamma Chlordane	ND	5.000	6.074	121	6.759	135	50-135	11	0-25	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/08/18
Work Order: 18-01-0375
Preparation: EPA 3541
Method: EPA 8270C SIM PAHs

Project: City of Newport Beach - Federal Channels

Page 6 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
LA-3-REF-010618	Sample	Sediment	GC/MS AAA	01/11/18	01/12/18 12:00	180111S16
LA-3-REF-010618	Matrix Spike	Sediment	GC/MS AAA	01/11/18	01/12/18 11:21	180111S16
LA-3-REF-010618	Matrix Spike Duplicate	Sediment	GC/MS AAA	01/11/18	01/12/18 13:56	180111S16

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Acenaphthene	ND	100.0	76.64	77	77.64	78	40-160	1	0-20	
Acenaphthylene	ND	100.0	74.71	75	74.47	74	40-160	0	0-20	
Anthracene	ND	100.0	86.16	86	88.65	89	40-160	3	0-20	
Benzo (a) Anthracene	ND	100.0	94.38	94	93.66	94	40-160	1	0-20	
Benzo (a) Pyrene	ND	100.0	95.04	95	94.60	95	40-160	0	0-20	
Benzo (b) Fluoranthene	ND	100.0	107.5	108	104.8	105	40-160	3	0-20	
Benzo (g,h,i) Perylene	ND	100.0	99.94	100	98.62	99	40-160	1	0-20	
Benzo (k) Fluoranthene	ND	100.0	86.28	86	87.13	87	40-160	1	0-20	
Chrysene	ND	100.0	84.69	85	89.91	90	40-160	6	0-20	
Dibenz (a,h) Anthracene	ND	100.0	103.1	103	104.2	104	40-160	1	0-20	
Fluoranthene	ND	100.0	95.17	95	95.55	96	40-160	0	0-20	
Fluorene	ND	100.0	78.76	79	78.31	78	40-160	1	0-20	
Indeno (1,2,3-c,d) Pyrene	ND	100.0	99.87	100	99.47	99	40-160	0	0-20	
2-Methylnaphthalene	ND	100.0	75.94	76	72.13	72	40-160	5	0-20	
1-Methylnaphthalene	ND	100.0	73.59	74	70.55	71	40-160	4	0-20	
Naphthalene	ND	100.0	63.82	64	65.13	65	40-160	2	0-20	
Phenanthrene	ND	100.0	89.39	89	91.06	91	40-160	2	0-20	
Pyrene	ND	100.0	96.96	97	99.92	100	40-160	3	0-46	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/08/18
Work Order: 18-01-0375
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners

Project: City of Newport Beach - Federal Channels

Page 7 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-09-2048-6	Sample	Sediment	GC/MS HHH	01/11/18	01/12/18 17:31	180111S17
17-09-2048-6	Matrix Spike	Sediment	GC/MS HHH	01/11/18	01/12/18 15:56	180111S17
17-09-2048-6	Matrix Spike Duplicate	Sediment	GC/MS HHH	01/11/18	01/12/18 16:20	180111S17

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
PCB018	ND	50.00	38.23	76	39.85	80	50-150	4	0-25	
PCB028	ND	50.00	42.92	86	44.16	88	50-150	3	0-25	
PCB044	ND	50.00	40.79	82	41.47	83	50-150	2	0-25	
PCB052	ND	50.00	38.61	77	39.70	79	50-150	3	0-25	
PCB066	ND	50.00	47.14	94	47.06	94	50-150	0	0-25	
PCB077	ND	50.00	41.67	83	43.10	86	50-150	3	0-25	
PCB101	ND	50.00	40.49	81	42.27	85	50-150	4	0-25	
PCB105	ND	50.00	43.22	86	44.49	89	50-150	3	0-25	
PCB118	ND	50.00	43.45	87	43.88	88	50-150	1	0-25	
PCB126	ND	50.00	41.55	83	42.18	84	50-150	2	0-25	
PCB128	ND	50.00	39.39	79	41.23	82	50-150	5	0-25	
PCB170	ND	50.00	43.05	86	45.46	91	50-150	5	0-25	
PCB180	ND	50.00	44.87	90	46.06	92	50-150	3	0-25	
PCB187	ND	50.00	44.16	88	44.79	90	50-150	1	0-25	
PCB195	ND	50.00	37.82	76	39.70	79	50-150	5	0-25	
PCB206	ND	50.00	42.71	85	44.94	90	50-150	5	0-25	
PCB209	ND	50.00	34.41	69	36.37	73	50-150	6	0-25	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/08/18
 Work Order: 18-01-0375
 Preparation: EPA 3550B (M)
 Method: Organotins by Krone et al.

Project: City of Newport Beach - Federal Channels

Page 8 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
18-01-0689-1	Sample	Sediment	GC/MS Y	01/11/18	01/12/18 17:35	180111S11
18-01-0689-1	Matrix Spike	Sediment	GC/MS Y	01/11/18	01/12/18 17:00	180111S11
18-01-0689-1	Matrix Spike Duplicate	Sediment	GC/MS Y	01/11/18	01/12/18 17:18	180111S11

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Tetrabutyltin	ND	100.0	97.26	97	101.8	102	33-129	5	0-36	
Tributyltin	ND	100.0	16.93	17	22.21	22	34-142	27	0-50	3

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - PDS

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/08/18
Work Order: 18-01-0375
Preparation: EPA 3050B
Method: EPA 6020

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
LA-3-REF-010618	Sample	Sediment	ICP/MS 03	01/09/18 00:00	01/09/18 12:33	180109S01
LA-3-REF-010618	PDS	Sediment	ICP/MS 03	01/09/18 00:00	01/09/18 12:28	180109S01

Parameter	Sample Conc.	Spike Added	PDS Conc.	PDS %Rec.	%Rec. CL	Qualifiers
Arsenic	2.757	25.00	28.88	104	75-125	
Cadmium	0.4312	25.00	26.93	106	75-125	
Chromium	20.16	25.00	46.35	105	75-125	
Copper	10.96	25.00	35.27	97	75-125	
Lead	4.988	25.00	31.55	106	75-125	
Nickel	11.31	25.00	36.88	102	75-125	
Selenium	0.7433	25.00	28.42	111	75-125	
Silver	0.1281	12.50	13.65	108	75-125	
Zinc	43.38	25.00	67.89	98	75-125	



Calscience

Quality Control - Sample Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/08/18
Work Order: 18-01-0375
Preparation: N/A
Method: SM 2540 B (M)

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
LA-3-REF-010618	Sample	Sediment	N/A	01/10/18 00:00	01/10/18 19:00	I0110TSD1
LA-3-REF-010618	Sample Duplicate	Sediment	N/A	01/10/18 00:00	01/10/18 19:00	I0110TSD1

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Solids, Total	52.30	51.60	1	0-10	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/08/18
 Work Order: 18-01-0375
 Preparation: N/A
 Method: EPA 9060A

Project: City of Newport Beach - Federal Channels

Page 1 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-06-013-1789	LCS	Solid	TOC 9	01/11/18	01/11/18 10:52	I0111TOCL1			
099-06-013-1789	LCSD	Solid	TOC 9	01/11/18	01/11/18 10:52	I0111TOCL1			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Carbon, Total Organic	0.6000	0.5782	96	0.6641	111	80-120	14	0-20	

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/08/18
 Work Order: 18-01-0375
 Preparation: EPA 3541
 Method: EPA 8270D (M)/TQ/EI

Project: City of Newport Beach - Federal Channels

Page 2 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-14-403-142	LCS	Solid	GCTQ 2	01/11/18	01/12/18 23:56	180111L18				
099-14-403-142	LCSD	Solid	GCTQ 2	01/11/18	01/13/18 00:42	180111L18				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Allethrin	5.000	4.385	88	3.916	78	10-148	0-171	11	0-25	
Bifenthrin	5.000	5.172	103	4.558	91	26-128	9-145	13	0-25	
Cyfluthrin	5.000	5.202	104	4.978	100	10-131	0-151	4	0-25	
Cypermethrin	5.000	4.722	94	4.471	89	10-136	0-157	5	0-25	
Deltamethrin/Tralomethrin	5.000	4.921	98	4.547	91	13-190	0-220	8	0-25	
Fenpropathrin	5.000	4.451	89	4.043	81	10-148	0-171	10	0-25	
Fenvalerate/Esfenvalerate	5.000	4.487	90	4.709	94	10-149	0-172	5	0-25	
Fluvalinate	5.000	4.373	87	4.501	90	10-121	0-140	3	0-25	
Permethrin (cis/trans)	5.000	5.759	115	6.056	121	45-123	32-136	5	0-25	
Phenothrin	5.000	4.552	91	4.107	82	45-165	25-185	10	0-25	
Resmethrin/Bioresmethrin	5.000	4.635	93	4.344	87	38-164	17-185	6	0-25	
Tetramethrin	5.000	4.609	92	4.380	88	15-153	0-176	5	0-25	
lambda-Cyhalothrin	5.000	4.394	88	3.716	74	10-123	0-142	17	0-25	

Total number of LCS compounds: 13

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/08/18
Work Order: 18-01-0375
Preparation: EPA 3050B
Method: EPA 6020

Project: City of Newport Beach - Federal Channels

Page 3 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-15-254-565	LCS	Solid	ICP/MS 03	01/09/18	01/09/18 12:11	180109L01E			
099-15-254-565	LCSD	Solid	ICP/MS 03	01/09/18	01/09/18 12:13	180109L01E			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	25.00	24.42	98	24.36	97	80-120	0	0-20	
Cadmium	25.00	24.65	99	24.84	99	80-120	1	0-20	
Chromium	25.00	24.80	99	24.39	98	80-120	2	0-20	
Copper	25.00	24.80	99	24.07	96	80-120	3	0-20	
Lead	25.00	24.73	99	25.04	100	80-120	1	0-20	
Nickel	25.00	24.85	99	24.31	97	80-120	2	0-20	
Selenium	25.00	25.16	101	24.62	98	80-120	2	0-20	
Silver	12.50	11.95	96	12.23	98	80-120	2	0-20	
Zinc	25.00	25.24	101	24.74	99	80-120	2	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/08/18
 Work Order: 18-01-0375
 Preparation: EPA 7471A Total
 Method: EPA 7471A

Project: City of Newport Beach - Federal Channels

Page 4 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-16-278-362	LCS	Solid	Mercury 07	01/09/18	01/09/18 13:46	180109L01E			
099-16-278-362	LCSD	Solid	Mercury 07	01/09/18	01/09/18 14:47	180109L01E			
<u>Parameter</u>	<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>LCSD Conc.</u>	<u>LCSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Mercury	0.8350	0.7128	85	0.7004	84	82-124	2	0-16	

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/08/18
 Work Order: 18-01-0375
 Preparation: EPA 3541
 Method: EPA 8081A

Project: City of Newport Beach - Federal Channels

Page 5 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-858-511	LCS	Solid	GC 41	01/11/18	01/12/18 12:02	180111L15				
099-12-858-511	LCSD	Solid	GC 41	01/11/18	01/12/18 12:17	180111L15				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Aldrin	5.000	4.643	93	4.839	97	50-135	36-149	4	0-25	
Alpha-BHC	5.000	4.590	92	4.824	96	50-135	36-149	5	0-25	
Beta-BHC	5.000	4.687	94	4.854	97	50-135	36-149	4	0-25	
Delta-BHC	5.000	4.944	99	5.096	102	50-135	36-149	3	0-25	
Gamma-BHC	5.000	4.788	96	4.996	100	50-135	36-149	4	0-25	
Dieldrin	5.000	5.345	107	5.423	108	50-135	36-149	1	0-25	
4,4'-DDD	5.000	5.454	109	5.503	110	50-135	36-149	1	0-25	
4,4'-DDE	5.000	5.491	110	5.626	113	50-135	36-149	2	0-25	
4,4'-DDT	5.000	5.751	115	5.548	111	50-135	36-149	4	0-25	
Endosulfan I	5.000	4.906	98	5.034	101	50-135	36-149	3	0-25	
Endosulfan II	5.000	5.626	113	5.680	114	50-135	36-149	1	0-25	
Endosulfan Sulfate	5.000	5.427	109	5.449	109	50-135	36-149	0	0-25	
Endrin	5.000	5.331	107	5.412	108	50-135	36-149	2	0-25	
Endrin Aldehyde	5.000	4.043	81	3.945	79	50-135	36-149	2	0-25	
Endrin Ketone	5.000	5.478	110	5.544	111	50-135	36-149	1	0-25	
Heptachlor	5.000	5.011	100	5.130	103	50-135	36-149	2	0-25	
Heptachlor Epoxide	5.000	4.891	98	5.028	101	50-135	36-149	3	0-25	
Methoxychlor	5.000	5.516	110	5.591	112	50-135	36-149	1	0-25	
Alpha Chlordane	5.000	4.835	97	4.999	100	50-135	36-149	3	0-25	
Gamma Chlordane	5.000	4.733	95	4.913	98	50-135	36-149	4	0-25	

Total number of LCS compounds: 20

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/08/18
 Work Order: 18-01-0375
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs

Project: City of Newport Beach - Federal Channels

Page 6 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-14-097-251	LCS	Solid	GC/MS AAA	01/11/18	01/12/18 10:43	180111L16				
099-14-097-251	LCSD	Solid	GC/MS AAA	01/11/18	01/12/18 13:37	180111L16				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Acenaphthene	100.0	95.50	96	95.07	95	40-160	20-180	0	0-20	
Acenaphthylene	100.0	92.99	93	94.15	94	40-160	20-180	1	0-20	
Anthracene	100.0	98.50	98	100.5	100	40-160	20-180	2	0-20	
Benzo (a) Anthracene	100.0	103.5	104	105.9	106	40-160	20-180	2	0-20	
Benzo (a) Pyrene	100.0	106.2	106	112.7	113	40-160	20-180	6	0-20	
Benzo (b) Fluoranthene	100.0	119.8	120	130.6	131	40-160	20-180	9	0-20	
Benzo (g,h,i) Perylene	100.0	111.9	112	120.9	121	40-160	20-180	8	0-20	
Benzo (k) Fluoranthene	100.0	104.6	105	100.8	101	40-160	20-180	4	0-20	
Chrysene	100.0	102.2	102	103.8	104	40-160	20-180	2	0-20	
Dibenz (a,h) Anthracene	100.0	115.8	116	124.6	125	40-160	20-180	7	0-20	
Fluoranthene	100.0	105.0	105	108.4	108	40-160	20-180	3	0-20	
Fluorene	100.0	95.24	95	96.70	97	40-160	20-180	2	0-20	
Indeno (1,2,3-c,d) Pyrene	100.0	110.5	110	120.5	120	40-160	20-180	9	0-20	
2-Methylnaphthalene	100.0	97.63	98	100.6	101	40-160	20-180	3	0-20	
1-Methylnaphthalene	100.0	95.42	95	98.25	98	40-160	20-180	3	0-20	
Naphthalene	100.0	90.73	91	89.72	90	40-160	20-180	1	0-20	
Phenanthrene	100.0	100.8	101	100.3	100	40-160	20-180	0	0-20	
Pyrene	100.0	104.8	105	107.9	108	40-160	20-180	3	0-20	

Total number of LCS compounds: 18

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/08/18
 Work Order: 18-01-0375
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners

Project: City of Newport Beach - Federal Channels

Page 7 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-16-418-283	LCS	Solid	GC/MS HHH	01/11/18	01/12/18 15:08	180111L17				
099-16-418-283	LCSD	Solid	GC/MS HHH	01/11/18	01/12/18 15:31	180111L17				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
PCB018	50.00	37.50	75	37.54	75	24-132	6-150	0	0-28	
PCB028	50.00	42.87	86	41.94	84	31-133	14-150	2	0-26	
PCB044	50.00	40.62	81	40.20	80	36-120	22-134	1	0-28	
PCB052	50.00	39.11	78	38.29	77	31-121	16-136	2	0-27	
PCB066	50.00	48.49	97	46.41	93	43-139	27-155	4	0-25	
PCB077	50.00	43.68	87	42.25	85	41-131	26-146	3	0-25	
PCB101	50.00	42.88	86	40.22	80	37-121	23-135	6	0-27	
PCB105	50.00	45.36	91	44.14	88	48-132	34-146	3	0-26	
PCB118	50.00	45.12	90	43.18	86	46-136	31-151	4	0-25	
PCB126	50.00	43.11	86	42.07	84	38-134	22-150	2	0-25	
PCB128	50.00	42.35	85	40.97	82	40-130	25-145	3	0-26	
PCB170	50.00	45.58	91	44.07	88	40-124	26-138	3	0-29	
PCB180	50.00	46.68	93	46.44	93	41-143	24-160	1	0-26	
PCB187	50.00	45.71	91	45.33	91	39-129	24-144	1	0-26	
PCB195	50.00	40.35	81	39.54	79	44-128	30-142	2	0-28	
PCB206	50.00	46.39	93	45.88	92	33-135	16-152	1	0-24	
PCB209	50.00	36.61	73	36.51	73	29-137	11-155	0	0-29	

Total number of LCS compounds: 17

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/08/18
Work Order: 18-01-0375
Preparation: EPA 3550B (M)
Method: Organotins by Krone et al.

Project: City of Newport Beach - Federal Channels

Page 8 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-07-016-1551	LCS	Solid	GC/MS Y	01/11/18	01/12/18 16:25	180111L11
099-07-016-1551	LCSD	Solid	GC/MS Y	01/11/18	01/12/18 16:43	180111L11

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Tetrabutyltin	100.0	60.24	60	69.51	70	40-142	14	0-20	
Tributyltin	100.0	52.02	52	51.26	51	33-147	1	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Sample Analysis Summary Report

Work Order: 18-01-0375

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
ASTM D4464 (M)	N/A	1106	LPSA 1	1
EPA 6020	EPA 3050B	598	ICP/MS 03	1
EPA 7471A	EPA 7471A Total	868	Mercury 07	1
EPA 8081A	EPA 3541	669	GC 41	1
EPA 8270C SIM PAHs	EPA 3541	907	GC/MS AAA	1
EPA 8270C SIM PCB Congeners	EPA 3541	907	GC/MS HHH	1
EPA 8270D (M)/TQ/EI	EPA 3541	27	GCTQ 2	3
EPA 9060A	N/A	1141	TOC 9	1
Organotins by Krone et al.	EPA 3550B (M)	907	GC/MS Y	1
SM 2540 B (M)	N/A	1136	N/A	1

Glossary of Terms and Qualifiers

Work Order: 18-01-0375

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.



Calscience

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

CHAIN OF CUSTODY RECORD

W/O # / LAB USE ONLY
18-01-0375

DATE: 1/8/18
PAGE: 1 OF 1

LABORATORY CLIENT: Anchor QEA		CLIENT PROJECT NAME / NUMBER: City of Newport Beach - Federal Channels		P.O. NO.: CLF-121417	
ADDRESS: 27201 Puerta Real, Suite 350		PROJECT CONTACT: Chris Osuch		QUOTE # 964027 and 964028	
CITY: Mission Viejo	STATE: CA	ZIP: 92691	SAMPLER(S): (PRINT) <i>Sta Ventures</i>		
TEL: 949.347.2780	E-MAIL: <u>cosuch@anchorgea.com</u>				

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	SAMPLING		MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	Archive	Please check box or fill in blank as needed.																		
		DATE	TIME							EPA 6020 Metals	EPA 7471A Mercury	EPA 8081A Organochlorine pesticides	EPA 8270C SIM PAHs	EPA 8270C SIM PCB Congeners	EPA 9060A Total Organic Carbon	Krone et al. Organotins	Pyrethroids by EPA 8270D (M)/TC/IEI	SM 2540 B (M) Total Solids	ASTM D4464 (M) Particle Size	MS/MSD								
	<i>LA-3-REF-010618</i>	<i>1/8/18</i>	<i>0900</i>	<i>SED</i>	<i>3</i>					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										

Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature/Affiliation) <i>[Signature]</i> ECI	Date: <i>1/8/18</i>	Time: <i>13:00</i>
Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature/Affiliation) <i>Dannyle ECI</i>	Date: <i>1/8/18</i>	Time: <i>18:10</i>
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: ANCHOR QEA

DATE: 01/08/2018

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: +0.2°C); Temperature (w/o CF): 3.0 °C (w/ CF): 3.2 °C; Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: Air Filter

Checked by: 671

CUSTODY SEAL:

Cooler Present and Intact Present but Not Intact Not Present N/A Checked by: 671

Sample(s) Present and Intact Present but Not Intact Not Present N/A Checked by: 1140

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sampling date <input type="checkbox"/> Sampling time <input type="checkbox"/> Matrix <input type="checkbox"/> Number of containers <input type="checkbox"/> No analysis requested <input type="checkbox"/> Not relinquished <input type="checkbox"/> No relinquished date <input type="checkbox"/> No relinquished time			
Sampler's name indicated on COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sufficient volume/mass for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples for certain analyses received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfide <input type="checkbox"/> Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation chemical(s) noted on COC and/or sample container	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Unpreserved aqueous sample(s) received for certain analyses			
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Total Metals <input type="checkbox"/> Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Container(s) for certain analysis free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Dissolved Gases (RSK-175) <input type="checkbox"/> Dissolved Oxygen (SM 4500) <input type="checkbox"/> Carbon Dioxide (SM 4500) <input type="checkbox"/> Ferrous Iron (SM 3500) <input type="checkbox"/> Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:

(Trip Blank Lot Number: _____)

Aqueous: VOA VOA_h VOA_{na2} 100PJ 100PJ_{na2} 125AGB 125AGB_h 125AGB_p 125PB 125PB_z 125PB_z 125PB_z 125PB_z (pH__9)
 250AGB 250CGB 250CGBs (pH__2) 250PB 250PB_n (pH__2) 500AGB 500AGJ 500AGJs (pH__2) 500PB
 1AGB 1AGB_{na2} 1AGBs (pH__2) 1AGBs (O&G) 1PB 1PB_{na} (pH__12) _____ _____ _____

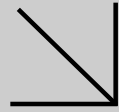
Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (____) EnCores® (____) TerraCores® (____) _____ _____ _____

Air: Tedlar™ Canister Sorbent Tube PUF _____ **Other Matrix** (Sediment): 8ozCGJ Z _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO₃, **na** = NaOH, **na₂** = Na₂S₂O₃, **p** = H₃PO₄, Labeled/Checked by: 1140

s = H₂SO₄, **u** = ultra-pure, **x** = Na₂SO₃+NaHSO₄.H₂O, **z**na = Zn (CH₃CO₂)₂ + NaOH Reviewed by: 671


WORK ORDER NUMBER: 18-01-0689
The difference is service


AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For
Client: ANCHOR QEA, LLC

Client Project Name: City of Newport Beach - Federal Channels

Attention: Chris Osuch
 27201 Puerta Real
 Suite 350
 Mission Viejo, CA 92691-8306

 Approved for release on 01/15/2018 by:
 Richard Villafania
 Project Manager

ResultLink ▶

Email your PM ▶

Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Contents

Client Project Name: City of Newport Beach - Federal Channels
 Work Order Number: 18-01-0689

1	Work Order Narrative.	3
2	Sample Summary.	4
3	Client Sample Data.	5
	3.1 EPA 9060A Total Organic Carbon (Solid).	5
	3.2 SM 2540 B (M) Total Solids (Solid).	6
	3.3 Pyrethroids by EPA 8270D (M)/TQ/EI (Solid).	7
	3.4 EPA 6020 ICP/MS Metals (Solid).	10
	3.5 EPA 7471A Mercury (Solid).	12
	3.6 ASTM D4464 (M) Particle Size Laser (Solid).	13
	3.7 EPA 8081A Organochlorine Pesticides (Solid).	14
	3.8 EPA 8270C SIM PAHs (Solid).	19
	3.9 EPA 8270C SIM PCB Congeners (Solid).	22
	3.10 Krone et al. Organotins (Solid).	28
4	Quality Control Sample Data.	29
	4.1 MS/MSD.	29
	4.2 PDS/PDSD.	37
	4.3 Sample Duplicate.	38
	4.4 LCS/LCSD.	39
5	Glossary of Terms and Qualifiers.	47
6	Chain-of-Custody/Sample Receipt Form.	48

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 01/10/18. They were assigned to Work Order 18-01-0689.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Sample Summary

Client: ANCHOR QEA, LLC	Work Order: 18-01-0689
27201 Puerta Real, Suite 350	Project Name: City of Newport Beach - Federal Channels
Mission Viejo, CA 92691-8306	PO Number:
	Date/Time Received: 01/10/18 20:15
	Number of Containers: 4

Attn: Chris Osuch

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
BIMW-COMP-T-011018	18-01-0689-1	01/10/18 17:37	2	Sediment
BIMW-COMP-M-011018	18-01-0689-2	01/10/18 18:36	2	Sediment

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/10/18
 Work Order: 18-01-0689
 Preparation: N/A
 Method: EPA 9060A
 Units: %

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIMW-COMP-T-011018	18-01-0689-1-AA	01/10/18 17:37	Sediment	TOC 9	01/11/18	01/11/18 10:52	I0111TOCL1

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Carbon, Total Organic	1.5	0.10	0.036	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIMW-COMP-M-011018	18-01-0689-2-AA	01/10/18 18:36	Sediment	TOC 9	01/11/18	01/11/18 10:52	I0111TOCL1

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Carbon, Total Organic	1.2	0.095	0.033	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-06-013-1789	N/A	Solid	TOC 9	01/11/18	01/11/18 10:52	I0111TOCL1

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Carbon, Total Organic	ND	0.050	0.017	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/10/18
 Work Order: 18-01-0689
 Preparation: N/A
 Method: SM 2540 B (M)
 Units: %

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIMW-COMP-T-011018	18-01-0689-1-AA	01/10/18 17:37	Sediment	N/A	01/11/18	01/11/18 19:00	I0111TSB1

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Solids, Total	48.9	0.100	0.100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIMW-COMP-M-011018	18-01-0689-2-AA	01/10/18 18:36	Sediment	N/A	01/11/18	01/11/18 19:00	I0111TSB1

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Solids, Total	52.9	0.100	0.100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-05-019-3913	N/A	Solid	N/A	01/11/18	01/11/18 19:00	I0111TSB1

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Solids, Total	ND	0.100	0.100	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/10/18
 Work Order: 18-01-0689
 Preparation: EPA 3541
 Method: EPA 8270D (M)/TQ/EI
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIMW-COMP-T-011018	18-01-0689-1-AA	01/10/18 17:37	Sediment	GCTQ 2	01/11/18	01/13/18 03:46	180111L18

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Allethrin	ND	1.0	0.51	1.00	
Bifenthrin	ND	1.0	0.61	1.00	
Cyfluthrin	ND	1.0	0.51	1.00	
Cypermethrin	ND	1.0	0.51	1.00	
Deltamethrin/Tralomethrin	ND	1.0	0.51	1.00	
Fenpropathrin	ND	1.0	0.51	1.00	
Fenvalerate/Esfenvalerate	ND	1.0	0.51	1.00	
Fluvalinate	ND	1.0	0.51	1.00	
Permethrin (cis/trans)	ND	2.0	1.0	1.00	
Phenothrin	ND	1.0	0.51	1.00	
Resmethrin/Bioresmethrin	ND	1.0	0.86	1.00	
Tetramethrin	ND	1.0	0.61	1.00	
lambda-Cyhalothrin	ND	1.0	0.51	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
Dibutylchloroendate	56	40-160			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/10/18
 Work Order: 18-01-0689
 Preparation: EPA 3541
 Method: EPA 8270D (M)/TQ/EI
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIMW-COMP-M-011018	18-01-0689-2-AA	01/10/18 18:36	Sediment	GCTQ 2	01/11/18	01/13/18 04:33	180111L18

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Allethrin	ND	0.94	0.47	1.00	
Bifenthrin	ND	0.94	0.56	1.00	
Cyfluthrin	ND	0.94	0.47	1.00	
Cypermethrin	ND	0.94	0.47	1.00	
Deltamethrin/Tralomethrin	ND	0.94	0.47	1.00	
Fenpropathrin	ND	0.94	0.47	1.00	
Fenvalerate/Esfenvalerate	ND	0.94	0.47	1.00	
Fluvalinate	ND	0.94	0.47	1.00	
Permethrin (cis/trans)	ND	1.9	0.94	1.00	
Phenothrin	ND	0.94	0.47	1.00	
Resmethrin/Bioresmethrin	ND	0.94	0.80	1.00	
Tetramethrin	ND	0.94	0.56	1.00	
lambda-Cyhalothrin	ND	0.94	0.47	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
Dibutylchlorendate	81	40-160			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/10/18
 Work Order: 18-01-0689
 Preparation: EPA 3541
 Method: EPA 8270D (M)/TQ/EI
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-403-142	N/A	Solid	GCTQ 2	01/11/18	01/13/18 01:28	180111L18

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Allethrin	ND	0.50	0.25	1.00	
Bifenthrin	ND	0.50	0.30	1.00	
Cyfluthrin	ND	0.50	0.25	1.00	
Cypermethrin	ND	0.50	0.25	1.00	
Deltamethrin/Tralomethrin	ND	0.50	0.25	1.00	
Fenpropathrin	ND	0.50	0.25	1.00	
Fenvalerate/Esfenvalerate	ND	0.50	0.25	1.00	
Fluvalinate	ND	0.50	0.25	1.00	
Permethrin (cis/trans)	ND	1.0	0.50	1.00	
Phenothrin	ND	0.50	0.25	1.00	
Resmethrin/Bioresmethrin	ND	0.50	0.42	1.00	
Tetramethrin	ND	0.50	0.30	1.00	
lambda-Cyhalothrin	ND	0.50	0.25	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibutylchloroendate	95	40-160	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/10/18
 Work Order: 18-01-0689
 Preparation: EPA 3050B
 Method: EPA 6020
 Units: mg/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIMW-COMP-T-011018	18-01-0689-1-AA	01/10/18 17:37	Sediment	ICP/MS 03	01/12/18	01/12/18 16:46	180112L01E

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	8.82	0.204	0.179	1.00	
Cadmium	2.21	0.204	0.117	1.00	
Chromium	43.1	0.204	0.127	1.00	
Copper	54.1	0.204	0.0857	1.00	
Lead	44.4	0.204	0.135	1.00	
Nickel	28.3	0.204	0.104	1.00	
Selenium	1.53	0.204	0.149	1.00	B
Silver	0.335	0.204	0.0640	1.00	
Zinc	174	2.04	1.63	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIMW-COMP-M-011018	18-01-0689-2-AA	01/10/18 18:36	Sediment	ICP/MS 03	01/12/18	01/12/18 16:51	180112L01E

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	8.46	0.189	0.165	1.00	
Cadmium	2.09	0.189	0.108	1.00	
Chromium	41.7	0.189	0.117	1.00	
Copper	51.4	0.189	0.0792	1.00	
Lead	55.5	0.189	0.125	1.00	
Nickel	26.9	0.189	0.0957	1.00	
Selenium	1.19	0.189	0.138	1.00	B
Silver	0.375	0.189	0.0592	1.00	
Zinc	165	1.89	1.50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC	Date Received:	01/10/18
27201 Puerta Real, Suite 350	Work Order:	18-01-0689
Mission Viejo, CA 92691-8306	Preparation:	EPA 3050B
	Method:	EPA 6020
	Units:	mg/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-15-254-566	N/A	Solid	ICP/MS 03	01/12/18	01/12/18 16:31	180112L01E

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Arsenic	ND	0.100	0.0873	1.00	
Cadmium	ND	0.100	0.0572	1.00	
Chromium	ND	0.100	0.0621	1.00	
Copper	ND	0.100	0.0419	1.00	
Lead	ND	0.100	0.0659	1.00	
Nickel	ND	0.100	0.0506	1.00	
Selenium	0.0793	0.100	0.0731	1.00	J
Silver	ND	0.100	0.0313	1.00	
Zinc	ND	1.00	0.795	1.00	



Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/10/18
 Work Order: 18-01-0689
 Preparation: EPA 7471A Total
 Method: EPA 7471A
 Units: mg/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIMW-COMP-T-011018	18-01-0689-1-AA	01/10/18 17:37	Sediment	Mercury 08	01/12/18	01/12/18 15:58	180112L01E

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Mercury	0.153	0.0423	0.0124	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIMW-COMP-M-011018	18-01-0689-2-AA	01/10/18 18:36	Sediment	Mercury 08	01/12/18	01/12/18 16:05	180112L01E

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Mercury	0.658	0.0366	0.0107	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-278-363	N/A	Solid	Mercury 08	01/12/18	01/12/18 15:53	180112L01E

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Mercury	ND	0.0200	0.00587	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/10/18
 Work Order: 18-01-0689
 Preparation: N/A
 Method: ASTM D4464 (M)
 Units: %

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIMW-COMP-T-011018	18-01-0689-1-B	01/10/18 17:37	Sediment	LPSA 1	N/A	01/11/18 18:05	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	23.29	
Silt (0.00391 to 0.0625mm)	66.83	
Total Silt and Clay (0 to 0.0625mm)	90.12	
Very Fine Sand (0.0625 to 0.125mm)	7.45	
Fine Sand (0.125 to 0.25mm)	2.42	
Medium Sand (0.25 to 0.5mm)	ND	
Coarse Sand (0.5 to 1mm)	ND	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIMW-COMP-M-011018	18-01-0689-2-B	01/10/18 18:36	Sediment	LPSA 1	N/A	01/11/18 18:12	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	23.47	
Silt (0.00391 to 0.0625mm)	62.20	
Total Silt and Clay (0 to 0.0625mm)	85.66	
Very Fine Sand (0.0625 to 0.125mm)	8.97	
Fine Sand (0.125 to 0.25mm)	5.35	
Medium Sand (0.25 to 0.5mm)	0.020	
Coarse Sand (0.5 to 1mm)	ND	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/10/18
 Work Order: 18-01-0689
 Preparation: EPA 3541
 Method: EPA 8081A
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIMW-COMP-T-011018	18-01-0689-1-AA	01/10/18 17:37	Sediment	GC 41	01/11/18	01/12/18 14:02	180111L15

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Aldrin	ND	2.0	0.89	1.00	
Alpha-BHC	ND	4.1	1.5	1.00	
Beta-BHC	ND	2.0	1.0	1.00	
Delta-BHC	ND	4.1	1.8	1.00	
Gamma-BHC	ND	2.0	0.91	1.00	
Dieldrin	0.95	2.0	0.89	1.00	J
Trans-nonachlor	4.7	2.0	0.55	1.00	
2,4'-DDD	4.6	2.0	0.58	1.00	
2,4'-DDE	6.0	4.1	2.0	1.00	
2,4'-DDT	ND	2.0	0.64	1.00	
4,4'-DDT	3.5	2.0	0.89	1.00	
Endosulfan I	ND	2.0	0.81	1.00	
Endosulfan II	ND	2.0	0.96	1.00	
Endosulfan Sulfate	ND	2.0	1.1	1.00	
Endrin	ND	2.0	0.98	1.00	
Endrin Aldehyde	ND	2.0	1.2	1.00	
Endrin Ketone	ND	2.0	1.0	1.00	
Heptachlor	ND	2.0	0.88	1.00	
Heptachlor Epoxide	ND	4.1	1.5	1.00	
Methoxychlor	ND	2.0	1.1	1.00	
Toxaphene	ND	41	18	1.00	
Alpha Chlordane	2.8	2.0	0.82	1.00	
Gamma Chlordane	4.8	4.1	1.8	1.00	
Cis-nonachlor	2.3	2.0	0.53	1.00	
Oxychlordane	ND	2.0	0.55	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2,4,5,6-Tetrachloro-m-Xylene	77	25-145			
Decachlorobiphenyl	97	24-168			

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/10/18
Work Order: 18-01-0689
Preparation: EPA 3541
Method: EPA 8081A
Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIMW-COMP-T-011018	18-01-0689-1-AA	01/10/18 17:37	Sediment	GC 41	01/11/18	01/12/18 18:12	180111L15

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
4,4'-DDD	31	20	10	10.0	
4,4'-DDE	120	20	9.0	10.0	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
2,4,5,6-Tetrachloro-m-Xylene	78	25-145	
Decachlorobiphenyl	87	24-168	

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/10/18
 Work Order: 18-01-0689
 Preparation: EPA 3541
 Method: EPA 8081A
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 3 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIMW-COMP-M-011018	18-01-0689-2-AA	01/10/18 18:36	Sediment	GC 41	01/11/18	01/12/18 14:17	180111L15

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Aldrin	ND	1.9	0.83	1.00	
Alpha-BHC	ND	3.8	1.4	1.00	
Beta-BHC	ND	1.9	0.94	1.00	
Delta-BHC	ND	3.8	1.7	1.00	
Gamma-BHC	ND	1.9	0.84	1.00	
Dieldrin	1.2	1.9	0.83	1.00	J
Trans-nonachlor	3.4	1.9	0.51	1.00	
2,4'-DDD	6.9	1.9	0.54	1.00	
2,4'-DDE	9.9	3.8	1.9	1.00	
2,4'-DDT	ND	1.9	0.59	1.00	
4,4'-DDT	1.9	1.9	0.83	1.00	
Endosulfan I	ND	1.9	0.75	1.00	
Endosulfan II	ND	1.9	0.89	1.00	
Endosulfan Sulfate	ND	1.9	0.99	1.00	
Endrin	ND	1.9	0.91	1.00	
Endrin Aldehyde	ND	1.9	1.1	1.00	
Endrin Ketone	ND	1.9	0.95	1.00	
Heptachlor	ND	1.9	0.82	1.00	
Heptachlor Epoxide	ND	3.8	1.4	1.00	
Methoxychlor	ND	1.9	1.1	1.00	
Toxaphene	ND	38	17	1.00	
Alpha Chlordane	1.6	1.9	0.77	1.00	J
Gamma Chlordane	5.7	3.8	1.7	1.00	
Cis-nonachlor	2.1	1.9	0.49	1.00	
Oxychlordane	ND	1.9	0.51	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2,4,5,6-Tetrachloro-m-Xylene	79	25-145			
Decachlorobiphenyl	91	24-168			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/10/18
 Work Order: 18-01-0689
 Preparation: EPA 3541
 Method: EPA 8081A
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 4 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIMW-COMP-M-011018	18-01-0689-2-AA	01/10/18 18:36	Sediment	GC 41	01/11/18	01/12/18 18:27	180111L15

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
4,4'-DDD	51	19	9.5	10.0	
4,4'-DDE	90	19	8.4	10.0	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
2,4,5,6-Tetrachloro-m-Xylene	80	25-145	
Decachlorobiphenyl	87	24-168	

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/10/18
 Work Order: 18-01-0689
 Preparation: EPA 3541
 Method: EPA 8081A
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 5 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-858-511	N/A	Solid	GC 41	01/11/18	01/12/18 11:47	180111L15

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Aldrin	ND	1.0	0.44	1.00	
Alpha-BHC	ND	2.0	0.74	1.00	
Beta-BHC	ND	1.0	0.50	1.00	
Delta-BHC	ND	2.0	0.88	1.00	
Gamma-BHC	ND	1.0	0.45	1.00	
Dieldrin	ND	1.0	0.44	1.00	
Trans-nonachlor	ND	1.0	0.27	1.00	
2,4'-DDD	ND	1.0	0.29	1.00	
2,4'-DDE	ND	2.0	0.99	1.00	
2,4'-DDT	ND	1.0	0.31	1.00	
4,4'-DDD	ND	1.0	0.50	1.00	
4,4'-DDE	ND	1.0	0.44	1.00	
4,4'-DDT	ND	1.0	0.44	1.00	
Endosulfan I	ND	1.0	0.40	1.00	
Endosulfan II	ND	1.0	0.47	1.00	
Endosulfan Sulfate	ND	1.0	0.52	1.00	
Endrin	ND	1.0	0.48	1.00	
Endrin Aldehyde	ND	1.0	0.60	1.00	
Endrin Ketone	ND	1.0	0.50	1.00	
Heptachlor	ND	1.0	0.43	1.00	
Heptachlor Epoxide	ND	2.0	0.74	1.00	
Methoxychlor	ND	1.0	0.56	1.00	
Toxaphene	ND	20	9.0	1.00	
Alpha Chlordane	ND	1.0	0.41	1.00	
Gamma Chlordane	ND	2.0	0.89	1.00	
Cis-nonachlor	ND	1.0	0.26	1.00	
Oxychlordane	ND	1.0	0.27	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
2,4,5,6-Tetrachloro-m-Xylene	93	25-145	
Decachlorobiphenyl	106	24-168	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/10/18
 Work Order: 18-01-0689
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIMW-COMP-T-011018	18-01-0689-1-AA	01/10/18 17:37	Sediment	GC/MS AAA	01/11/18	01/12/18 12:39	180111L16

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Acenaphthene	ND	20	4.8	1.00	
Acenaphthylene	ND	20	3.7	1.00	
Anthracene	ND	20	7.1	1.00	
Benzo (a) Anthracene	16	20	4.4	1.00	J
Benzo (a) Pyrene	25	20	3.8	1.00	
Benzo (b) Fluoranthene	30	20	5.6	1.00	
Benzo (g,h,i) Perylene	34	20	3.1	1.00	
Benzo (k) Fluoranthene	28	20	5.7	1.00	
Chrysene	23	20	4.6	1.00	
Dibenz (a,h) Anthracene	8.1	20	4.0	1.00	J
Fluoranthene	25	20	3.7	1.00	
Fluorene	ND	20	6.4	1.00	
Indeno (1,2,3-c,d) Pyrene	26	20	3.3	1.00	
2-Methylnaphthalene	ND	20	4.8	1.00	
1-Methylnaphthalene	ND	20	4.8	1.00	
Naphthalene	ND	20	7.1	1.00	
Phenanthrene	9.8	20	4.6	1.00	J
Pyrene	48	20	4.6	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
2-Fluorobiphenyl	64	14-146	
Nitrobenzene-d5	47	18-162	
p-Terphenyl-d14	82	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/10/18
 Work Order: 18-01-0689
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIMW-COMP-M-011018	18-01-0689-2-AA	01/10/18 18:36	Sediment	GC/MS AAA	01/11/18	01/12/18 12:59	180111L16

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Acenaphthene	ND	19	4.4	1.00	
Acenaphthylene	ND	19	3.4	1.00	
Anthracene	ND	19	6.5	1.00	
Benzo (a) Anthracene	17	19	4.1	1.00	J
Benzo (a) Pyrene	26	19	3.5	1.00	
Benzo (b) Fluoranthene	35	19	5.1	1.00	
Benzo (g,h,i) Perylene	31	19	2.9	1.00	
Benzo (k) Fluoranthene	28	19	5.2	1.00	
Chrysene	22	19	4.2	1.00	
Dibenz (a,h) Anthracene	7.7	19	3.7	1.00	J
Fluoranthene	25	19	3.4	1.00	
Fluorene	ND	19	5.9	1.00	
Indeno (1,2,3-c,d) Pyrene	24	19	3.0	1.00	
2-Methylnaphthalene	ND	19	4.4	1.00	
1-Methylnaphthalene	ND	19	4.4	1.00	
Naphthalene	ND	19	6.5	1.00	
Phenanthrene	12	19	4.2	1.00	J
Pyrene	54	19	4.2	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
2-Fluorobiphenyl	52	14-146	
Nitrobenzene-d5	42	18-162	
p-Terphenyl-d14	67	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/10/18
 Work Order: 18-01-0689
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-097-251	N/A	Solid	GC/MS AAA	01/11/18	01/12/18 10:23	180111L16

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Acenaphthene	ND	10	2.4	1.00	
Acenaphthylene	ND	10	1.8	1.00	
Anthracene	ND	10	3.5	1.00	
Benzo (a) Anthracene	ND	10	2.2	1.00	
Benzo (a) Pyrene	ND	10	1.8	1.00	
Benzo (b) Fluoranthene	ND	10	2.7	1.00	
Benzo (g,h,i) Perylene	ND	10	1.5	1.00	
Benzo (k) Fluoranthene	ND	10	2.8	1.00	
Chrysene	ND	10	2.2	1.00	
Dibenz (a,h) Anthracene	ND	10	2.0	1.00	
Fluoranthene	ND	10	1.8	1.00	
Fluorene	ND	10	3.1	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	10	1.6	1.00	
2-Methylnaphthalene	ND	10	2.3	1.00	
1-Methylnaphthalene	ND	10	2.3	1.00	
Naphthalene	ND	10	3.5	1.00	
Phenanthrene	ND	10	2.2	1.00	
Pyrene	ND	10	2.2	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
2-Fluorobiphenyl	84	14-146	
Nitrobenzene-d5	72	18-162	
p-Terphenyl-d14	92	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC	Date Received:	01/10/18
27201 Puerta Real, Suite 350	Work Order:	18-01-0689
Mission Viejo, CA 92691-8306	Preparation:	EPA 3541
	Method:	EPA 8270C SIM PCB Congeners
	Units:	ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIMW-COMP-T-011018	18-01-0689-1-AA	01/10/18 17:37	Sediment	GC/MS HHH	01/11/18	01/12/18 18:43	180111L17

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB018	ND	0.41	0.13	1.00	
PCB028	ND	0.41	0.14	1.00	
PCB037	ND	0.41	0.12	1.00	
PCB044	ND	0.41	0.31	1.00	
PCB049	ND	0.41	0.10	1.00	
PCB052	0.80	0.41	0.39	1.00	
PCB066	0.95	0.41	0.25	1.00	
PCB070	0.54	0.41	0.15	1.00	
PCB074	ND	0.41	0.18	1.00	
PCB077	ND	0.41	0.24	1.00	
PCB081	ND	0.41	0.18	1.00	
PCB087	2.3	0.41	0.23	1.00	
PCB099	1.1	0.41	0.097	1.00	
PCB101	1.6	0.41	0.091	1.00	
PCB105	ND	0.41	0.11	1.00	
PCB110	1.7	0.41	0.069	1.00	
PCB114	ND	0.41	0.15	1.00	
PCB118	1.2	0.41	0.071	1.00	
PCB119	ND	0.41	0.13	1.00	
PCB123	1.2	0.41	0.15	1.00	
PCB126	ND	0.41	0.11	1.00	
PCB128	ND	0.41	0.25	1.00	
PCB132/153	2.8	0.82	0.33	1.00	
PCB138/158	2.5	0.82	0.72	1.00	
PCB149	1.6	0.41	0.24	1.00	
PCB151	0.57	0.41	0.18	1.00	
PCB156	ND	0.41	0.16	1.00	
PCB157	ND	0.41	0.17	1.00	
PCB167	ND	0.41	0.27	1.00	
PCB168	ND	0.41	0.29	1.00	
PCB169	ND	0.41	0.13	1.00	
PCB170	0.91	0.41	0.23	1.00	
PCB177	0.41	0.41	0.24	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/10/18
 Work Order: 18-01-0689
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 6

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB180	2.0	0.41	0.19	1.00	
PCB183	0.49	0.41	0.19	1.00	
PCB187	1.4	0.41	0.21	1.00	
PCB189	ND	0.41	0.13	1.00	
PCB194	ND	0.41	0.15	1.00	
PCB201	ND	0.41	0.070	1.00	
PCB206	ND	0.41	0.24	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	85	14-146			
p-Terphenyl-d14	80	34-148			

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/10/18
 Work Order: 18-01-0689
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 3 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIMW-COMP-M-011018	18-01-0689-2-AA	01/10/18 18:36	Sediment	GC/MS HHH	01/11/18	01/12/18 19:07	180111L17

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB018	ND	0.38	0.12	1.00	
PCB028	1.2	0.38	0.13	1.00	
PCB037	ND	0.38	0.11	1.00	
PCB044	1.4	0.38	0.29	1.00	
PCB049	1.1	0.38	0.093	1.00	
PCB052	1.5	0.38	0.36	1.00	
PCB066	2.0	0.38	0.23	1.00	
PCB070	1.2	0.38	0.13	1.00	
PCB074	1.1	0.38	0.17	1.00	
PCB077	ND	0.38	0.22	1.00	
PCB081	ND	0.38	0.17	1.00	
PCB087	1.7	0.38	0.21	1.00	
PCB099	1.4	0.38	0.089	1.00	
PCB101	2.6	0.38	0.083	1.00	
PCB105	1.7	0.38	0.10	1.00	
PCB110	2.8	0.38	0.064	1.00	
PCB114	ND	0.38	0.14	1.00	
PCB118	2.4	0.38	0.065	1.00	
PCB119	ND	0.38	0.12	1.00	
PCB123	ND	0.38	0.14	1.00	
PCB126	ND	0.38	0.10	1.00	
PCB128	ND	0.38	0.23	1.00	
PCB132/153	3.8	0.75	0.31	1.00	
PCB138/158	3.6	0.75	0.66	1.00	
PCB149	2.5	0.38	0.22	1.00	
PCB151	0.84	0.38	0.16	1.00	
PCB156	ND	0.38	0.15	1.00	
PCB157	ND	0.38	0.16	1.00	
PCB167	ND	0.38	0.25	1.00	
PCB168	ND	0.38	0.27	1.00	
PCB169	ND	0.38	0.12	1.00	
PCB170	1.3	0.38	0.21	1.00	
PCB177	0.78	0.38	0.22	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/10/18
 Work Order: 18-01-0689
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 4 of 6

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB180	2.7	0.38	0.17	1.00	
PCB183	0.78	0.38	0.18	1.00	
PCB187	1.5	0.38	0.19	1.00	
PCB189	ND	0.38	0.12	1.00	
PCB194	1.1	0.38	0.14	1.00	
PCB201	ND	0.38	0.064	1.00	
PCB206	ND	0.38	0.22	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	68	14-146			
p-Terphenyl-d14	68	34-148			

Analytical Report

ANCHOR QEA, LLC	Date Received:	01/10/18
27201 Puerta Real, Suite 350	Work Order:	18-01-0689
Mission Viejo, CA 92691-8306	Preparation:	EPA 3541
	Method:	EPA 8270C SIM PCB Congeners
	Units:	ug/kg

Project: City of Newport Beach - Federal Channels

Page 5 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-418-283	N/A	Solid	GC/MS HHH	01/11/18	01/12/18 14:44	180111L17

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB018	ND	0.20	0.065	1.00	
PCB028	ND	0.20	0.069	1.00	
PCB037	ND	0.20	0.061	1.00	
PCB044	ND	0.20	0.15	1.00	
PCB049	ND	0.20	0.050	1.00	
PCB052	ND	0.20	0.19	1.00	
PCB066	ND	0.20	0.12	1.00	
PCB070	ND	0.20	0.072	1.00	
PCB074	ND	0.20	0.090	1.00	
PCB077	ND	0.20	0.12	1.00	
PCB081	ND	0.20	0.090	1.00	
PCB087	ND	0.20	0.11	1.00	
PCB099	ND	0.20	0.047	1.00	
PCB101	ND	0.20	0.044	1.00	
PCB105	ND	0.20	0.053	1.00	
PCB110	ND	0.20	0.034	1.00	
PCB114	ND	0.20	0.074	1.00	
PCB118	ND	0.20	0.035	1.00	
PCB119	ND	0.20	0.062	1.00	
PCB123	ND	0.20	0.073	1.00	
PCB126	ND	0.20	0.055	1.00	
PCB128	ND	0.20	0.12	1.00	
PCB132/153	ND	0.40	0.16	1.00	
PCB138/158	ND	0.40	0.35	1.00	
PCB149	ND	0.20	0.12	1.00	
PCB151	ND	0.20	0.088	1.00	
PCB156	ND	0.20	0.077	1.00	
PCB157	ND	0.20	0.085	1.00	
PCB167	ND	0.20	0.13	1.00	
PCB168	ND	0.20	0.14	1.00	
PCB169	ND	0.20	0.065	1.00	
PCB170	ND	0.20	0.11	1.00	
PCB177	ND	0.20	0.12	1.00	
PCB180	ND	0.20	0.092	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/10/18
 Work Order: 18-01-0689
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 6 of 6

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB183	ND	0.20	0.093	1.00	
PCB187	ND	0.20	0.10	1.00	
PCB189	ND	0.20	0.064	1.00	
PCB194	ND	0.20	0.074	1.00	
PCB201	ND	0.20	0.034	1.00	
PCB206	ND	0.20	0.12	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	109	14-146			
p-Terphenyl-d14	102	34-148			

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/10/18
 Work Order: 18-01-0689
 Preparation: EPA 3550B (M)
 Method: Organotins by Krone et al.
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIMW-COMP-T-011018	18-01-0689-1-AA	01/10/18 17:37	Sediment	GC/MS Y	01/11/18	01/12/18 17:35	180111L11

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	8.1	6.1	1.5	1.00	
Monobutyltin	ND	6.1	2.8	1.00	
Tetrabutyltin	ND	6.1	1.5	1.00	
Tributyltin	ND	6.1	3.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	32	27-135	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIMW-COMP-M-011018	18-01-0689-2-AA	01/10/18 18:36	Sediment	GC/MS Y	01/11/18	01/12/18 17:51	180111L11

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	6.7	5.6	1.4	1.00	
Monobutyltin	ND	5.6	2.6	1.00	
Tetrabutyltin	ND	5.6	1.4	1.00	
Tributyltin	ND	5.6	2.8	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	29	27-135	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-07-016-1551	N/A	Solid	GC/MS Y	01/11/18	01/12/18 16:08	180111L11

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	ND	3.0	0.73	1.00	
Monobutyltin	ND	3.0	1.4	1.00	
Tetrabutyltin	ND	3.0	0.74	1.00	
Tributyltin	ND	3.0	1.5	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	54	27-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/10/18
 Work Order: 18-01-0689
 Preparation: N/A
 Method: EPA 9060A

Project: City of Newport Beach - Federal Channels

Page 1 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
18-01-0375-1	Sample	Sediment	TOC 9	01/11/18	01/11/18 10:52	I0111TOCS1
18-01-0375-1	Matrix Spike	Sediment	TOC 9	01/11/18	01/11/18 10:52	I0111TOCS1
18-01-0375-1	Matrix Spike Duplicate	Sediment	TOC 9	01/11/18	01/11/18 10:52	I0111TOCS1

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Carbon, Total Organic	1.410	3.000	3.874	82	3.734	77	75-125	4	0-25	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/10/18
Work Order: 18-01-0689
Preparation: EPA 3541
Method: EPA 8270D (M)/TQ/EI

Project: City of Newport Beach - Federal Channels

Page 2 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
18-01-0688-1	Sample	Sediment	GCTQ 2	01/11/18	01/13/18 03:00	180111S18
18-01-0688-1	Matrix Spike	Sediment	GCTQ 2	01/11/18	01/13/18 05:19	180111S18
18-01-0688-1	Matrix Spike Duplicate	Sediment	GCTQ 2	01/11/18	01/13/18 06:05	180111S18

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Allethrin	ND	5.000	1.315	26	2.393	48	10-148	58	0-30	4
Bifenthrin	ND	5.000	2.768	55	4.376	88	26-128	45	0-30	4
Cyfluthrin	ND	5.000	2.119	42	4.263	85	10-131	67	0-30	4
Cypermethrin	ND	5.000	1.891	38	3.681	74	10-136	64	0-30	4
Deltamethrin/Tralomethrin	ND	5.000	3.096	62	5.362	107	13-190	54	0-30	4
Fenpropathrin	ND	5.000	2.359	47	4.595	92	10-148	64	0-30	4
Fenvalerate/Esfenvalerate	ND	5.000	2.807	56	4.375	87	10-149	44	0-30	4
Fluvalinate	ND	5.000	2.476	50	3.763	75	10-121	41	0-30	4
Permethrin (cis/trans)	ND	5.000	3.156	63	5.683	114	45-123	57	0-30	4
Phenothrin	ND	5.000	3.254	65	5.164	103	45-165	45	0-30	4
Resmethrin/Bioresmethrin	ND	5.000	2.552	51	5.076	102	38-164	66	0-30	4
Tetramethrin	ND	5.000	3.448	69	5.645	113	15-153	48	0-30	4
lambda-Cyhalothrin	ND	5.000	5.359	107	4.291	86	10-123	22	0-30	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/10/18
Work Order: 18-01-0689
Preparation: EPA 3050B
Method: EPA 6020

Project: City of Newport Beach - Federal Channels

Page 3 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
BIMW-COMP-T-011018	Sample	Sediment	ICP/MS 03	01/12/18	01/12/18 16:46	180112S01
BIMW-COMP-T-011018	Matrix Spike	Sediment	ICP/MS 03	01/12/18	01/12/18 16:38	180112S01
BIMW-COMP-T-011018	Matrix Spike Duplicate	Sediment	ICP/MS 03	01/12/18	01/12/18 16:41	180112S01

<u>Parameter</u>	<u>Sample Conc.</u>	<u>Spike Added</u>	<u>MS Conc.</u>	<u>MS %Rec.</u>	<u>MSD Conc.</u>	<u>MSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Arsenic	4.314	25.00	31.79	110	28.28	96	80-120	12	0-20	
Cadmium	1.079	25.00	30.83	119	28.06	108	80-120	9	0-20	
Chromium	21.07	25.00	47.45	106	44.21	93	80-120	7	0-20	
Copper	26.47	25.00	53.89	110	49.07	90	80-120	9	0-20	
Lead	21.70	25.00	50.67	116	46.94	101	80-120	8	0-20	
Nickel	13.84	25.00	39.32	102	36.66	91	80-120	7	0-20	
Selenium	0.7493	25.00	28.97	113	25.05	97	80-120	15	0-20	
Silver	0.1639	12.50	14.81	117	13.56	107	80-120	9	0-20	
Zinc	85.16	25.00	113.5	114	107.2	88	80-120	6	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/10/18
Work Order: 18-01-0689
Preparation: EPA 7471A Total
Method: EPA 7471A

Project: City of Newport Beach - Federal Channels

Page 4 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
BIMW-COMP-T-011018	Sample	Sediment	Mercury 08	01/12/18	01/12/18 15:58	180112S01
BIMW-COMP-T-011018	Matrix Spike	Sediment	Mercury 08	01/12/18	01/12/18 16:00	180112S01
BIMW-COMP-T-011018	Matrix Spike Duplicate	Sediment	Mercury 08	01/12/18	01/12/18 16:02	180112S01

<u>Parameter</u>	<u>Sample Conc.</u>	<u>Spike Added</u>	<u>MS Conc.</u>	<u>MS %Rec.</u>	<u>MSD Conc.</u>	<u>MSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Mercury	0.07493	0.8350	0.8300	90	0.8264	90	76-136	0	0-16	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/10/18
Work Order: 18-01-0689
Preparation: EPA 3541
Method: EPA 8081A

Project: City of Newport Beach - Federal Channels

Page 5 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
18-01-0375-1	Sample	Sediment	GC 41	01/11/18	01/12/18 14:47	180111S15
18-01-0375-1	Matrix Spike	Sediment	GC 41	01/11/18	01/12/18 13:02	180111S15
18-01-0375-1	Matrix Spike Duplicate	Sediment	GC 41	01/11/18	01/12/18 13:17	180111S15

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Aldrin	ND	5.000	3.287	66	4.280	86	50-135	26	0-25	4
Alpha-BHC	ND	5.000	4.020	80	5.102	102	50-135	24	0-25	
Beta-BHC	ND	5.000	3.775	76	5.097	102	50-135	30	0-25	4
Delta-BHC	ND	5.000	4.190	84	5.327	107	50-135	24	0-25	
Gamma-BHC	ND	5.000	3.571	71	4.623	92	50-135	26	0-25	4
Dieldrin	ND	5.000	4.487	90	6.012	120	50-135	29	0-25	4
4,4'-DDD	ND	5.000	4.193	84	6.099	122	50-135	37	0-25	4
4,4'-DDE	4.848	5.000	8.239	68	10.98	123	50-135	29	0-25	4
4,4'-DDT	ND	5.000	3.722	74	2.202	44	50-135	51	0-25	3,4
Endosulfan I	ND	5.000	3.736	75	4.715	94	50-135	23	0-25	
Endosulfan II	ND	5.000	3.974	79	5.009	100	50-135	23	0-25	
Endosulfan Sulfate	ND	5.000	3.776	76	4.859	97	50-135	25	0-25	
Endrin	ND	5.000	3.889	78	4.874	97	50-135	22	0-25	
Endrin Aldehyde	ND	5.000	3.008	60	3.191	64	50-135	6	0-25	
Endrin Ketone	ND	5.000	4.297	86	5.409	108	50-135	23	0-25	
Heptachlor	ND	5.000	4.174	83	5.071	101	50-135	19	0-25	
Heptachlor Epoxide	ND	5.000	5.192	104	7.119	142	50-135	31	0-25	3,4
Methoxychlor	ND	5.000	3.381	68	2.129	43	50-135	45	0-25	3,4
Alpha Chlordane	ND	5.000	3.865	77	4.916	98	50-135	24	0-25	
Gamma Chlordane	ND	5.000	6.074	121	6.759	135	50-135	11	0-25	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/10/18
Work Order: 18-01-0689
Preparation: EPA 3541
Method: EPA 8270C SIM PAHs

Project: City of Newport Beach - Federal Channels

Page 6 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
18-01-0375-1	Sample	Sediment	GC/MS AAA	01/11/18	01/12/18 12:00	180111S16
18-01-0375-1	Matrix Spike	Sediment	GC/MS AAA	01/11/18	01/12/18 11:21	180111S16
18-01-0375-1	Matrix Spike Duplicate	Sediment	GC/MS AAA	01/11/18	01/12/18 13:56	180111S16

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Acenaphthene	ND	100.0	76.64	77	77.64	78	40-160	1	0-20	
Acenaphthylene	ND	100.0	74.71	75	74.47	74	40-160	0	0-20	
Anthracene	ND	100.0	86.16	86	88.65	89	40-160	3	0-20	
Benzo (a) Anthracene	ND	100.0	94.38	94	93.66	94	40-160	1	0-20	
Benzo (a) Pyrene	ND	100.0	95.04	95	94.60	95	40-160	0	0-20	
Benzo (b) Fluoranthene	ND	100.0	107.5	108	104.8	105	40-160	3	0-20	
Benzo (g,h,i) Perylene	ND	100.0	99.94	100	98.62	99	40-160	1	0-20	
Benzo (k) Fluoranthene	ND	100.0	86.28	86	87.13	87	40-160	1	0-20	
Chrysene	ND	100.0	84.69	85	89.91	90	40-160	6	0-20	
Dibenz (a,h) Anthracene	ND	100.0	103.1	103	104.2	104	40-160	1	0-20	
Fluoranthene	ND	100.0	95.17	95	95.55	96	40-160	0	0-20	
Fluorene	ND	100.0	78.76	79	78.31	78	40-160	1	0-20	
Indeno (1,2,3-c,d) Pyrene	ND	100.0	99.87	100	99.47	99	40-160	0	0-20	
2-Methylnaphthalene	ND	100.0	75.94	76	72.13	72	40-160	5	0-20	
1-Methylnaphthalene	ND	100.0	73.59	74	70.55	71	40-160	4	0-20	
Naphthalene	ND	100.0	63.82	64	65.13	65	40-160	2	0-20	
Phenanthrene	ND	100.0	89.39	89	91.06	91	40-160	2	0-20	
Pyrene	ND	100.0	96.96	97	99.92	100	40-160	3	0-46	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/10/18
Work Order: 18-01-0689
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners

Project: City of Newport Beach - Federal Channels

Page 7 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-09-2048-6	Sample	Sediment	GC/MS HHH	01/11/18	01/12/18 17:31	180111S17
17-09-2048-6	Matrix Spike	Sediment	GC/MS HHH	01/11/18	01/12/18 15:56	180111S17
17-09-2048-6	Matrix Spike Duplicate	Sediment	GC/MS HHH	01/11/18	01/12/18 16:20	180111S17

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
PCB018	ND	50.00	38.23	76	39.85	80	50-150	4	0-25	
PCB028	ND	50.00	42.92	86	44.16	88	50-150	3	0-25	
PCB044	ND	50.00	40.79	82	41.47	83	50-150	2	0-25	
PCB052	ND	50.00	38.61	77	39.70	79	50-150	3	0-25	
PCB066	ND	50.00	47.14	94	47.06	94	50-150	0	0-25	
PCB077	ND	50.00	41.67	83	43.10	86	50-150	3	0-25	
PCB101	ND	50.00	40.49	81	42.27	85	50-150	4	0-25	
PCB105	ND	50.00	43.22	86	44.49	89	50-150	3	0-25	
PCB118	ND	50.00	43.45	87	43.88	88	50-150	1	0-25	
PCB126	ND	50.00	41.55	83	42.18	84	50-150	2	0-25	
PCB128	ND	50.00	39.39	79	41.23	82	50-150	5	0-25	
PCB170	ND	50.00	43.05	86	45.46	91	50-150	5	0-25	
PCB180	ND	50.00	44.87	90	46.06	92	50-150	3	0-25	
PCB187	ND	50.00	44.16	88	44.79	90	50-150	1	0-25	
PCB195	ND	50.00	37.82	76	39.70	79	50-150	5	0-25	
PCB206	ND	50.00	42.71	85	44.94	90	50-150	5	0-25	
PCB209	ND	50.00	34.41	69	36.37	73	50-150	6	0-25	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/10/18
Work Order: 18-01-0689
Preparation: EPA 3550B (M)
Method: Organotins by Krone et al.

Project: City of Newport Beach - Federal Channels

Page 8 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
BIMW-COMP-T-011018	Sample	Sediment	GC/MS Y	01/11/18	01/12/18 17:35	180111S11				
BIMW-COMP-T-011018	Matrix Spike	Sediment	GC/MS Y	01/11/18	01/12/18 17:00	180111S11				
BIMW-COMP-T-011018	Matrix Spike Duplicate	Sediment	GC/MS Y	01/11/18	01/12/18 17:18	180111S11				
<u>Parameter</u>	<u>Sample Conc.</u>	<u>Spike Added</u>	<u>MS Conc.</u>	<u>MS %Rec.</u>	<u>MSD Conc.</u>	<u>MSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Tetrabutyltin	ND	100.0	97.26	97	101.8	102	33-129	5	0-36	
Tributyltin	ND	100.0	16.93	17	22.21	22	34-142	27	0-50	3


 Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - PDS

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/10/18
Work Order: 18-01-0689
Preparation: EPA 3050B
Method: EPA 6020

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number	
BIMW-COMP-T-011018	Sample	Sediment	ICP/MS 03	01/12/18 00:00	01/12/18 16:46	180112S01	
BIMW-COMP-T-011018	PDS	Sediment	ICP/MS 03	01/12/18 00:00	01/15/18 12:06	180112S01	
<u>Parameter</u>		<u>Sample Conc.</u>	<u>Spike Added</u>	<u>PDS Conc.</u>	<u>PDS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Arsenic		4.314	25.00	30.04	103	75-125	
Cadmium		1.079	25.00	27.03	104	75-125	
Chromium		21.07	25.00	46.25	101	75-125	
Copper		26.47	25.00	50.29	95	75-125	
Lead		21.70	25.00	48.02	105	75-125	
Nickel		13.84	25.00	37.91	96	75-125	
Selenium		0.7493	25.00	27.99	109	75-125	
Silver		0.1639	12.50	12.22	96	75-125	
Zinc		85.16	25.00	111.6	106	75-125	



Calscience

Quality Control - Sample Duplicate

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/10/18
 Work Order: 18-01-0689
 Preparation: N/A
 Method: SM 2540 B (M)

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
BIMW-COMP-T-011018	Sample	Sediment	N/A	01/11/18 00:00	01/11/18 19:00	I0111TSD1
BIMW-COMP-T-011018	Sample Duplicate	Sediment	N/A	01/11/18 00:00	01/11/18 19:00	I0111TSD1

<u>Parameter</u>	<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Solids, Total	48.90	49.10	0	0-10	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/10/18
 Work Order: 18-01-0689
 Preparation: N/A
 Method: EPA 9060A

Project: City of Newport Beach - Federal Channels

Page 1 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-06-013-1789	LCS	Solid	TOC 9	01/11/18	01/11/18 10:52	I0111TOCL1			
099-06-013-1789	LCSD	Solid	TOC 9	01/11/18	01/11/18 10:52	I0111TOCL1			
<u>Parameter</u>	<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>LCSD Conc.</u>	<u>LCSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Carbon, Total Organic	0.6000	0.5782	96	0.6641	111	80-120	14	0-20	

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/10/18
 Work Order: 18-01-0689
 Preparation: EPA 3541
 Method: EPA 8270D (M)/TQ/EI

Project: City of Newport Beach - Federal Channels

Page 2 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-14-403-142	LCS	Solid	GCTQ 2	01/11/18	01/12/18 23:56	180111L18				
099-14-403-142	LCSD	Solid	GCTQ 2	01/11/18	01/13/18 00:42	180111L18				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Allethrin	5.000	4.385	88	3.916	78	10-148	0-171	11	0-25	
Bifenthrin	5.000	5.172	103	4.558	91	26-128	9-145	13	0-25	
Cyfluthrin	5.000	5.202	104	4.978	100	10-131	0-151	4	0-25	
Cypermethrin	5.000	4.722	94	4.471	89	10-136	0-157	5	0-25	
Deltamethrin/Tralomethrin	5.000	4.921	98	4.547	91	13-190	0-220	8	0-25	
Fenpropathrin	5.000	4.451	89	4.043	81	10-148	0-171	10	0-25	
Fenvalerate/Esfenvalerate	5.000	4.487	90	4.709	94	10-149	0-172	5	0-25	
Fluvalinate	5.000	4.373	87	4.501	90	10-121	0-140	3	0-25	
Permethrin (cis/trans)	5.000	5.759	115	6.056	121	45-123	32-136	5	0-25	
Phenothrin	5.000	4.552	91	4.107	82	45-165	25-185	10	0-25	
Resmethrin/Bioresmethrin	5.000	4.635	93	4.344	87	38-164	17-185	6	0-25	
Tetramethrin	5.000	4.609	92	4.380	88	15-153	0-176	5	0-25	
lambda-Cyhalothrin	5.000	4.394	88	3.716	74	10-123	0-142	17	0-25	

Total number of LCS compounds: 13

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/10/18
 Work Order: 18-01-0689
 Preparation: EPA 3050B
 Method: EPA 6020

Project: City of Newport Beach - Federal Channels

Page 3 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-15-254-566	LCS	Solid	ICP/MS 03	01/12/18	01/12/18 16:33	180112L01E			
099-15-254-566	LCSD	Solid	ICP/MS 03	01/12/18	01/12/18 16:36	180112L01E			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	25.00	23.73	95	25.01	100	80-120	5	0-20	
Cadmium	25.00	25.37	101	26.22	105	80-120	3	0-20	
Chromium	25.00	24.67	99	25.59	102	80-120	4	0-20	
Copper	25.00	24.68	99	25.79	103	80-120	4	0-20	
Lead	25.00	25.13	101	26.08	104	80-120	4	0-20	
Nickel	25.00	23.60	94	25.18	101	80-120	6	0-20	
Selenium	25.00	24.17	97	24.98	100	80-120	3	0-20	
Silver	12.50	12.29	98	12.82	103	80-120	4	0-20	
Zinc	25.00	25.13	101	26.46	106	80-120	5	0-20	



Calscience

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/10/18
 Work Order: 18-01-0689
 Preparation: EPA 7471A Total
 Method: EPA 7471A

Project: City of Newport Beach - Federal Channels

Page 4 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-16-278-363	LCS	Solid	Mercury 08	01/12/18	01/12/18 15:55	180112L01E
099-16-278-363	LCSD	Solid	Mercury 08	01/12/18	01/15/18 11:39	180112L01E

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	0.8350	0.8126	97	0.8947	107	82-124	10	0-16	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/10/18
 Work Order: 18-01-0689
 Preparation: EPA 3541
 Method: EPA 8081A

Project: City of Newport Beach - Federal Channels

Page 5 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-858-511	LCS	Solid	GC 41	01/11/18	01/12/18 12:02	180111L15				
099-12-858-511	LCSD	Solid	GC 41	01/11/18	01/12/18 12:17	180111L15				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Aldrin	5.000	4.643	93	4.839	97	50-135	36-149	4	0-25	
Alpha-BHC	5.000	4.590	92	4.824	96	50-135	36-149	5	0-25	
Beta-BHC	5.000	4.687	94	4.854	97	50-135	36-149	4	0-25	
Delta-BHC	5.000	4.944	99	5.096	102	50-135	36-149	3	0-25	
Gamma-BHC	5.000	4.788	96	4.996	100	50-135	36-149	4	0-25	
Dieldrin	5.000	5.345	107	5.423	108	50-135	36-149	1	0-25	
4,4'-DDD	5.000	5.454	109	5.503	110	50-135	36-149	1	0-25	
4,4'-DDE	5.000	5.491	110	5.626	113	50-135	36-149	2	0-25	
4,4'-DDT	5.000	5.751	115	5.548	111	50-135	36-149	4	0-25	
Endosulfan I	5.000	4.906	98	5.034	101	50-135	36-149	3	0-25	
Endosulfan II	5.000	5.626	113	5.680	114	50-135	36-149	1	0-25	
Endosulfan Sulfate	5.000	5.427	109	5.449	109	50-135	36-149	0	0-25	
Endrin	5.000	5.331	107	5.412	108	50-135	36-149	2	0-25	
Endrin Aldehyde	5.000	4.043	81	3.945	79	50-135	36-149	2	0-25	
Endrin Ketone	5.000	5.478	110	5.544	111	50-135	36-149	1	0-25	
Heptachlor	5.000	5.011	100	5.130	103	50-135	36-149	2	0-25	
Heptachlor Epoxide	5.000	4.891	98	5.028	101	50-135	36-149	3	0-25	
Methoxychlor	5.000	5.516	110	5.591	112	50-135	36-149	1	0-25	
Alpha Chlordane	5.000	4.835	97	4.999	100	50-135	36-149	3	0-25	
Gamma Chlordane	5.000	4.733	95	4.913	98	50-135	36-149	4	0-25	

Total number of LCS compounds: 20

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/10/18
 Work Order: 18-01-0689
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs

Project: City of Newport Beach - Federal Channels

Page 6 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-14-097-251	LCS	Solid	GC/MS AAA	01/11/18	01/12/18 10:43	180111L16				
099-14-097-251	LCSD	Solid	GC/MS AAA	01/11/18	01/12/18 13:37	180111L16				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Acenaphthene	100.0	95.50	96	95.07	95	40-160	20-180	0	0-20	
Acenaphthylene	100.0	92.99	93	94.15	94	40-160	20-180	1	0-20	
Anthracene	100.0	98.50	98	100.5	100	40-160	20-180	2	0-20	
Benzo (a) Anthracene	100.0	103.5	104	105.9	106	40-160	20-180	2	0-20	
Benzo (a) Pyrene	100.0	106.2	106	112.7	113	40-160	20-180	6	0-20	
Benzo (b) Fluoranthene	100.0	119.8	120	130.6	131	40-160	20-180	9	0-20	
Benzo (g,h,i) Perylene	100.0	111.9	112	120.9	121	40-160	20-180	8	0-20	
Benzo (k) Fluoranthene	100.0	104.6	105	100.8	101	40-160	20-180	4	0-20	
Chrysene	100.0	102.2	102	103.8	104	40-160	20-180	2	0-20	
Dibenz (a,h) Anthracene	100.0	115.8	116	124.6	125	40-160	20-180	7	0-20	
Fluoranthene	100.0	105.0	105	108.4	108	40-160	20-180	3	0-20	
Fluorene	100.0	95.24	95	96.70	97	40-160	20-180	2	0-20	
Indeno (1,2,3-c,d) Pyrene	100.0	110.5	110	120.5	120	40-160	20-180	9	0-20	
2-Methylnaphthalene	100.0	97.63	98	100.6	101	40-160	20-180	3	0-20	
1-Methylnaphthalene	100.0	95.42	95	98.25	98	40-160	20-180	3	0-20	
Naphthalene	100.0	90.73	91	89.72	90	40-160	20-180	1	0-20	
Phenanthrene	100.0	100.8	101	100.3	100	40-160	20-180	0	0-20	
Pyrene	100.0	104.8	105	107.9	108	40-160	20-180	3	0-20	

Total number of LCS compounds: 18

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/10/18
 Work Order: 18-01-0689
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners

Project: City of Newport Beach - Federal Channels

Page 7 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-16-418-283	LCS	Solid	GC/MS HHH	01/11/18	01/12/18 15:08	180111L17				
099-16-418-283	LCSD	Solid	GC/MS HHH	01/11/18	01/12/18 15:31	180111L17				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
PCB018	50.00	37.50	75	37.54	75	24-132	6-150	0	0-28	
PCB028	50.00	42.87	86	41.94	84	31-133	14-150	2	0-26	
PCB044	50.00	40.62	81	40.20	80	36-120	22-134	1	0-28	
PCB052	50.00	39.11	78	38.29	77	31-121	16-136	2	0-27	
PCB066	50.00	48.49	97	46.41	93	43-139	27-155	4	0-25	
PCB077	50.00	43.68	87	42.25	85	41-131	26-146	3	0-25	
PCB101	50.00	42.88	86	40.22	80	37-121	23-135	6	0-27	
PCB105	50.00	45.36	91	44.14	88	48-132	34-146	3	0-26	
PCB118	50.00	45.12	90	43.18	86	46-136	31-151	4	0-25	
PCB126	50.00	43.11	86	42.07	84	38-134	22-150	2	0-25	
PCB128	50.00	42.35	85	40.97	82	40-130	25-145	3	0-26	
PCB170	50.00	45.58	91	44.07	88	40-124	26-138	3	0-29	
PCB180	50.00	46.68	93	46.44	93	41-143	24-160	1	0-26	
PCB187	50.00	45.71	91	45.33	91	39-129	24-144	1	0-26	
PCB195	50.00	40.35	81	39.54	79	44-128	30-142	2	0-28	
PCB206	50.00	46.39	93	45.88	92	33-135	16-152	1	0-24	
PCB209	50.00	36.61	73	36.51	73	29-137	11-155	0	0-29	

Total number of LCS compounds: 17

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/10/18
 Work Order: 18-01-0689
 Preparation: EPA 3550B (M)
 Method: Organotins by Krone et al.

Project: City of Newport Beach - Federal Channels

Page 8 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-07-016-1551	LCS	Solid	GC/MS Y	01/11/18	01/12/18 16:25	180111L11
099-07-016-1551	LCSD	Solid	GC/MS Y	01/11/18	01/12/18 16:43	180111L11

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Tetrabutyltin	100.0	60.24	60	69.51	70	40-142	14	0-20	
Tributyltin	100.0	52.02	52	51.26	51	33-147	1	0-20	

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: Anchor & EA

DATE: 01/10/2018

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: +0.2°C); Temperature (w/o CF): 3.7 °C (w/ CF): 3.9 °C; Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: Air Filter

Checked by: 659

CUSTODY SEAL:

Cooler Present and Intact Present but Not Intact Not Present N/A

Checked by: 659

Sample(s) Present and Intact Present but Not Intact Not Present N/A

Checked by: 728

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sampling date <input type="checkbox"/> Sampling time <input type="checkbox"/> Matrix <input type="checkbox"/> Number of containers			
<input type="checkbox"/> No analysis requested <input type="checkbox"/> Not relinquished <input type="checkbox"/> No relinquished date <input type="checkbox"/> No relinquished time			
Sampler's name indicated on COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sufficient volume/mass for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples for certain analyses received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfide <input type="checkbox"/> Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation chemical(s) noted on COC and/or sample container	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Unpreserved aqueous sample(s) received for certain analyses			
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Total Metals <input type="checkbox"/> Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Container(s) for certain analysis free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Dissolved Gases (RSK-175) <input type="checkbox"/> Dissolved Oxygen (SM 4500)			
<input type="checkbox"/> Carbon Dioxide (SM 4500) <input type="checkbox"/> Ferrous Iron (SM 3500) <input type="checkbox"/> Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:

(Trip Blank Lot Number: _____)

Aqueous: VOA VOAh VOAna2 100PJ 100PJna2 125AGB 125AGBh 125AGBp 125PB 125PBzanna (pH__9)
 250AGB 250CGB 250CGBs (pH__2) 250PB 250PBn (pH__2) 500AGB 500AGJ 500AGJs (pH__2) 500PB
 1AGB 1AGBna2 1AGBs (pH__2) 1AGBs (O&G) 1PB 1PBna (pH__12) _____ _____ _____

Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (____) EnCores® (____) TerraCores® (____) Z _____ _____

Air: Tedlar™ Canister Sorbent Tube PUF _____ Other Matrix (____): _____ _____ _____

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO3, na = NaOH, na2 = Na2S2O3, p = H3PO4,

Labeled/Checked by: 728

s = H2SO4, u = ultra-pure, x = Na2SO3+NaHSO4.H2O, zanna = Zn (CH3CO2)2 + NaOH

Reviewed by: 1053

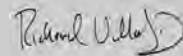

WORK ORDER NUMBER: 18-01-0886
The difference is service


AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For
Client: ANCHOR QEA, LLC

Client Project Name: City of Newport Beach - Federal Channels

Attention: Chris Osuch
 27201 Puerta Real
 Suite 350
 Mission Viejo, CA 92691-8306



 Approved for release on 01/17/2018 by:
 Richard Villafania
 Project Manager

ResultLink ▶

Email your PM ▶

Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Contents

Client Project Name: City of Newport Beach - Federal Channels
 Work Order Number: 18-01-0886

1	Work Order Narrative.	3
2	Sample Summary.	4
3	Client Sample Data.	5
	3.1 EPA 9060A Total Organic Carbon (Solid).	5
	3.2 SM 2540 B (M) Total Solids (Solid).	6
	3.3 Pyrethroids by EPA 8270D (M)/TQ/EI (Solid).	7
	3.4 EPA 6020 ICP/MS Metals (Solid).	10
	3.5 EPA 7471A Mercury (Solid).	12
	3.6 ASTM D4464 (M) Particle Size Laser (Solid).	13
	3.7 EPA 8081A Organochlorine Pesticides (Solid).	14
	3.8 EPA 8270C SIM PAHs (Solid).	19
	3.9 EPA 8270C SIM PCB Congeners (Solid).	22
	3.10 Krone et al. Organotins (Solid).	28
4	Quality Control Sample Data.	29
	4.1 MS/MSD.	29
	4.2 PDS/PDSD.	37
	4.3 Sample Duplicate.	38
	4.4 LCS/LCSD.	39
5	Sample Analysis Summary.	47
6	Glossary of Terms and Qualifiers.	48
7	Chain-of-Custody/Sample Receipt Form.	49

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 01/12/18. They were assigned to Work Order 18-01-0886.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Sample Summary

Client: ANCHOR QEA, LLC	Work Order: 18-01-0886
27201 Puerta Real, Suite 350	Project Name: City of Newport Beach - Federal Channels
Mission Viejo, CA 92691-8306	PO Number:
	Date/Time Received: 01/12/18 12:15
	Number of Containers: 4

Attn: Chris Osuch

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
BIME-COMP-T-011218	18-01-0886-1	01/12/18 08:00	2	Sediment
BIME-COMP-M-011218	18-01-0886-2	01/12/18 09:02	2	Sediment

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0886
 Preparation: N/A
 Method: EPA 9060A
 Units: %

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIME-COMP-T-011218	18-01-0886-1-AA	01/12/18 08:00	Sediment	TOC 9	01/15/18	01/15/18 21:58	I0115TOCL1

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Carbon, Total Organic	1.7	0.10	0.035	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIME-COMP-M-011218	18-01-0886-2-AA	01/12/18 09:02	Sediment	TOC 9	01/15/18	01/15/18 21:58	I0115TOCL1

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Carbon, Total Organic	1.4	0.093	0.032	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-06-013-1790	N/A	Solid	TOC 9	01/15/18	01/15/18 21:58	I0115TOCL1

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Carbon, Total Organic	ND	0.050	0.017	1.00	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0886
 Preparation: N/A
 Method: SM 2540 B (M)
 Units: %

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIME-COMP-T-011218	18-01-0886-1-AA	01/12/18 08:00	Sediment	N/A	01/12/18	01/12/18 19:30	I0112TSB3

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Solids, Total	49.2	0.100	0.100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIME-COMP-M-011218	18-01-0886-2-AA	01/12/18 09:02	Sediment	N/A	01/12/18	01/12/18 19:30	I0112TSB3

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Solids, Total	53.7	0.100	0.100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-05-019-3916	N/A	Solid	N/A	01/12/18	01/12/18 19:30	I0112TSB3

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Solids, Total	ND	0.100	0.100	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0886
 Preparation: EPA 3541
 Method: EPA 8270D (M)/TQ/EI
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIME-COMP-T-011218	18-01-0886-1-AA	01/12/18 08:00	Sediment	GCTQ 2	01/15/18	01/15/18 21:41	180115L03

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Allethrin	ND	1.0	0.51	1.00	
Bifenthrin	4.5	1.0	0.61	1.00	
Cyfluthrin	ND	1.0	0.51	1.00	
Cypermethrin	ND	1.0	0.51	1.00	
Deltamethrin/Tralomethrin	ND	1.0	0.51	1.00	
Fenpropathrin	ND	1.0	0.51	1.00	
Fenvalerate/Esfenvalerate	ND	1.0	0.51	1.00	
Fluvalinate	ND	1.0	0.51	1.00	
Permethrin (cis/trans)	ND	2.0	1.0	1.00	
Phenothrin	ND	1.0	0.51	1.00	
Resmethrin/Bioresmethrin	ND	1.0	0.86	1.00	
Tetramethrin	ND	1.0	0.61	1.00	
lambda-Cyhalothrin	ND	1.0	0.51	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
Dibutylchloroendate	147	40-160			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0886
 Preparation: EPA 3541
 Method: EPA 8270D (M)/TQ/EI
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIME-COMP-M-011218	18-01-0886-2-AA	01/12/18 09:02	Sediment	GCTQ 2	01/15/18	01/15/18 22:27	180115L03

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Allethrin	ND	0.93	0.47	1.00	
Bifenthrin	ND	0.93	0.56	1.00	
Cyfluthrin	ND	0.93	0.47	1.00	
Cypermethrin	ND	0.93	0.47	1.00	
Deltamethrin/Tralomethrin	ND	0.93	0.47	1.00	
Fenpropathrin	ND	0.93	0.47	1.00	
Fenvalerate/Esfenvalerate	ND	0.93	0.47	1.00	
Fluvalinate	ND	0.93	0.47	1.00	
Permethrin (cis/trans)	ND	1.9	0.93	1.00	
Phenothrin	ND	0.93	0.47	1.00	
Resmethrin/Bioresmethrin	ND	0.93	0.79	1.00	
Tetramethrin	ND	0.93	0.56	1.00	
lambda-Cyhalothrin	ND	0.93	0.47	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
Dibutylchlorendate	113	40-160			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0886
 Preparation: EPA 3541
 Method: EPA 8270D (M)/TQ/EI
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-403-143	N/A	Solid	GCTQ 2	01/15/18	01/15/18 20:54	180115L03

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Allethrin	ND	0.50	0.25	1.00	
Bifenthrin	ND	0.50	0.30	1.00	
Cyfluthrin	ND	0.50	0.25	1.00	
Cypermethrin	ND	0.50	0.25	1.00	
Deltamethrin/Tralomethrin	ND	0.50	0.25	1.00	
Fenpropathrin	ND	0.50	0.25	1.00	
Fenvalerate/Esfenvalerate	ND	0.50	0.25	1.00	
Fluvalinate	ND	0.50	0.25	1.00	
Permethrin (cis/trans)	ND	1.0	0.50	1.00	
Phenothrin	ND	0.50	0.25	1.00	
Resmethrin/Bioresmethrin	ND	0.50	0.42	1.00	
Tetramethrin	ND	0.50	0.30	1.00	
lambda-Cyhalothrin	ND	0.50	0.25	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	68	40-160	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0886
 Preparation: EPA 3050B
 Method: EPA 6020
 Units: mg/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIME-COMP-T-011218	18-01-0886-1-AA	01/12/18 08:00	Sediment	ICP/MS 03	01/15/18	01/15/18 19:34	180115L01E

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Arsenic	8.95	0.203	0.177	1.00	
Cadmium	2.19	0.203	0.116	1.00	
Chromium	41.7	0.203	0.126	1.00	
Copper	55.2	0.203	0.0852	1.00	
Lead	40.2	0.203	0.134	1.00	
Nickel	27.0	0.203	0.103	1.00	
Selenium	1.35	0.203	0.149	1.00	
Silver	0.299	0.203	0.0636	1.00	
Zinc	173	2.03	1.62	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIME-COMP-M-011218	18-01-0886-2-AA	01/12/18 09:02	Sediment	ICP/MS 03	01/15/18	01/15/18 19:36	180115L01E

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Arsenic	9.42	0.186	0.163	1.00	
Cadmium	2.67	0.186	0.107	1.00	
Chromium	43.0	0.186	0.116	1.00	
Copper	45.3	0.186	0.0781	1.00	
Lead	45.2	0.186	0.123	1.00	
Nickel	29.7	0.186	0.0943	1.00	
Selenium	1.27	0.186	0.136	1.00	
Silver	0.358	0.186	0.0583	1.00	
Zinc	149	1.86	1.48	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC	Date Received:	01/12/18
27201 Puerta Real, Suite 350	Work Order:	18-01-0886
Mission Viejo, CA 92691-8306	Preparation:	EPA 3050B
	Method:	EPA 6020
	Units:	mg/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-15-254-567	N/A	Solid	ICP/MS 03	01/15/18	01/15/18 19:06	180115L01E

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Arsenic	ND	0.100	0.0873	1.00	
Cadmium	ND	0.100	0.0572	1.00	
Chromium	ND	0.100	0.0621	1.00	
Copper	ND	0.100	0.0419	1.00	
Lead	ND	0.100	0.0659	1.00	
Nickel	ND	0.100	0.0506	1.00	
Selenium	ND	0.100	0.0731	1.00	
Silver	ND	0.100	0.0313	1.00	
Zinc	ND	1.00	0.795	1.00	



Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0886
 Preparation: EPA 7471A Total
 Method: EPA 7471A
 Units: mg/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIME-COMP-T-011218	18-01-0886-1-AA	01/12/18 08:00	Sediment	Mercury 07	01/15/18	01/15/18 15:38	180115L03E

Comment(s):
 - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Mercury	0.142	0.0413	0.0121	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIME-COMP-M-011218	18-01-0886-2-AA	01/12/18 09:02	Sediment	Mercury 07	01/15/18	01/15/18 15:45	180115L03E

Comment(s):
 - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Mercury	0.690	0.0355	0.0104	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-278-364	N/A	Solid	Mercury 07	01/15/18	01/15/18 15:33	180115L03E

Comment(s):
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Mercury	ND	0.0200	0.00587	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0886
 Preparation: N/A
 Method: ASTM D4464 (M)
 Units: %

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIME-COMP-T-011218	18-01-0886-1-B	01/12/18 08:00	Sediment	LPSA 1	N/A	01/12/18 18:20	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	24.53	
Silt (0.00391 to 0.0625mm)	63.19	
Total Silt and Clay (0 to 0.0625mm)	87.72	
Very Fine Sand (0.0625 to 0.125mm)	10.90	
Fine Sand (0.125 to 0.25mm)	1.38	
Medium Sand (0.25 to 0.5mm)	0.010	
Coarse Sand (0.5 to 1mm)	ND	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIME-COMP-M-011218	18-01-0886-2-B	01/12/18 09:02	Sediment	LPSA 1	N/A	01/12/18 18:28	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	26.67	
Silt (0.00391 to 0.0625mm)	71.53	
Total Silt and Clay (0 to 0.0625mm)	98.20	
Very Fine Sand (0.0625 to 0.125mm)	1.80	
Fine Sand (0.125 to 0.25mm)	ND	
Medium Sand (0.25 to 0.5mm)	ND	
Coarse Sand (0.5 to 1mm)	ND	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0886
 Preparation: EPA 3541
 Method: EPA 8081A
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIME-COMP-T-011218	18-01-0886-1-AA	01/12/18 08:00	Sediment	GC 41	01/12/18	01/16/18 14:46	180112L17

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	2.0	0.88	1.00	
Alpha-BHC	ND	4.0	1.5	1.00	
Beta-BHC	ND	2.0	0.99	1.00	
Delta-BHC	ND	4.0	1.8	1.00	
Gamma-BHC	ND	2.0	0.89	1.00	
Dieldrin	1.1	2.0	0.88	1.00	J
Trans-nonachlor	3.6	2.0	0.54	1.00	
2,4'-DDD	3.3	2.0	0.57	1.00	
2,4'-DDE	5.3	4.0	2.0	1.00	
2,4'-DDT	ND	2.0	0.63	1.00	
4,4'-DDT	6.6	2.0	0.88	1.00	
Endosulfan I	ND	2.0	0.79	1.00	
Endosulfan II	ND	2.0	0.94	1.00	
Endosulfan Sulfate	ND	2.0	1.0	1.00	
Endrin	ND	2.0	0.96	1.00	
Endrin Aldehyde	ND	2.0	1.2	1.00	
Endrin Ketone	ND	2.0	1.0	1.00	
Heptachlor	ND	2.0	0.87	1.00	
Heptachlor Epoxide	ND	4.0	1.5	1.00	
Methoxychlor	ND	2.0	1.1	1.00	
Toxaphene	ND	40	18	1.00	
Alpha Chlordane	3.1	2.0	0.81	1.00	
Gamma Chlordane	4.9	4.0	1.8	1.00	
Cis-nonachlor	1.4	2.0	0.52	1.00	J
Oxychlordane	ND	2.0	0.54	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
2,4,5,6-Tetrachloro-m-Xylene	92	25-145			
Decachlorobiphenyl	114	24-168			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0886
 Preparation: EPA 3541
 Method: EPA 8081A
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIME-COMP-T-011218	18-01-0886-1-AA	01/12/18 08:00	Sediment	GC 41	01/12/18	01/16/18 16:16	180112L17

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
4,4'-DDD	20	20	10	10.0	J
4,4'-DDE	90	20	8.9	10.0	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
2,4,5,6-Tetrachloro-m-Xylene	81	25-145	
Decachlorobiphenyl	104	24-168	

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0886
 Preparation: EPA 3541
 Method: EPA 8081A
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 3 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIME-COMP-M-011218	18-01-0886-2-AA	01/12/18 09:02	Sediment	GC 41	01/12/18	01/16/18 15:01	180112L17

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	1.8	0.81	1.00	
Alpha-BHC	ND	3.7	1.4	1.00	
Beta-BHC	ND	1.8	0.92	1.00	
Delta-BHC	ND	3.7	1.6	1.00	
Gamma-BHC	ND	1.8	0.82	1.00	
Dieldrin	1.8	1.8	0.81	1.00	J
Trans-nonachlor	3.7	1.8	0.50	1.00	
2,4'-DDD	12	1.8	0.53	1.00	
2,4'-DDE	12	3.7	1.8	1.00	
2,4'-DDT	ND	1.8	0.58	1.00	
4,4'-DDT	4.6	1.8	0.81	1.00	
Endosulfan I	ND	1.8	0.73	1.00	
Endosulfan II	ND	1.8	0.87	1.00	
Endosulfan Sulfate	ND	1.8	0.96	1.00	
Endrin	ND	1.8	0.89	1.00	
Endrin Aldehyde	ND	1.8	1.1	1.00	
Endrin Ketone	ND	1.8	0.93	1.00	
Heptachlor	ND	1.8	0.80	1.00	
Heptachlor Epoxide	ND	3.7	1.4	1.00	
Methoxychlor	ND	1.8	1.0	1.00	
Toxaphene	ND	37	17	1.00	
Alpha Chlordane	2.0	1.8	0.75	1.00	
Gamma Chlordane	6.9	3.7	1.6	1.00	
Cis-nonachlor	ND	1.8	0.48	1.00	
Oxychlordane	ND	1.8	0.50	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
2,4,5,6-Tetrachloro-m-Xylene	75	25-145			
Decachlorobiphenyl	101	24-168			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0886
 Preparation: EPA 3541
 Method: EPA 8081A
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 4 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIME-COMP-M-011218	18-01-0886-2-AA	01/12/18 09:02	Sediment	GC 41	01/12/18	01/16/18 16:31	180112L17

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
4,4'-DDD	100	18	9.2	10.0	
4,4'-DDE	79	18	8.2	10.0	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
2,4,5,6-Tetrachloro-m-Xylene	73	25-145	
Decachlorobiphenyl	101	24-168	

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0886
 Preparation: EPA 3541
 Method: EPA 8081A
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 5 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-858-512	N/A	Solid	GC 41	01/12/18	01/16/18 15:46	180112L17

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	1.0	0.44	1.00	
Alpha-BHC	ND	2.0	0.74	1.00	
Beta-BHC	ND	1.0	0.50	1.00	
Delta-BHC	ND	2.0	0.88	1.00	
Gamma-BHC	ND	1.0	0.45	1.00	
Dieldrin	ND	1.0	0.44	1.00	
Trans-nonachlor	ND	1.0	0.27	1.00	
2,4'-DDD	ND	1.0	0.29	1.00	
2,4'-DDE	ND	2.0	0.99	1.00	
2,4'-DDT	ND	1.0	0.31	1.00	
4,4'-DDD	ND	1.0	0.50	1.00	
4,4'-DDE	ND	1.0	0.44	1.00	
4,4'-DDT	ND	1.0	0.44	1.00	
Endosulfan I	ND	1.0	0.40	1.00	
Endosulfan II	ND	1.0	0.47	1.00	
Endosulfan Sulfate	ND	1.0	0.52	1.00	
Endrin	ND	1.0	0.48	1.00	
Endrin Aldehyde	ND	1.0	0.60	1.00	
Endrin Ketone	ND	1.0	0.50	1.00	
Heptachlor	ND	1.0	0.43	1.00	
Heptachlor Epoxide	ND	2.0	0.74	1.00	
Methoxychlor	ND	1.0	0.56	1.00	
Toxaphene	ND	20	9.0	1.00	
Alpha Chlordane	ND	1.0	0.41	1.00	
Gamma Chlordane	ND	2.0	0.89	1.00	
Cis-nonachlor	ND	1.0	0.26	1.00	
Oxychlordane	ND	1.0	0.27	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2,4,5,6-Tetrachloro-m-Xylene	55	25-145	
Decachlorobiphenyl	101	24-168	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0886
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIME-COMP-T-011218	18-01-0886-1-AA	01/12/18 08:00	Sediment	GC/MS AAA	01/12/18	01/15/18 17:34	180112L18

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	ND	20	4.8	1.00	
Acenaphthylene	ND	20	3.6	1.00	
Anthracene	ND	20	7.0	1.00	
Benzo (a) Anthracene	16	20	4.4	1.00	J
Benzo (a) Pyrene	25	20	3.7	1.00	
Benzo (b) Fluoranthene	33	20	5.5	1.00	
Benzo (g,h,i) Perylene	32	20	3.1	1.00	
Benzo (k) Fluoranthene	23	20	5.6	1.00	
Chrysene	23	20	4.5	1.00	
Dibenz (a,h) Anthracene	8.2	20	3.9	1.00	J
Fluoranthene	25	20	3.7	1.00	
Fluorene	ND	20	6.3	1.00	
Indeno (1,2,3-c,d) Pyrene	25	20	3.2	1.00	
2-Methylnaphthalene	ND	20	4.7	1.00	
1-Methylnaphthalene	ND	20	4.7	1.00	
Naphthalene	ND	20	7.0	1.00	
Phenanthrene	9.0	20	4.5	1.00	J
Pyrene	41	20	4.5	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	55	14-146	
Nitrobenzene-d5	50	18-162	
p-Terphenyl-d14	68	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0886
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIME-COMP-M-011218	18-01-0886-2-AA	01/12/18 09:02	Sediment	GC/MS AAA	01/12/18	01/15/18 17:54	180112L18

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	ND	18	4.3	1.00	
Acenaphthylene	ND	18	3.3	1.00	
Anthracene	ND	18	6.4	1.00	
Benzo (a) Anthracene	14	18	4.0	1.00	J
Benzo (a) Pyrene	19	18	3.4	1.00	
Benzo (b) Fluoranthene	28	18	5.0	1.00	
Benzo (g,h,i) Perylene	23	18	2.8	1.00	
Benzo (k) Fluoranthene	20	18	5.1	1.00	
Chrysene	18	18	4.1	1.00	J
Dibenz (a,h) Anthracene	4.6	18	3.6	1.00	J
Fluoranthene	20	18	3.4	1.00	
Fluorene	ND	18	5.8	1.00	
Indeno (1,2,3-c,d) Pyrene	18	18	2.9	1.00	J
2-Methylnaphthalene	ND	18	4.3	1.00	
1-Methylnaphthalene	ND	18	4.3	1.00	
Naphthalene	ND	18	6.4	1.00	
Phenanthrene	7.9	18	4.1	1.00	J
Pyrene	45	18	4.1	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	60	14-146	
Nitrobenzene-d5	52	18-162	
p-Terphenyl-d14	79	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0886
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-097-252	N/A	Solid	GC/MS AAA	01/12/18	01/15/18 15:38	180112L18

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	ND	10	2.4	1.00	
Acenaphthylene	ND	10	1.8	1.00	
Anthracene	ND	10	3.5	1.00	
Benzo (a) Anthracene	ND	10	2.2	1.00	
Benzo (a) Pyrene	ND	10	1.8	1.00	
Benzo (b) Fluoranthene	ND	10	2.7	1.00	
Benzo (g,h,i) Perylene	ND	10	1.5	1.00	
Benzo (k) Fluoranthene	ND	10	2.8	1.00	
Chrysene	ND	10	2.2	1.00	
Dibenz (a,h) Anthracene	ND	10	2.0	1.00	
Fluoranthene	ND	10	1.8	1.00	
Fluorene	ND	10	3.1	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	10	1.6	1.00	
2-Methylnaphthalene	ND	10	2.3	1.00	
1-Methylnaphthalene	ND	10	2.3	1.00	
Naphthalene	ND	10	3.5	1.00	
Phenanthrene	ND	10	2.2	1.00	
Pyrene	ND	10	2.2	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	89	14-146	
Nitrobenzene-d5	80	18-162	
p-Terphenyl-d14	100	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC	Date Received:	01/12/18
27201 Puerta Real, Suite 350	Work Order:	18-01-0886
Mission Viejo, CA 92691-8306	Preparation:	EPA 3541
	Method:	EPA 8270C SIM PCB Congeners
	Units:	ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIME-COMP-T-011218	18-01-0886-1-AA	01/12/18 08:00	Sediment	GC/MS HHH	01/12/18	01/16/18 17:46	180112L19

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB018	ND	0.40	0.13	1.00	
PCB028	ND	0.40	0.14	1.00	
PCB037	ND	0.40	0.12	1.00	
PCB044	0.73	0.40	0.31	1.00	
PCB049	0.49	0.40	0.10	1.00	
PCB052	0.89	0.40	0.38	1.00	
PCB066	0.94	0.40	0.25	1.00	
PCB070	0.61	0.40	0.14	1.00	
PCB074	ND	0.40	0.18	1.00	
PCB077	ND	0.40	0.23	1.00	
PCB081	ND	0.40	0.18	1.00	
PCB087	1.8	0.40	0.23	1.00	
PCB099	0.84	0.40	0.096	1.00	
PCB101	1.7	0.40	0.090	1.00	
PCB105	ND	0.40	0.11	1.00	
PCB110	1.5	0.40	0.068	1.00	
PCB114	ND	0.40	0.15	1.00	
PCB118	1.3	0.40	0.070	1.00	
PCB119	ND	0.40	0.13	1.00	
PCB123	ND	0.40	0.15	1.00	
PCB126	ND	0.40	0.11	1.00	
PCB128	ND	0.40	0.24	1.00	
PCB132/153	2.3	0.81	0.33	1.00	
PCB138/158	2.7	0.81	0.71	1.00	
PCB149	1.7	0.40	0.24	1.00	
PCB151	0.74	0.40	0.18	1.00	
PCB156	ND	0.40	0.16	1.00	
PCB157	ND	0.40	0.17	1.00	
PCB167	ND	0.40	0.27	1.00	
PCB168	ND	0.40	0.29	1.00	
PCB169	ND	0.40	0.13	1.00	
PCB170	0.92	0.40	0.22	1.00	
PCB177	0.48	0.40	0.24	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0886
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 6

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB180	1.8	0.40	0.19	1.00	
PCB183	0.59	0.40	0.19	1.00	
PCB187	0.94	0.40	0.21	1.00	
PCB189	ND	0.40	0.13	1.00	
PCB194	ND	0.40	0.15	1.00	
PCB201	ND	0.40	0.069	1.00	
PCB206	ND	0.40	0.23	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	80	14-146			
p-Terphenyl-d14	89	34-148			

Return to Contents 

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0886
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 3 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIME-COMP-M-011218	18-01-0886-2-AA	01/12/18 09:02	Sediment	GC/MS HHH	01/12/18	01/16/18 18:10	180112L19

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB018	ND	0.37	0.12	1.00	
PCB028	1.1	0.37	0.13	1.00	
PCB037	ND	0.37	0.11	1.00	
PCB044	1.8	0.37	0.28	1.00	
PCB049	1.3	0.37	0.091	1.00	
PCB052	1.7	0.37	0.35	1.00	
PCB066	2.2	0.37	0.23	1.00	
PCB070	1.7	0.37	0.13	1.00	
PCB074	1.1	0.37	0.17	1.00	
PCB077	0.48	0.37	0.21	1.00	
PCB081	ND	0.37	0.17	1.00	
PCB087	1.8	0.37	0.21	1.00	
PCB099	1.6	0.37	0.087	1.00	
PCB101	2.7	0.37	0.082	1.00	
PCB105	2.1	0.37	0.099	1.00	
PCB110	2.5	0.37	0.062	1.00	
PCB114	ND	0.37	0.14	1.00	
PCB118	2.0	0.37	0.064	1.00	
PCB119	ND	0.37	0.12	1.00	
PCB123	ND	0.37	0.13	1.00	
PCB126	ND	0.37	0.10	1.00	
PCB128	ND	0.37	0.22	1.00	
PCB132/153	3.7	0.74	0.30	1.00	
PCB138/158	3.3	0.74	0.65	1.00	
PCB149	2.9	0.37	0.22	1.00	
PCB151	0.93	0.37	0.16	1.00	
PCB156	ND	0.37	0.14	1.00	
PCB157	ND	0.37	0.16	1.00	
PCB167	ND	0.37	0.25	1.00	
PCB168	ND	0.37	0.26	1.00	
PCB169	ND	0.37	0.12	1.00	
PCB170	ND	0.37	0.20	1.00	
PCB177	0.65	0.37	0.22	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0886
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 4 of 6

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB180	2.6	0.37	0.17	1.00	
PCB183	0.73	0.37	0.17	1.00	
PCB187	1.5	0.37	0.19	1.00	
PCB189	ND	0.37	0.12	1.00	
PCB194	ND	0.37	0.14	1.00	
PCB201	ND	0.37	0.063	1.00	
PCB206	ND	0.37	0.21	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	82	14-146			
p-Terphenyl-d14	91	34-148			

Analytical Report

ANCHOR QEA, LLC	Date Received:	01/12/18
27201 Puerta Real, Suite 350	Work Order:	18-01-0886
Mission Viejo, CA 92691-8306	Preparation:	EPA 3541
	Method:	EPA 8270C SIM PCB Congeners
	Units:	ug/kg

Project: City of Newport Beach - Federal Channels

Page 5 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-418-284	N/A	Solid	GC/MS HHH	01/12/18	01/16/18 21:19	180112L19

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB018	ND	0.20	0.065	1.00	
PCB028	ND	0.20	0.069	1.00	
PCB037	ND	0.20	0.061	1.00	
PCB044	ND	0.20	0.15	1.00	
PCB049	ND	0.20	0.050	1.00	
PCB052	ND	0.20	0.19	1.00	
PCB066	ND	0.20	0.12	1.00	
PCB070	ND	0.20	0.072	1.00	
PCB074	ND	0.20	0.090	1.00	
PCB077	ND	0.20	0.12	1.00	
PCB081	ND	0.20	0.090	1.00	
PCB087	ND	0.20	0.11	1.00	
PCB099	ND	0.20	0.047	1.00	
PCB101	ND	0.20	0.044	1.00	
PCB105	ND	0.20	0.053	1.00	
PCB110	ND	0.20	0.034	1.00	
PCB114	ND	0.20	0.074	1.00	
PCB118	ND	0.20	0.035	1.00	
PCB119	ND	0.20	0.062	1.00	
PCB123	ND	0.20	0.073	1.00	
PCB126	ND	0.20	0.055	1.00	
PCB128	ND	0.20	0.12	1.00	
PCB132/153	ND	0.40	0.16	1.00	
PCB138/158	ND	0.40	0.35	1.00	
PCB149	ND	0.20	0.12	1.00	
PCB151	ND	0.20	0.088	1.00	
PCB156	ND	0.20	0.077	1.00	
PCB157	ND	0.20	0.085	1.00	
PCB167	ND	0.20	0.13	1.00	
PCB168	ND	0.20	0.14	1.00	
PCB169	ND	0.20	0.065	1.00	
PCB170	ND	0.20	0.11	1.00	
PCB177	ND	0.20	0.12	1.00	
PCB180	ND	0.20	0.092	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0886
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 6 of 6

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB183	ND	0.20	0.093	1.00	
PCB187	ND	0.20	0.10	1.00	
PCB189	ND	0.20	0.064	1.00	
PCB194	ND	0.20	0.074	1.00	
PCB201	ND	0.20	0.034	1.00	
PCB206	ND	0.20	0.12	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	83	14-146			
p-Terphenyl-d14	82	34-148			

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0886
 Preparation: EPA 3550B (M)
 Method: Organotins by Krone et al.
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIME-COMP-T-011218	18-01-0886-1-AA	01/12/18 08:00	Sediment	GC/MS Y	01/13/18	01/15/18 12:47	180113L03

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	3.1	6.0	1.5	1.00	J
Monobutyltin	ND	6.0	2.8	1.00	
Tetrabutyltin	ND	6.0	1.5	1.00	
Tributyltin	ND	6.0	3.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	27	27-135	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIME-COMP-M-011218	18-01-0886-2-AA	01/12/18 09:02	Sediment	GC/MS Y	01/13/18	01/15/18 13:04	180113L03

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	ND	5.6	1.4	1.00	
Monobutyltin	ND	5.6	2.6	1.00	
Tetrabutyltin	ND	5.6	1.4	1.00	
Tributyltin	ND	5.6	2.8	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	73	27-135	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-07-016-1552	N/A	Solid	GC/MS Y	01/13/18	01/15/18 10:59	180113L03

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	ND	3.0	0.73	1.00	
Monobutyltin	ND	3.0	1.4	1.00	
Tetrabutyltin	ND	3.0	0.74	1.00	
Tributyltin	ND	3.0	1.5	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	49	27-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0886
Preparation: N/A
Method: EPA 9060A

Project: City of Newport Beach - Federal Channels

Page 1 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
18-01-0888-1	Sample	Sediment	TOC 9	01/15/18	01/15/18 21:58	I0115TOCS1
18-01-0888-1	Matrix Spike	Sediment	TOC 9	01/15/18	01/15/18 21:58	I0115TOCS1
18-01-0888-1	Matrix Spike Duplicate	Sediment	TOC 9	01/15/18	01/15/18 21:58	I0115TOCS1

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Carbon, Total Organic	0.8000	3.000	3.826	101	3.584	93	75-125	7	0-25	


 Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0886
Preparation: EPA 3541
Method: EPA 8270D (M)/TQ/EI

Project: City of Newport Beach - Federal Channels

Page 2 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
18-01-0888-1	Sample	Sediment	GCTQ 2	01/15/18	01/15/18 23:59	180115S03				
18-01-0888-1	Matrix Spike	Sediment	GCTQ 2	01/15/18	01/16/18 01:31	180115S03				
18-01-0888-1	Matrix Spike Duplicate	Sediment	GCTQ 2	01/15/18	01/16/18 02:17	180115S03				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Allethrin	ND	5.000	4.438	89	4.287	86	10-148	3	0-30	
Bifenthrin	ND	5.000	6.345	127	5.501	110	26-128	14	0-30	
Cyfluthrin	ND	5.000	7.963	159	6.946	139	10-131	14	0-30	3
Cypermethrin	ND	5.000	7.947	159	6.741	135	10-136	16	0-30	3
Deltamethrin/Tralomethrin	ND	5.000	5.346	107	4.772	95	13-190	11	0-30	
Fenpropathrin	ND	5.000	7.511	150	6.725	134	10-148	11	0-30	3
Fenvalerate/Esfenvalerate	ND	5.000	10.27	205	8.857	177	10-149	15	0-30	3
Fluvalinate	ND	5.000	6.619	132	5.893	118	10-121	12	0-30	3
Permethrin (cis/trans)	ND	5.000	7.301	146	6.516	130	45-123	11	0-30	3
Phenothrin	ND	5.000	7.069	141	6.318	126	45-165	11	0-30	
Resmethrin/Bioresmethrin	ND	5.000	7.220	144	6.729	135	38-164	7	0-30	
Tetramethrin	ND	5.000	8.278	166	7.869	157	15-153	5	0-30	3
lambda-Cyhalothrin	ND	5.000	9.523	190	8.624	172	10-123	10	0-30	3

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0886
Preparation: EPA 3050B
Method: EPA 6020

Project: City of Newport Beach - Federal Channels

Page 3 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
18-01-0888-1	Sample	Sediment	ICP/MS 03	01/15/18	01/15/18 19:21	180115S01
18-01-0888-1	Matrix Spike	Sediment	ICP/MS 03	01/15/18	01/15/18 19:14	180115S01
18-01-0888-1	Matrix Spike Duplicate	Sediment	ICP/MS 03	01/15/18	01/15/18 19:16	180115S01

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	4.828	25.00	30.97	105	31.19	105	80-120	1	0-20	
Cadmium	1.099	25.00	29.00	112	29.76	115	80-120	3	0-20	
Chromium	19.81	25.00	47.40	110	49.16	117	80-120	4	0-20	
Copper	26.23	25.00	52.94	107	52.44	105	80-120	1	0-20	
Lead	19.61	25.00	47.56	112	47.83	113	80-120	1	0-20	
Nickel	13.68	25.00	40.46	107	40.68	108	80-120	1	0-20	
Selenium	0.7854	25.00	27.36	106	28.15	109	80-120	3	0-20	
Silver	0.1403	12.50	13.73	109	14.39	114	80-120	5	0-20	
Zinc	81.44	25.00	111.2	119	110.7	117	80-120	0	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0886
Preparation: EPA 7471A Total
Method: EPA 7471A

Project: City of Newport Beach - Federal Channels

Page 4 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
BIME-COMP-T-011218	Sample	Sediment	Mercury 07	01/15/18	01/15/18 15:38	180115S03
BIME-COMP-T-011218	Matrix Spike	Sediment	Mercury 07	01/15/18	01/15/18 15:40	180115S03
BIME-COMP-T-011218	Matrix Spike Duplicate	Sediment	Mercury 07	01/15/18	01/15/18 15:43	180115S03

<u>Parameter</u>	<u>Sample Conc.</u>	<u>Spike Added</u>	<u>MS Conc.</u>	<u>MS %Rec.</u>	<u>MSD Conc.</u>	<u>MSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Mercury	0.06996	0.8350	0.8387	92	0.7654	83	76-136	9	0-16	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0886
Preparation: EPA 3541
Method: EPA 8081A

Project: City of Newport Beach - Federal Channels

Page 5 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
18-01-0888-1	Sample	Sediment	GC 41	01/12/18	01/16/18 16:01	180112S17
18-01-0888-1	Matrix Spike	Sediment	GC 41	01/12/18	01/16/18 13:46	180112S17
18-01-0888-1	Matrix Spike Duplicate	Sediment	GC 41	01/12/18	01/16/18 14:01	180112S17

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Aldrin	ND	5.000	3.713	74	3.993	80	50-135	7	0-25	
Alpha-BHC	ND	5.000	4.105	82	4.334	87	50-135	5	0-25	
Beta-BHC	ND	5.000	3.744	75	3.934	79	50-135	5	0-25	
Delta-BHC	ND	5.000	3.485	70	3.702	74	50-135	6	0-25	
Gamma-BHC	ND	5.000	5.492	110	5.792	116	50-135	5	0-25	
Dieldrin	ND	5.000	4.630	93	5.016	100	50-135	8	0-25	
4,4'-DDD	13.03	5.000	16.82	76	18.06	101	50-135	7	0-25	
4,4'-DDE	52.82	5.000	49.65	0	51.47	0	50-135	4	0-25	3
4,4'-DDT	3.107	5.000	7.087	80	7.525	88	50-135	6	0-25	
Endosulfan I	ND	5.000	4.554	91	4.882	98	50-135	7	0-25	
Endosulfan II	ND	5.000	3.965	79	4.245	85	50-135	7	0-25	
Endosulfan Sulfate	ND	5.000	3.842	77	4.169	83	50-135	8	0-25	
Endrin	ND	5.000	4.019	80	4.370	87	50-135	8	0-25	
Endrin Aldehyde	ND	5.000	0	0	0	0	50-135	0	0-25	3
Endrin Ketone	ND	5.000	4.185	84	4.527	91	50-135	8	0-25	
Heptachlor	ND	5.000	3.718	74	3.914	78	50-135	5	0-25	
Heptachlor Epoxide	ND	5.000	5.603	112	6.026	121	50-135	7	0-25	
Methoxychlor	ND	5.000	4.464	89	4.638	93	50-135	4	0-25	
Alpha Chlordane	ND	5.000	5.202	104	5.553	111	50-135	7	0-25	
Gamma Chlordane	ND	5.000	5.026	101	5.336	107	50-135	6	0-25	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0886
Preparation: EPA 3541
Method: EPA 8270C SIM PAHs

Project: City of Newport Beach - Federal Channels

Page 6 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
18-01-0888-1	Sample	Sediment	GC/MS AAA	01/12/18	01/16/18 15:34	180112S18
18-01-0888-1	Matrix Spike	Sediment	GC/MS AAA	01/12/18	01/15/18 16:36	180112S18
18-01-0888-1	Matrix Spike Duplicate	Sediment	GC/MS AAA	01/12/18	01/15/18 16:56	180112S18

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Acenaphthene	ND	100.0	84.88	85	80.90	81	40-160	5	0-20	
Acenaphthylene	ND	100.0	80.59	81	75.62	76	40-160	6	0-20	
Anthracene	ND	100.0	94.90	95	91.04	91	40-160	4	0-20	
Benzo (a) Anthracene	10.29	100.0	105.9	96	100.7	90	40-160	5	0-20	
Benzo (a) Pyrene	15.72	100.0	112.1	96	108.8	93	40-160	3	0-20	
Benzo (b) Fluoranthene	20.42	100.0	123.3	103	117.7	97	40-160	5	0-20	
Benzo (g,h,i) Perylene	17.84	100.0	120.5	103	117.9	100	40-160	2	0-20	
Benzo (k) Fluoranthene	16.99	100.0	107.7	91	102.9	86	40-160	5	0-20	
Chrysene	13.84	100.0	105.9	92	100.9	87	40-160	5	0-20	
Dibenz (a,h) Anthracene	ND	100.0	112.8	113	111.0	111	40-160	2	0-20	
Fluoranthene	16.25	100.0	110.4	94	107.7	91	40-160	2	0-20	
Fluorene	ND	100.0	83.21	83	80.10	80	40-160	4	0-20	
Indeno (1,2,3-c,d) Pyrene	14.27	100.0	117.6	103	115.9	102	40-160	2	0-20	
2-Methylnaphthalene	ND	100.0	80.96	81	81.77	82	40-160	1	0-20	
1-Methylnaphthalene	ND	100.0	79.62	80	80.32	80	40-160	1	0-20	
Naphthalene	ND	100.0	74.96	75	72.72	73	40-160	3	0-20	
Phenanthrene	ND	100.0	101.3	101	96.61	97	40-160	5	0-20	
Pyrene	29.05	100.0	132.9	104	128.4	99	40-160	3	0-46	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0886
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners

Project: City of Newport Beach - Federal Channels

Page 7 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
18-01-0888-1	Sample	Sediment	GC/MS HHH	01/12/18	01/16/18 20:32	180112S19
18-01-0888-1	Matrix Spike	Sediment	GC/MS HHH	01/12/18	01/16/18 19:21	180112S19
18-01-0888-1	Matrix Spike Duplicate	Sediment	GC/MS HHH	01/12/18	01/16/18 19:44	180112S19

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
PCB018	ND	50.00	33.40	67	34.38	69	50-150	3	0-25	
PCB028	ND	50.00	38.64	77	40.64	81	50-150	5	0-25	
PCB044	0.5170	50.00	35.78	71	36.72	72	50-150	3	0-25	
PCB052	0.5942	50.00	34.39	68	35.91	71	50-150	4	0-25	
PCB066	0.4339	50.00	40.83	81	41.99	83	50-150	3	0-25	
PCB077	ND	50.00	36.32	73	38.09	76	50-150	5	0-25	
PCB101	0.7929	50.00	35.73	70	37.08	73	50-150	4	0-25	
PCB105	ND	50.00	38.63	77	39.65	79	50-150	3	0-25	
PCB118	0.5260	50.00	38.25	75	39.63	78	50-150	4	0-25	
PCB126	ND	50.00	36.29	73	37.70	75	50-150	4	0-25	
PCB128	ND	50.00	35.38	71	38.05	76	50-150	7	0-25	
PCB170	ND	50.00	38.85	78	40.28	81	50-150	4	0-25	
PCB180	0.7963	50.00	40.67	80	43.22	85	50-150	6	0-25	
PCB187	0.6084	50.00	39.33	77	41.54	82	50-150	5	0-25	
PCB195	ND	50.00	33.61	67	35.34	71	50-150	5	0-25	
PCB206	ND	50.00	39.67	79	42.05	84	50-150	6	0-25	
PCB209	ND	50.00	33.96	68	35.34	71	50-150	4	0-25	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0886
Preparation: EPA 3550B (M)
Method: Organotins by Krone et al.

Project: City of Newport Beach - Federal Channels

Page 8 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
18-01-0888-1	Sample	Sediment	GC/MS Y	01/13/18	01/15/18 12:30	180113S03				
18-01-0888-1	Matrix Spike	Sediment	GC/MS Y	01/13/18	01/15/18 11:55	180113S03				
18-01-0888-1	Matrix Spike Duplicate	Sediment	GC/MS Y	01/13/18	01/15/18 12:12	180113S03				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Tetrabutyltin	ND	100.0	90.28	90	89.10	89	33-129	1	0-36	
Tributyltin	ND	100.0	65.29	65	63.23	63	34-142	3	0-50	


 Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - PDS

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0886
Preparation: EPA 3050B
Method: EPA 6020

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
18-01-0888-1	Sample	Sediment	ICP/MS 03	01/15/18 00:00	01/15/18 19:21	180115S01
18-01-0888-1	PDS	Sediment	ICP/MS 03	01/15/18 00:00	01/15/18 19:19	180115S01

Parameter	Sample Conc.	Spike Added	PDS Conc.	PDS %Rec.	%Rec. CL	Qualifiers
Arsenic	4.828	25.00	27.55	91	75-125	
Cadmium	1.099	25.00	24.97	95	75-125	
Chromium	19.81	25.00	42.62	91	75-125	
Copper	26.23	25.00	47.86	87	75-125	
Lead	19.61	25.00	43.04	94	75-125	
Nickel	13.68	25.00	36.73	92	75-125	
Selenium	0.7854	25.00	24.50	95	75-125	
Silver	0.1403	12.50	11.74	93	75-125	
Zinc	81.44	25.00	104.0	90	75-125	



Calscience

Quality Control - Sample Duplicate

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0886
 Preparation: N/A
 Method: SM 2540 B (M)

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
BIME-COMP-T-011218	Sample	Sediment	N/A	01/12/18 00:00	01/12/18 19:30	I0112TSD3
BIME-COMP-T-011218	Sample Duplicate	Sediment	N/A	01/12/18 00:00	01/12/18 19:30	I0112TSD3

<u>Parameter</u>	<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Solids, Total	49.20	49.40	0	0-10	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0886
 Preparation: N/A
 Method: EPA 9060A

Project: City of Newport Beach - Federal Channels

Page 1 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-06-013-1790	LCS	Solid	TOC 9	01/15/18	01/15/18 21:58	I0115TOCL1			
099-06-013-1790	LCSD	Solid	TOC 9	01/15/18	01/15/18 21:58	I0115TOCL1			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Carbon, Total Organic	0.6000	0.6376	106	0.6566	109	80-120	3	0-20	

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0886
 Preparation: EPA 3541
 Method: EPA 8270D (M)/TQ/EI

Project: City of Newport Beach - Federal Channels

Page 2 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-14-403-143	LCS	Solid	GCTQ 2	01/15/18	01/15/18 18:36	180115L03				
099-14-403-143	LCSD	Solid	GCTQ 2	01/15/18	01/15/18 19:22	180115L03				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Allethrin	5.000	4.953	99	4.632	93	10-148	0-171	7	0-25	
Bifenthrin	5.000	4.432	89	3.925	79	26-128	9-145	12	0-25	
Cyfluthrin	5.000	4.007	80	3.674	73	10-131	0-151	9	0-25	
Cypermethrin	5.000	3.754	75	3.501	70	10-136	0-157	7	0-25	
Deltamethrin/Tralomethrin	5.000	3.469	69	3.427	69	13-190	0-220	1	0-25	
Fenpropathrin	5.000	3.527	71	3.397	68	10-148	0-171	4	0-25	
Fenvalerate/Esfenvalerate	5.000	3.968	79	3.874	77	10-149	0-172	2	0-25	
Fluvalinate	5.000	3.345	67	3.259	65	10-121	0-140	3	0-25	
Permethrin (cis/trans)	5.000	4.557	91	4.299	86	45-123	32-136	6	0-25	
Phenothrin	5.000	4.523	90	4.250	85	45-165	25-185	6	0-25	
Resmethrin/Bioresmethrin	5.000	5.909	118	5.678	114	38-164	17-185	4	0-25	
Tetramethrin	5.000	4.656	93	4.235	85	15-153	0-176	9	0-25	
lambda-Cyhalothrin	5.000	4.083	82	3.921	78	10-123	0-142	4	0-25	

Total number of LCS compounds: 13

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0886
 Preparation: EPA 3050B
 Method: EPA 6020

Project: City of Newport Beach - Federal Channels

Page 3 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-15-254-567	LCS	Solid	ICP/MS 03	01/15/18	01/15/18 19:08	180115L01E			
099-15-254-567	LCSD	Solid	ICP/MS 03	01/15/18	01/15/18 19:11	180115L01E			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	25.00	21.14	85	21.31	85	80-120	1	0-20	
Cadmium	25.00	22.19	89	22.14	89	80-120	0	0-20	
Chromium	25.00	21.60	86	21.88	88	80-120	1	0-20	
Copper	25.00	21.07	84	21.22	85	80-120	1	0-20	
Lead	25.00	21.57	86	21.81	87	80-120	1	0-20	
Nickel	25.00	21.58	86	21.34	85	80-120	1	0-20	
Selenium	25.00	21.36	85	21.26	85	80-120	0	0-20	
Silver	12.50	10.67	85	10.71	86	80-120	0	0-20	
Zinc	25.00	21.80	87	21.84	87	80-120	0	0-20	

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0886
Preparation: EPA 7471A Total
Method: EPA 7471A

Project: City of Newport Beach - Federal Channels

Page 4 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-16-278-364	LCS	Solid	Mercury 07	01/15/18	01/15/18 15:36	180115L03E			
099-16-278-364	LCSD	Solid	Mercury 07	01/15/18	01/15/18 15:57	180115L03E			
<u>Parameter</u>	<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>LCSD Conc.</u>	<u>LCSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Mercury	0.8350	0.7887	94	0.7870	94	82-124	0	0-16	

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0886
 Preparation: EPA 3541
 Method: EPA 8081A

Project: City of Newport Beach - Federal Channels

Page 5 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-858-512	LCS	Solid	GC 41	01/12/18	01/16/18 11:23	180112L17				
099-12-858-512	LCSD	Solid	GC 41	01/12/18	01/16/18 13:32	180112L17				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Aldrin	5.000	4.619	92	4.730	95	50-135	36-149	2	0-25	
Alpha-BHC	5.000	4.624	92	4.714	94	50-135	36-149	2	0-25	
Beta-BHC	5.000	4.560	91	4.670	93	50-135	36-149	2	0-25	
Delta-BHC	5.000	4.740	95	4.861	97	50-135	36-149	3	0-25	
Gamma-BHC	5.000	4.741	95	4.851	97	50-135	36-149	2	0-25	
Dieldrin	5.000	4.910	98	4.954	99	50-135	36-149	1	0-25	
4,4'-DDD	5.000	5.261	105	5.384	108	50-135	36-149	2	0-25	
4,4'-DDE	5.000	5.323	106	5.436	109	50-135	36-149	2	0-25	
4,4'-DDT	5.000	5.747	115	5.863	117	50-135	36-149	2	0-25	
Endosulfan I	5.000	4.757	95	4.860	97	50-135	36-149	2	0-25	
Endosulfan II	5.000	5.388	108	5.499	110	50-135	36-149	2	0-25	
Endosulfan Sulfate	5.000	5.142	103	5.263	105	50-135	36-149	2	0-25	
Endrin	5.000	5.095	102	5.165	103	50-135	36-149	1	0-25	
Endrin Aldehyde	5.000	3.886	78	3.958	79	50-135	36-149	2	0-25	
Endrin Ketone	5.000	5.314	106	5.454	109	50-135	36-149	3	0-25	
Heptachlor	5.000	4.857	97	4.967	99	50-135	36-149	2	0-25	
Heptachlor Epoxide	5.000	4.744	95	4.852	97	50-135	36-149	2	0-25	
Methoxychlor	5.000	5.386	108	5.491	110	50-135	36-149	2	0-25	
Alpha Chlordane	5.000	4.751	95	4.852	97	50-135	36-149	2	0-25	
Gamma Chlordane	5.000	4.687	94	4.787	96	50-135	36-149	2	0-25	

Total number of LCS compounds: 20

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0886
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs

Project: City of Newport Beach - Federal Channels

Page 6 of 8

Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-14-097-252	LCS	Solid		GC/MS AAA	01/12/18	01/15/18 15:57	180112L18			
099-14-097-252	LCSD	Solid		GC/MS AAA	01/12/18	01/15/18 16:17	180112L18			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Acenaphthene	100.0	93.67	94	86.83	87	40-160	20-180	8	0-20	
Acenaphthylene	100.0	90.32	90	84.95	85	40-160	20-180	6	0-20	
Anthracene	100.0	93.80	94	89.63	90	40-160	20-180	5	0-20	
Benzo (a) Anthracene	100.0	99.30	99	94.68	95	40-160	20-180	5	0-20	
Benzo (a) Pyrene	100.0	101.2	101	97.68	98	40-160	20-180	4	0-20	
Benzo (b) Fluoranthene	100.0	117.6	118	107.7	108	40-160	20-180	9	0-20	
Benzo (g,h,i) Perylene	100.0	108.2	108	103.8	104	40-160	20-180	4	0-20	
Benzo (k) Fluoranthene	100.0	94.70	95	99.35	99	40-160	20-180	5	0-20	
Chrysene	100.0	96.82	97	93.19	93	40-160	20-180	4	0-20	
Dibenz (a,h) Anthracene	100.0	111.7	112	107.2	107	40-160	20-180	4	0-20	
Fluoranthene	100.0	98.28	98	97.88	98	40-160	20-180	0	0-20	
Fluorene	100.0	90.76	91	86.65	87	40-160	20-180	5	0-20	
Indeno (1,2,3-c,d) Pyrene	100.0	107.5	108	104.0	104	40-160	20-180	3	0-20	
2-Methylnaphthalene	100.0	96.17	96	92.21	92	40-160	20-180	4	0-20	
1-Methylnaphthalene	100.0	95.25	95	92.46	92	40-160	20-180	3	0-20	
Naphthalene	100.0	90.61	91	82.52	83	40-160	20-180	9	0-20	
Phenanthrene	100.0	97.17	97	91.80	92	40-160	20-180	6	0-20	
Pyrene	100.0	104.0	104	98.50	98	40-160	20-180	5	0-20	

Total number of LCS compounds: 18

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0886
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners

Project: City of Newport Beach - Federal Channels

Page 7 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-16-418-284	LCS	Solid	GC/MS HHH	01/12/18	01/16/18 18:34	180112L19				
099-16-418-284	LCSD	Solid	GC/MS HHH	01/12/18	01/16/18 18:58	180112L19				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
PCB018	50.00	36.07	72	38.71	77	24-132	6-150	7	0-28	
PCB028	50.00	41.76	84	43.85	88	31-133	14-150	5	0-26	
PCB044	50.00	37.52	75	41.05	82	36-120	22-134	9	0-28	
PCB052	50.00	36.56	73	39.67	79	31-121	16-136	8	0-27	
PCB066	50.00	44.15	88	47.56	95	43-139	27-155	7	0-25	
PCB077	50.00	39.13	78	42.64	85	41-131	26-146	9	0-25	
PCB101	50.00	37.36	75	40.92	82	37-121	23-135	9	0-27	
PCB105	50.00	39.84	80	43.82	88	48-132	34-146	10	0-26	
PCB118	50.00	39.55	79	43.55	87	46-136	31-151	10	0-25	
PCB126	50.00	37.83	76	41.13	82	38-134	22-150	8	0-25	
PCB128	50.00	36.70	73	40.36	81	40-130	25-145	9	0-26	
PCB170	50.00	40.11	80	43.24	86	40-124	26-138	8	0-29	
PCB180	50.00	40.92	82	43.96	88	41-143	24-160	7	0-26	
PCB187	50.00	39.62	79	43.59	87	39-129	24-144	10	0-26	
PCB195	50.00	34.20	68	37.54	75	44-128	30-142	9	0-28	
PCB206	50.00	39.79	80	42.89	86	33-135	16-152	7	0-24	
PCB209	50.00	34.92	70	37.12	74	29-137	11-155	6	0-29	

Total number of LCS compounds: 17

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0886
Preparation: EPA 3550B (M)
Method: Organotins by Krone et al.

Project: City of Newport Beach - Federal Channels

Page 8 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-07-016-1552	LCS	Solid	GC/MS Y	01/13/18	01/16/18 13:04	180113L03			
099-07-016-1552	LCSD	Solid	GC/MS Y	01/13/18	01/16/18 13:22	180113L03			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Tetrabutyltin	100.0	91.01	91	78.95	79	40-142	14	0-20	
Tributyltin	100.0	62.12	62	56.64	57	33-147	9	0-20	

Sample Analysis Summary Report

Work Order: 18-01-0886

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
ASTM D4464 (M)	N/A	1106	LPSA 1	1
EPA 6020	EPA 3050B	598	ICP/MS 03	1
EPA 7471A	EPA 7471A Total	868	Mercury 07	1
EPA 8081A	EPA 3541	669	GC 41	1
EPA 8270C SIM PAHs	EPA 3541	907	GC/MS AAA	1
EPA 8270C SIM PCB Congeners	EPA 3541	907	GC/MS HHH	1
EPA 8270D (M)/TQ/EI	EPA 3541	27	GCTQ 2	3
EPA 9060A	N/A	1141	TOC 9	1
Organotins by Krone et al.	EPA 3550B (M)	907	GC/MS Y	1
SM 2540 B (M)	N/A	1136	N/A	1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
 For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

WO # / LAB USE ONLY
18-01-0886

DATE: 1/12/19
 PAGE: 1 OF 1

LABORATORY CLIENT: **Anchor QEA**

ADDRESS: **27201 Puerta Real, Suite 350**

CITY: **Mission Viejo** STATE: **CA** ZIP: **92691**

TEL: **949.347.2780** E-MAIL: **cosuch@anchorqea.com**

CLIENT PROJECT NAME / NUMBER: **Colorado Lagoon 2B sediment LOWER NEWPORT**

P.O. NO.: **16-548-06.01**

PROJECT CONTACT: **Chris Osuch** QUOTE #

SAMPLER(S): (PRINT) **S. POTTER COSUCH**

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

SAME DAY 24 HR 48 HR 72 HR 5 DAYS STANDARD

COELT EDF GLOBAL ID: LOG CODE:

REQUESTED ANALYSES

SPECIAL INSTRUCTIONS:

Report down to the MDL
BIME-COMP-T + BIME-COMP-M = 48 HR TAT

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	EPA 6020 METALS	EPA 7471A H4	ORGANO CHLORINE PESTICIDES	EPA 8270C SIM-PAH	EPA 8270C SIM PCB CONGENERS	EPA 9060A. TDC	HEAVY ORGANICS	PYTHICINS EPA 92700 (M) (E)	SM 2540B (M) TS	ASTM D4464 (M) PARTICLE SIZE
1	BIME-COMP-T-011219	01/12/19	800	SE	2	X			X	X	X	X	X	X	X	X	X	X
2	BIME-COMP-M-011219	01/12/19	902	SE	2	X			X	X	X	X	X	X	X	X	X	X

Relinquished by: (Signature) <i>Chris Osuch</i>	Received by: (Signature/Affiliation) <i>[Signature]</i>	Date: <u>1/12/18</u>	Time: <u>12:15</u>
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: Anchor QEA

DATE: 01/12/2018

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: +0.2°C); Temperature (w/o CF): 2.8 °C (w/ CF): 3.0 °C; Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: Air Filter

Checked by: J36

CUSTODY SEAL:

Cooler Present and Intact Present but Not Intact Not Present N/A

Checked by: J36

Sample(s) Present and Intact Present but Not Intact Not Present N/A

Checked by: 1050

SAMPLE CONDITION:

Chain-of-Custody (COC) document(s) received with samples Yes No N/A

COC document(s) received complete Yes No N/A

Sampling date Sampling time Matrix Number of containers

No analysis requested Not relinquished No relinquished date No relinquished time

Sampler's name indicated on COC Yes No N/A

Sample container label(s) consistent with COC Yes No N/A

Sample container(s) intact and in good condition Yes No N/A

Proper containers for analyses requested Yes No N/A

Sufficient volume/mass for analyses requested Yes No N/A

Samples received within holding time Yes No N/A

Aqueous samples for certain analyses received within 15-minute holding time

pH Residual Chlorine Dissolved Sulfide Dissolved Oxygen Yes No N/A

Proper preservation chemical(s) noted on COC and/or sample container Yes No N/A

Unpreserved aqueous sample(s) received for certain analyses

Volatile Organics Total Metals Dissolved Metals

Acid/base preserved samples - pH within acceptable range Yes No N/A

Container(s) for certain analysis free of headspace..... Yes No N/A

Volatile Organics Dissolved Gases (RSK-175) Dissolved Oxygen (SM 4500)

Carbon Dioxide (SM 4500) Ferrous Iron (SM 3500) Hydrogen Sulfide (Hach)

Tedlar™ bag(s) free of condensation Yes No N/A

CONTAINER TYPE:

(Trip Blank Lot Number: _____)

Aqueous: VOA VOA_h VOA_{na2} 100PJ 100PJ_{na2} 125AGB 125AGB_h 125AGB_p 125PB 125PB_{znna} (pH__9)

250AGB 250CGB 250CGB_s (pH__2) 250PB 250PB_n (pH__2) 500AGB 500AGJ 500AGJ_s (pH__2) 500PB

1AGB 1AGB_{na2} 1AGB_s (pH__2) 1AGB_s (O&G) 1PB 1PB_{na} (pH__12) _____ _____ _____

Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (____) EnCores® (____) TerraCores® (____) _____ _____ _____

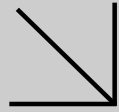
Air: Tedlar™ Canister Sorbent Tube PUF _____ Other Matrix (Sediment): Z 100ZCGJ _____

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO₃, na = NaOH, na₂ = Na₂S₂O₃, p = H₃PO₄, Labeled/Checked by: 1050

s = H₂SO₄, u = ultra-pure, x = Na₂SO₃+NaHSO₄.H₂O, znna = Zn (CH₃CO₂)₂ + NaOH

Reviewed by: J36

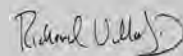

WORK ORDER NUMBER: 18-01-0888
The difference is service


AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For
Client: ANCHOR QEA, LLC

Client Project Name: City of Newport Beach - Federal Channels

Attention: Chris Osuch
 27201 Puerta Real
 Suite 350
 Mission Viejo, CA 92691-8306



 Approved for release on 01/19/2018 by:
 Richard Villafania
 Project Manager

ResultLink ▶

Email your PM ▶

Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Contents

Client Project Name: City of Newport Beach - Federal Channels
 Work Order Number: 18-01-0888

1	Work Order Narrative.	3
2	Sample Summary.	4
3	Client Sample Data.	5
	3.1 EPA 9060A Total Organic Carbon (Solid).	5
	3.2 SM 2540 B (M) Total Solids (Solid).	6
	3.3 Pyrethroids by EPA 8270D (M)/TQ/EI (Solid).	7
	3.4 EPA 6020 ICP/MS Metals (Solid).	9
	3.5 EPA 7471A Mercury (Solid).	10
	3.6 ASTM D4464 (M) Particle Size Laser (Solid).	11
	3.7 EPA 8081A Organochlorine Pesticides (Solid).	12
	3.8 EPA 8270C SIM PAHs (Solid).	15
	3.9 EPA 8270C SIM PCB Congeners (Solid).	17
	3.10 Krone et al. Organotins (Solid).	21
4	Quality Control Sample Data.	22
	4.1 MS/MSD.	22
	4.2 PDS/PDSD.	30
	4.3 Sample Duplicate.	31
	4.4 LCS/LCSD.	32
5	Sample Analysis Summary.	40
6	Glossary of Terms and Qualifiers.	41
7	Chain-of-Custody/Sample Receipt Form.	42

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 01/12/18. They were assigned to Work Order 18-01-0888.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Sample Summary

Client: ANCHOR QEA, LLC	Work Order: 18-01-0888
27201 Puerta Real, Suite 350	Project Name: City of Newport Beach - Federal Channels
Mission Viejo, CA 92691-8306	PO Number:
	Date/Time Received: 01/12/18 12:15
	Number of Containers: 3

Attn: Chris Osuch

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
BIS-COMP-011218	18-01-0888-1	01/12/18 10:04	3	Sediment

Analytical Report

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0888
Preparation: N/A
Method: EPA 9060A
Units: %

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIS-COMP-011218	18-01-0888-1-BB	01/12/18 10:04	Sediment	TOC 9	01/15/18	01/15/18 21:58	I0115TOCL1

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Carbon, Total Organic	1.7	0.11	0.037	1.00	

Method Blank	099-06-013-1790	N/A	Solid	TOC 9	01/15/18	01/15/18 21:58	I0115TOCL1
---------------------	------------------------	------------	--------------	--------------	-----------------	---------------------------	-------------------

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Carbon, Total Organic	ND	0.050	0.017	1.00	

Analytical Report

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0888
Preparation: N/A
Method: SM 2540 B (M)
Units: %

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIS-COMP-011218	18-01-0888-1-AA	01/12/18 10:04	Sediment	N/A	01/15/18	01/15/18 22:00	I0115TSB3

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Solids, Total	47.5	0.100	0.100	1.00	

Method Blank	099-05-019-3918	N/A	Solid	N/A	01/15/18	01/15/18 22:00	I0115TSB3
--------------	-----------------	-----	-------	-----	----------	-------------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Solids, Total	ND	0.100	0.100	1.00	

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0888
 Preparation: EPA 3541
 Method: EPA 8270D (M)/TQ/EI
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIS-COMP-011218	18-01-0888-1-AA	01/12/18 10:04	Sediment	GCTQ 2	01/15/18	01/15/18 23:59	180115L03

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Allethrin	ND	1.1	0.53	1.00	
Bifenthrin	ND	1.1	0.63	1.00	
Cyfluthrin	0.63	1.1	0.53	1.00	J
Cypermethrin	ND	1.1	0.53	1.00	
Deltamethrin/Tralomethrin	ND	1.1	0.53	1.00	
Fenpropathrin	ND	1.1	0.53	1.00	
Fenvalerate/Esfenvalerate	ND	1.1	0.53	1.00	
Fluvalinate	0.82	1.1	0.53	1.00	J
Permethrin (cis/trans)	ND	2.1	1.1	1.00	
Phenothrin	ND	1.1	0.53	1.00	
Resmethrin/Bioresmethrin	ND	1.1	0.89	1.00	
Tetramethrin	ND	1.1	0.63	1.00	
lambda-Cyhalothrin	ND	1.1	0.53	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
Dibutylchloroendate	104	40-160			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0888
 Preparation: EPA 3541
 Method: EPA 8270D (M)/TQ/EI
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-403-143	N/A	Solid	GCTQ 2	01/15/18	01/15/18 20:54	180115L03

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Allethrin	ND	0.50	0.25	1.00	
Bifenthrin	ND	0.50	0.30	1.00	
Cyfluthrin	ND	0.50	0.25	1.00	
Cypermethrin	ND	0.50	0.25	1.00	
Deltamethrin/Tralomethrin	ND	0.50	0.25	1.00	
Fenpropathrin	ND	0.50	0.25	1.00	
Fenvalerate/Esfenvalerate	ND	0.50	0.25	1.00	
Fluvalinate	ND	0.50	0.25	1.00	
Permethrin (cis/trans)	ND	1.0	0.50	1.00	
Phenothrin	ND	0.50	0.25	1.00	
Resmethrin/Bioresmethrin	ND	0.50	0.42	1.00	
Tetramethrin	ND	0.50	0.30	1.00	
lambda-Cyhalothrin	ND	0.50	0.25	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibutylchloroendate	68	40-160	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0888
 Preparation: EPA 3050B
 Method: EPA 6020
 Units: mg/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIS-COMP-011218	18-01-0888-1-AA	01/12/18 10:04	Sediment	ICP/MS 03	01/15/18	01/15/18 19:21	180115L01E

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Arsenic	10.2	0.211	0.184	1.00	
Cadmium	2.31	0.211	0.120	1.00	
Chromium	41.7	0.211	0.131	1.00	
Copper	55.2	0.211	0.0882	1.00	
Lead	41.3	0.211	0.139	1.00	
Nickel	28.8	0.211	0.107	1.00	
Selenium	1.65	0.211	0.154	1.00	
Silver	0.295	0.211	0.0659	1.00	
Zinc	171	2.11	1.67	1.00	

Method Blank	099-15-254-567	N/A	Solid	ICP/MS 03	01/15/18	01/15/18 19:06	180115L01E
---------------------	-----------------------	------------	--------------	------------------	-----------------	---------------------------	-------------------

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Arsenic	ND	0.100	0.0873	1.00	
Cadmium	ND	0.100	0.0572	1.00	
Chromium	ND	0.100	0.0621	1.00	
Copper	ND	0.100	0.0419	1.00	
Lead	ND	0.100	0.0659	1.00	
Nickel	ND	0.100	0.0506	1.00	
Selenium	ND	0.100	0.0731	1.00	
Silver	ND	0.100	0.0313	1.00	
Zinc	ND	1.00	0.795	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0888
Preparation: EPA 7471A Total
Method: EPA 7471A
Units: mg/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIS-COMP-011218	18-01-0888-1-AA	01/12/18 10:04	Sediment	Mercury 07	01/15/18	01/15/18 15:50	180115L03E

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Mercury	0.233	0.0428	0.0126	1.00	

Method Blank	099-16-278-364	N/A	Solid	Mercury 07	01/15/18	01/15/18 15:33	180115L03E
---------------------	-----------------------	------------	--------------	-------------------	-----------------	---------------------------	-------------------

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Mercury	ND	0.0200	0.00587	1.00	

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0888
 Preparation: N/A
 Method: ASTM D4464 (M)
 Units: %

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIS-COMP-011218	18-01-0888-1-C	01/12/18 10:04	Sediment	LPSA 1	N/A	01/12/18 18:43	

<u>Parameter</u>	<u>Result</u>	<u>Qualifiers</u>
Clay (less than 0.00391mm)	25.40	
Silt (0.00391 to 0.0625mm)	65.65	
Total Silt and Clay (0 to 0.0625mm)	91.05	
Very Fine Sand (0.0625 to 0.125mm)	8.91	
Fine Sand (0.125 to 0.25mm)	0.050	
Medium Sand (0.25 to 0.5mm)	ND	
Coarse Sand (0.5 to 1mm)	ND	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0888
 Preparation: EPA 3541
 Method: EPA 8081A
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIS-COMP-011218	18-01-0888-1-AA	01/12/18 10:04	Sediment	GC 41	01/12/18	01/16/18 14:16	180112L17

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	2.1	0.91	1.00	
Alpha-BHC	ND	4.2	1.5	1.00	
Beta-BHC	ND	2.1	1.0	1.00	
Delta-BHC	ND	4.2	1.8	1.00	
Gamma-BHC	ND	2.1	0.93	1.00	
Dieldrin	ND	2.1	0.91	1.00	
Trans-nonachlor	3.4	2.1	0.57	1.00	
2,4'-DDD	3.6	2.1	0.60	1.00	
2,4'-DDE	7.4	4.2	2.1	1.00	
2,4'-DDT	0.71	2.1	0.66	1.00	J
4,4'-DDT	6.5	2.1	0.91	1.00	
Endosulfan I	ND	2.1	0.83	1.00	
Endosulfan II	ND	2.1	0.98	1.00	
Endosulfan Sulfate	ND	2.1	1.1	1.00	
Endrin	ND	2.1	1.0	1.00	
Endrin Aldehyde	ND	2.1	1.3	1.00	
Endrin Ketone	ND	2.1	1.0	1.00	
Heptachlor	ND	2.1	0.90	1.00	
Heptachlor Epoxide	ND	4.2	1.5	1.00	
Methoxychlor	ND	2.1	1.2	1.00	
Toxaphene	ND	42	19	1.00	
Alpha Chlordane	1.5	2.1	0.85	1.00	J
Gamma Chlordane	2.8	4.2	1.8	1.00	J
Cis-nonachlor	1.3	2.1	0.54	1.00	J
Oxychlordane	ND	2.1	0.56	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
2,4,5,6-Tetrachloro-m-Xylene	81	25-145			
Decachlorobiphenyl	103	24-168			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC	Date Received:	01/12/18
27201 Puerta Real, Suite 350	Work Order:	18-01-0888
Mission Viejo, CA 92691-8306	Preparation:	EPA 3541
	Method:	EPA 8081A
	Units:	ug/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIS-COMP-011218	18-01-0888-1-AA	01/12/18 10:04	Sediment	GC 41	01/12/18	01/16/18 16:01	180112L17

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
4,4'-DDD	27	21	10	10.0	
4,4'-DDE	110	21	9.3	10.0	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
2,4,5,6-Tetrachloro-m-Xylene	74	25-145	
Decachlorobiphenyl	97	24-168	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0888
 Preparation: EPA 3541
 Method: EPA 8081A
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-858-512	N/A	Solid	GC 41	01/12/18	01/16/18 15:46	180112L17

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Aldrin	ND	1.0	0.44	1.00	
Alpha-BHC	ND	2.0	0.74	1.00	
Beta-BHC	ND	1.0	0.50	1.00	
Delta-BHC	ND	2.0	0.88	1.00	
Gamma-BHC	ND	1.0	0.45	1.00	
Dieldrin	ND	1.0	0.44	1.00	
Trans-nonachlor	ND	1.0	0.27	1.00	
2,4'-DDD	ND	1.0	0.29	1.00	
2,4'-DDE	ND	2.0	0.99	1.00	
2,4'-DDT	ND	1.0	0.31	1.00	
4,4'-DDD	ND	1.0	0.50	1.00	
4,4'-DDE	ND	1.0	0.44	1.00	
4,4'-DDT	ND	1.0	0.44	1.00	
Endosulfan I	ND	1.0	0.40	1.00	
Endosulfan II	ND	1.0	0.47	1.00	
Endosulfan Sulfate	ND	1.0	0.52	1.00	
Endrin	ND	1.0	0.48	1.00	
Endrin Aldehyde	ND	1.0	0.60	1.00	
Endrin Ketone	ND	1.0	0.50	1.00	
Heptachlor	ND	1.0	0.43	1.00	
Heptachlor Epoxide	ND	2.0	0.74	1.00	
Methoxychlor	ND	1.0	0.56	1.00	
Toxaphene	ND	20	9.0	1.00	
Alpha Chlordane	ND	1.0	0.41	1.00	
Gamma Chlordane	ND	2.0	0.89	1.00	
Cis-nonachlor	ND	1.0	0.26	1.00	
Oxychlordane	ND	1.0	0.27	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
2,4,5,6-Tetrachloro-m-Xylene	55	25-145	
Decachlorobiphenyl	101	24-168	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0888
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIS-COMP-011218	18-01-0888-1-AA	01/12/18 10:04	Sediment	GC/MS AAA	01/12/18	01/16/18 15:34	180112L18

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	ND	21	5.0	1.00	
Acenaphthylene	ND	21	3.8	1.00	
Anthracene	ND	21	7.3	1.00	
Benzo (a) Anthracene	22	21	4.5	1.00	
Benzo (a) Pyrene	33	21	3.9	1.00	
Benzo (b) Fluoranthene	43	21	5.8	1.00	
Benzo (g,h,i) Perylene	38	21	3.2	1.00	
Benzo (k) Fluoranthene	36	21	5.9	1.00	
Chrysene	29	21	4.7	1.00	
Dibenz (a,h) Anthracene	11	21	4.1	1.00	J
Fluoranthene	34	21	3.8	1.00	
Fluorene	ND	21	6.6	1.00	
Indeno (1,2,3-c,d) Pyrene	30	21	3.3	1.00	
2-Methylnaphthalene	ND	21	4.9	1.00	
1-Methylnaphthalene	ND	21	4.9	1.00	
Naphthalene	ND	21	7.3	1.00	
Phenanthrene	12	21	4.7	1.00	J
Pyrene	61	21	4.7	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	79	14-146	
Nitrobenzene-d5	67	18-162	
p-Terphenyl-d14	105	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0888
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-097-252	N/A	Solid	GC/MS AAA	01/12/18	01/15/18 15:38	180112L18

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	ND	10	2.4	1.00	
Acenaphthylene	ND	10	1.8	1.00	
Anthracene	ND	10	3.5	1.00	
Benzo (a) Anthracene	ND	10	2.2	1.00	
Benzo (a) Pyrene	ND	10	1.8	1.00	
Benzo (b) Fluoranthene	ND	10	2.7	1.00	
Benzo (g,h,i) Perylene	ND	10	1.5	1.00	
Benzo (k) Fluoranthene	ND	10	2.8	1.00	
Chrysene	ND	10	2.2	1.00	
Dibenz (a,h) Anthracene	ND	10	2.0	1.00	
Fluoranthene	ND	10	1.8	1.00	
Fluorene	ND	10	3.1	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	10	1.6	1.00	
2-Methylnaphthalene	ND	10	2.3	1.00	
1-Methylnaphthalene	ND	10	2.3	1.00	
Naphthalene	ND	10	3.5	1.00	
Phenanthrene	ND	10	2.2	1.00	
Pyrene	ND	10	2.2	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	89	14-146	
Nitrobenzene-d5	80	18-162	
p-Terphenyl-d14	100	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0888
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIS-COMP-011218	18-01-0888-1-AA	01/12/18 10:04	Sediment	GC/MS HHH	01/12/18	01/16/18 20:32	180112L19

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB018	ND	0.42	0.14	1.00	
PCB028	ND	0.42	0.15	1.00	
PCB037	ND	0.42	0.13	1.00	
PCB044	1.1	0.42	0.32	1.00	
PCB049	0.69	0.42	0.10	1.00	
PCB052	1.3	0.42	0.40	1.00	
PCB066	0.91	0.42	0.26	1.00	
PCB070	0.84	0.42	0.15	1.00	
PCB074	ND	0.42	0.19	1.00	
PCB077	ND	0.42	0.24	1.00	
PCB081	ND	0.42	0.19	1.00	
PCB087	1.6	0.42	0.23	1.00	
PCB099	0.95	0.42	0.10	1.00	
PCB101	1.7	0.42	0.093	1.00	
PCB105	ND	0.42	0.11	1.00	
PCB110	1.8	0.42	0.071	1.00	
PCB114	ND	0.42	0.16	1.00	
PCB118	1.1	0.42	0.073	1.00	
PCB119	ND	0.42	0.13	1.00	
PCB123	ND	0.42	0.15	1.00	
PCB126	ND	0.42	0.12	1.00	
PCB128	ND	0.42	0.25	1.00	
PCB132/153	2.6	0.84	0.34	1.00	
PCB138/158	2.6	0.84	0.74	1.00	
PCB149	1.9	0.42	0.25	1.00	
PCB151	ND	0.42	0.18	1.00	
PCB156	ND	0.42	0.16	1.00	
PCB157	ND	0.42	0.18	1.00	
PCB167	ND	0.42	0.28	1.00	
PCB168	ND	0.42	0.30	1.00	
PCB169	ND	0.42	0.14	1.00	
PCB170	ND	0.42	0.23	1.00	
PCB177	ND	0.42	0.25	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0888
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 4

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB180	1.7	0.42	0.19	1.00	
PCB183	0.63	0.42	0.20	1.00	
PCB187	1.3	0.42	0.22	1.00	
PCB189	ND	0.42	0.14	1.00	
PCB194	ND	0.42	0.16	1.00	
PCB201	ND	0.42	0.072	1.00	
PCB206	ND	0.42	0.24	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	89	14-146			
p-Terphenyl-d14	89	34-148			

Analytical Report

ANCHOR QEA, LLC	Date Received:	01/12/18
27201 Puerta Real, Suite 350	Work Order:	18-01-0888
Mission Viejo, CA 92691-8306	Preparation:	EPA 3541
	Method:	EPA 8270C SIM PCB Congeners
	Units:	ug/kg

Project: City of Newport Beach - Federal Channels

Page 3 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-418-284	N/A	Solid	GC/MS HHH	01/12/18	01/16/18 21:19	180112L19

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB018	ND	0.20	0.065	1.00	
PCB028	ND	0.20	0.069	1.00	
PCB037	ND	0.20	0.061	1.00	
PCB044	ND	0.20	0.15	1.00	
PCB049	ND	0.20	0.050	1.00	
PCB052	ND	0.20	0.19	1.00	
PCB066	ND	0.20	0.12	1.00	
PCB070	ND	0.20	0.072	1.00	
PCB074	ND	0.20	0.090	1.00	
PCB077	ND	0.20	0.12	1.00	
PCB081	ND	0.20	0.090	1.00	
PCB087	ND	0.20	0.11	1.00	
PCB099	ND	0.20	0.047	1.00	
PCB101	ND	0.20	0.044	1.00	
PCB105	ND	0.20	0.053	1.00	
PCB110	ND	0.20	0.034	1.00	
PCB114	ND	0.20	0.074	1.00	
PCB118	ND	0.20	0.035	1.00	
PCB119	ND	0.20	0.062	1.00	
PCB123	ND	0.20	0.073	1.00	
PCB126	ND	0.20	0.055	1.00	
PCB128	ND	0.20	0.12	1.00	
PCB132/153	ND	0.40	0.16	1.00	
PCB138/158	ND	0.40	0.35	1.00	
PCB149	ND	0.20	0.12	1.00	
PCB151	ND	0.20	0.088	1.00	
PCB156	ND	0.20	0.077	1.00	
PCB157	ND	0.20	0.085	1.00	
PCB167	ND	0.20	0.13	1.00	
PCB168	ND	0.20	0.14	1.00	
PCB169	ND	0.20	0.065	1.00	
PCB170	ND	0.20	0.11	1.00	
PCB177	ND	0.20	0.12	1.00	
PCB180	ND	0.20	0.092	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC	Date Received:	01/12/18
27201 Puerta Real, Suite 350	Work Order:	18-01-0888
Mission Viejo, CA 92691-8306	Preparation:	EPA 3541
	Method:	EPA 8270C SIM PCB Congeners
	Units:	ug/kg
Project: City of Newport Beach - Federal Channels		Page 4 of 4

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB183	ND	0.20	0.093	1.00	
PCB187	ND	0.20	0.10	1.00	
PCB189	ND	0.20	0.064	1.00	
PCB194	ND	0.20	0.074	1.00	
PCB201	ND	0.20	0.034	1.00	
PCB206	ND	0.20	0.12	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	83	14-146			
p-Terphenyl-d14	82	34-148			

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0888
 Preparation: EPA 3550B (M)
 Method: Organotins by Krone et al.
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIS-COMP-011218	18-01-0888-1-AA	01/12/18 10:04	Sediment	GC/MS Y	01/13/18	01/15/18 12:30	180113L03

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Dibutyltin	16	6.3	1.5	1.00	
Monobutyltin	ND	6.3	2.9	1.00	
Tetrabutyltin	ND	6.3	1.6	1.00	
Tributyltin	ND	6.3	3.1	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Tripentyltin	100	27-135	

Method Blank	099-07-016-1552	N/A	Solid	GC/MS Y	01/13/18	01/15/18 10:59	180113L03
---------------------	------------------------	------------	--------------	----------------	-----------------	---------------------------	------------------

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Dibutyltin	ND	3.0	0.73	1.00	
Monobutyltin	ND	3.0	1.4	1.00	
Tetrabutyltin	ND	3.0	0.74	1.00	
Tributyltin	ND	3.0	1.5	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Tripentyltin	49	27-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0888
Preparation: N/A
Method: EPA 9060A

Project: City of Newport Beach - Federal Channels

Page 1 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
BIS-COMP-011218	Sample	Sediment	TOC 9	01/15/18	01/15/18 21:58	I0115TOCS1
BIS-COMP-011218	Matrix Spike	Sediment	TOC 9	01/15/18	01/15/18 21:58	I0115TOCS1
BIS-COMP-011218	Matrix Spike Duplicate	Sediment	TOC 9	01/15/18	01/15/18 21:58	I0115TOCS1

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Carbon, Total Organic	0.8000	3.000	3.826	101	3.584	93	75-125	7	0-25	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0888
Preparation: EPA 3541
Method: EPA 8270D (M)/TQ/EI

Project: City of Newport Beach - Federal Channels

Page 2 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
BIS-COMP-011218	Sample	Sediment	GCTQ 2	01/15/18	01/15/18 23:59	180115S03
BIS-COMP-011218	Matrix Spike	Sediment	GCTQ 2	01/15/18	01/16/18 01:31	180115S03
BIS-COMP-011218	Matrix Spike Duplicate	Sediment	GCTQ 2	01/15/18	01/16/18 02:17	180115S03

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Allethrin	ND	5.000	4.438	89	4.287	86	10-148	3	0-30	
Bifenthrin	ND	5.000	6.345	127	5.501	110	26-128	14	0-30	
Cyfluthrin	ND	5.000	7.963	159	6.946	139	10-131	14	0-30	3
Cypermethrin	ND	5.000	7.947	159	6.741	135	10-136	16	0-30	3
Deltamethrin/Tralomethrin	ND	5.000	5.346	107	4.772	95	13-190	11	0-30	
Fenpropathrin	ND	5.000	7.511	150	6.725	134	10-148	11	0-30	3
Fenvalerate/Esfenvalerate	ND	5.000	10.27	205	8.857	177	10-149	15	0-30	3
Fluvalinate	ND	5.000	6.619	132	5.893	118	10-121	12	0-30	3
Permethrin (cis/trans)	ND	5.000	7.301	146	6.516	130	45-123	11	0-30	3
Phenothrin	ND	5.000	7.069	141	6.318	126	45-165	11	0-30	
Resmethrin/Bioresmethrin	ND	5.000	7.220	144	6.729	135	38-164	7	0-30	
Tetramethrin	ND	5.000	8.278	166	7.869	157	15-153	5	0-30	3
lambda-Cyhalothrin	ND	5.000	9.523	190	8.624	172	10-123	10	0-30	3

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0888
Preparation: EPA 3050B
Method: EPA 6020

Project: City of Newport Beach - Federal Channels

Page 3 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
BIS-COMP-011218	Sample	Sediment	ICP/MS 03	01/15/18	01/15/18 19:21	180115S01				
BIS-COMP-011218	Matrix Spike	Sediment	ICP/MS 03	01/15/18	01/15/18 19:14	180115S01				
BIS-COMP-011218	Matrix Spike Duplicate	Sediment	ICP/MS 03	01/15/18	01/15/18 19:16	180115S01				
<u>Parameter</u>	<u>Sample Conc.</u>	<u>Spike Added</u>	<u>MS Conc.</u>	<u>MS %Rec.</u>	<u>MSD Conc.</u>	<u>MSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Arsenic	4.828	25.00	30.97	105	31.19	105	80-120	1	0-20	
Cadmium	1.099	25.00	29.00	112	29.76	115	80-120	3	0-20	
Chromium	19.81	25.00	47.40	110	49.16	117	80-120	4	0-20	
Copper	26.23	25.00	52.94	107	52.44	105	80-120	1	0-20	
Lead	19.61	25.00	47.56	112	47.83	113	80-120	1	0-20	
Nickel	13.68	25.00	40.46	107	40.68	108	80-120	1	0-20	
Selenium	0.7854	25.00	27.36	106	28.15	109	80-120	3	0-20	
Silver	0.1403	12.50	13.73	109	14.39	114	80-120	5	0-20	
Zinc	81.44	25.00	111.2	119	110.7	117	80-120	0	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0888
Preparation: EPA 7471A Total
Method: EPA 7471A

Project: City of Newport Beach - Federal Channels

Page 4 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
BIS-COMP-011218	Sample	Sediment	Mercury 07	01/15/18	01/15/18 15:50	180115S03				
BIS-COMP-011218	Matrix Spike	Sediment	Mercury 07	01/15/18	01/15/18 15:40	180115S03				
BIS-COMP-011218	Matrix Spike Duplicate	Sediment	Mercury 07	01/15/18	01/15/18 15:43	180115S03				
<u>Parameter</u>	<u>Sample Conc.</u>	<u>Spike Added</u>	<u>MS Conc.</u>	<u>MS %Rec.</u>	<u>MSD Conc.</u>	<u>MSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Mercury	0.1105	0.8350	0.8387	87	0.7654	78	76-136	9	0-16	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0888
Preparation: EPA 3541
Method: EPA 8081A

Project: City of Newport Beach - Federal Channels

Page 5 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
BIS-COMP-011218	Sample	Sediment	GC 41	01/12/18	01/16/18 16:01	180112S17
BIS-COMP-011218	Matrix Spike	Sediment	GC 41	01/12/18	01/16/18 13:46	180112S17
BIS-COMP-011218	Matrix Spike Duplicate	Sediment	GC 41	01/12/18	01/16/18 14:01	180112S17

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Aldrin	ND	5.000	3.713	74	3.993	80	50-135	7	0-25	
Alpha-BHC	ND	5.000	4.105	82	4.334	87	50-135	5	0-25	
Beta-BHC	ND	5.000	3.744	75	3.934	79	50-135	5	0-25	
Delta-BHC	ND	5.000	3.485	70	3.702	74	50-135	6	0-25	
Gamma-BHC	ND	5.000	5.492	110	5.792	116	50-135	5	0-25	
Dieldrin	ND	5.000	4.630	93	5.016	100	50-135	8	0-25	
4,4'-DDD	13.03	5.000	16.82	76	18.06	101	50-135	7	0-25	
4,4'-DDE	52.82	5.000	49.65	0	51.47	0	50-135	4	0-25	3
4,4'-DDT	3.107	5.000	7.087	80	7.525	88	50-135	6	0-25	
Endosulfan I	ND	5.000	4.554	91	4.882	98	50-135	7	0-25	
Endosulfan II	ND	5.000	3.965	79	4.245	85	50-135	7	0-25	
Endosulfan Sulfate	ND	5.000	3.842	77	4.169	83	50-135	8	0-25	
Endrin	ND	5.000	4.019	80	4.370	87	50-135	8	0-25	
Endrin Aldehyde	ND	5.000	0	0	0	0	50-135	0	0-25	3
Endrin Ketone	ND	5.000	4.185	84	4.527	91	50-135	8	0-25	
Heptachlor	ND	5.000	3.718	74	3.914	78	50-135	5	0-25	
Heptachlor Epoxide	ND	5.000	5.603	112	6.026	121	50-135	7	0-25	
Methoxychlor	ND	5.000	4.464	89	4.638	93	50-135	4	0-25	
Alpha Chlordane	ND	5.000	5.202	104	5.553	111	50-135	7	0-25	
Gamma Chlordane	ND	5.000	5.026	101	5.336	107	50-135	6	0-25	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0888
Preparation: EPA 3541
Method: EPA 8270C SIM PAHs

Project: City of Newport Beach - Federal Channels

Page 6 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
BIS-COMP-011218	Sample	Sediment	GC/MS AAA	01/12/18	01/16/18 15:34	180112S18				
BIS-COMP-011218	Matrix Spike	Sediment	GC/MS AAA	01/12/18	01/15/18 16:36	180112S18				
BIS-COMP-011218	Matrix Spike Duplicate	Sediment	GC/MS AAA	01/12/18	01/15/18 16:56	180112S18				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Acenaphthene	ND	100.0	84.88	85	80.90	81	40-160	5	0-20	
Acenaphthylene	ND	100.0	80.59	81	75.62	76	40-160	6	0-20	
Anthracene	ND	100.0	94.90	95	91.04	91	40-160	4	0-20	
Benzo (a) Anthracene	10.29	100.0	105.9	96	100.7	90	40-160	5	0-20	
Benzo (a) Pyrene	15.72	100.0	112.1	96	108.8	93	40-160	3	0-20	
Benzo (b) Fluoranthene	20.42	100.0	123.3	103	117.7	97	40-160	5	0-20	
Benzo (g,h,i) Perylene	17.84	100.0	120.5	103	117.9	100	40-160	2	0-20	
Benzo (k) Fluoranthene	16.99	100.0	107.7	91	102.9	86	40-160	5	0-20	
Chrysene	13.84	100.0	105.9	92	100.9	87	40-160	5	0-20	
Dibenz (a,h) Anthracene	ND	100.0	112.8	113	111.0	111	40-160	2	0-20	
Fluoranthene	16.25	100.0	110.4	94	107.7	91	40-160	2	0-20	
Fluorene	ND	100.0	83.21	83	80.10	80	40-160	4	0-20	
Indeno (1,2,3-c,d) Pyrene	14.27	100.0	117.6	103	115.9	102	40-160	2	0-20	
2-Methylnaphthalene	ND	100.0	80.96	81	81.77	82	40-160	1	0-20	
1-Methylnaphthalene	ND	100.0	79.62	80	80.32	80	40-160	1	0-20	
Naphthalene	ND	100.0	74.96	75	72.72	73	40-160	3	0-20	
Phenanthrene	ND	100.0	101.3	101	96.61	97	40-160	5	0-20	
Pyrene	29.05	100.0	132.9	104	128.4	99	40-160	3	0-46	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0888
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners

Project: City of Newport Beach - Federal Channels

Page 7 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
BIS-COMP-011218	Sample	Sediment	GC/MS HHH	01/12/18	01/16/18 20:32	180112S19
BIS-COMP-011218	Matrix Spike	Sediment	GC/MS HHH	01/12/18	01/16/18 19:21	180112S19
BIS-COMP-011218	Matrix Spike Duplicate	Sediment	GC/MS HHH	01/12/18	01/16/18 19:44	180112S19

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
PCB018	ND	50.00	33.40	67	34.38	69	50-150	3	0-25	
PCB028	ND	50.00	38.64	77	40.64	81	50-150	5	0-25	
PCB044	0.5170	50.00	35.78	71	36.72	72	50-150	3	0-25	
PCB052	0.5942	50.00	34.39	68	35.91	71	50-150	4	0-25	
PCB066	0.4339	50.00	40.83	81	41.99	83	50-150	3	0-25	
PCB077	ND	50.00	36.32	73	38.09	76	50-150	5	0-25	
PCB101	0.7929	50.00	35.73	70	37.08	73	50-150	4	0-25	
PCB105	ND	50.00	38.63	77	39.65	79	50-150	3	0-25	
PCB118	0.5260	50.00	38.25	75	39.63	78	50-150	4	0-25	
PCB126	ND	50.00	36.29	73	37.70	75	50-150	4	0-25	
PCB128	ND	50.00	35.38	71	38.05	76	50-150	7	0-25	
PCB170	ND	50.00	38.85	78	40.28	81	50-150	4	0-25	
PCB180	0.7963	50.00	40.67	80	43.22	85	50-150	6	0-25	
PCB187	0.6084	50.00	39.33	77	41.54	82	50-150	5	0-25	
PCB195	ND	50.00	33.61	67	35.34	71	50-150	5	0-25	
PCB206	ND	50.00	39.67	79	42.05	84	50-150	6	0-25	
PCB209	ND	50.00	33.96	68	35.34	71	50-150	4	0-25	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0888
Preparation: EPA 3550B (M)
Method: Organotins by Krone et al.

Project: City of Newport Beach - Federal Channels

Page 8 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
BIS-COMP-011218	Sample	Sediment	GC/MS Y	01/13/18	01/15/18 12:30	180113S03				
BIS-COMP-011218	Matrix Spike	Sediment	GC/MS Y	01/13/18	01/15/18 11:55	180113S03				
BIS-COMP-011218	Matrix Spike Duplicate	Sediment	GC/MS Y	01/13/18	01/15/18 12:12	180113S03				
<u>Parameter</u>	<u>Sample Conc.</u>	<u>Spike Added</u>	<u>MS Conc.</u>	<u>MS %Rec.</u>	<u>MSD Conc.</u>	<u>MSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Tetrabutyltin	ND	100.0	90.28	90	89.10	89	33-129	1	0-36	
Tributyltin	ND	100.0	65.29	65	63.23	63	34-142	3	0-50	


 Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - PDS

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0888
Preparation: EPA 3050B
Method: EPA 6020

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
BIS-COMP-011218	Sample	Sediment	ICP/MS 03	01/15/18 00:00	01/15/18 19:21	180115S01
BIS-COMP-011218	PDS	Sediment	ICP/MS 03	01/15/18 00:00	01/15/18 19:19	180115S01

<u>Parameter</u>	<u>Sample Conc.</u>	<u>Spike Added</u>	<u>PDS Conc.</u>	<u>PDS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Arsenic	4.828	25.00	27.55	91	75-125	
Cadmium	1.099	25.00	24.97	95	75-125	
Chromium	19.81	25.00	42.62	91	75-125	
Copper	26.23	25.00	47.86	87	75-125	
Lead	19.61	25.00	43.04	94	75-125	
Nickel	13.68	25.00	36.73	92	75-125	
Selenium	0.7854	25.00	24.50	95	75-125	
Silver	0.1403	12.50	11.74	93	75-125	
Zinc	81.44	25.00	104.0	90	75-125	



Calscience

Quality Control - Sample Duplicate

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0888
 Preparation: N/A
 Method: SM 2540 B (M)

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
BIS-COMP-011218	Sample	Sediment	N/A	01/15/18 00:00	01/15/18 22:00	I0115TSD3
BIS-COMP-011218	Sample Duplicate	Sediment	N/A	01/15/18 00:00	01/15/18 22:00	I0115TSD3

<u>Parameter</u>	<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Solids, Total	47.50	48.10	1	0-10	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0888
Preparation: N/A
Method: EPA 9060A

Project: City of Newport Beach - Federal Channels

Page 1 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-06-013-1790	LCS	Solid	TOC 9	01/15/18	01/15/18 21:58	I0115TOCL1			
099-06-013-1790	LCSD	Solid	TOC 9	01/15/18	01/15/18 21:58	I0115TOCL1			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Carbon, Total Organic	0.6000	0.6376	106	0.6566	109	80-120	3	0-20	

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0888
Preparation: EPA 3541
Method: EPA 8270D (M)/TQ/EI

Project: City of Newport Beach - Federal Channels

Page 2 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-14-403-143	LCS	Solid	GCTQ 2	01/15/18	01/15/18 18:36	180115L03				
099-14-403-143	LCSD	Solid	GCTQ 2	01/15/18	01/15/18 19:22	180115L03				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Allethrin	5.000	4.953	99	4.632	93	10-148	0-171	7	0-25	
Bifenthrin	5.000	4.432	89	3.925	79	26-128	9-145	12	0-25	
Cyfluthrin	5.000	4.007	80	3.674	73	10-131	0-151	9	0-25	
Cypermethrin	5.000	3.754	75	3.501	70	10-136	0-157	7	0-25	
Deltamethrin/Tralomethrin	5.000	3.469	69	3.427	69	13-190	0-220	1	0-25	
Fenpropathrin	5.000	3.527	71	3.397	68	10-148	0-171	4	0-25	
Fenvalerate/Esfenvalerate	5.000	3.968	79	3.874	77	10-149	0-172	2	0-25	
Fluvalinate	5.000	3.345	67	3.259	65	10-121	0-140	3	0-25	
Permethrin (cis/trans)	5.000	4.557	91	4.299	86	45-123	32-136	6	0-25	
Phenothrin	5.000	4.523	90	4.250	85	45-165	25-185	6	0-25	
Resmethrin/Bioresmethrin	5.000	5.909	118	5.678	114	38-164	17-185	4	0-25	
Tetramethrin	5.000	4.656	93	4.235	85	15-153	0-176	9	0-25	
lambda-Cyhalothrin	5.000	4.083	82	3.921	78	10-123	0-142	4	0-25	

Total number of LCS compounds: 13

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0888
 Preparation: EPA 3050B
 Method: EPA 6020

Project: City of Newport Beach - Federal Channels

Page 3 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-15-254-567	LCS	Solid	ICP/MS 03	01/15/18	01/15/18 19:08	180115L01E			
099-15-254-567	LCSD	Solid	ICP/MS 03	01/15/18	01/15/18 19:11	180115L01E			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	25.00	21.14	85	21.31	85	80-120	1	0-20	
Cadmium	25.00	22.19	89	22.14	89	80-120	0	0-20	
Chromium	25.00	21.60	86	21.88	88	80-120	1	0-20	
Copper	25.00	21.07	84	21.22	85	80-120	1	0-20	
Lead	25.00	21.57	86	21.81	87	80-120	1	0-20	
Nickel	25.00	21.58	86	21.34	85	80-120	1	0-20	
Selenium	25.00	21.36	85	21.26	85	80-120	0	0-20	
Silver	12.50	10.67	85	10.71	86	80-120	0	0-20	
Zinc	25.00	21.80	87	21.84	87	80-120	0	0-20	

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0888
Preparation: EPA 7471A Total
Method: EPA 7471A

Project: City of Newport Beach - Federal Channels

Page 4 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-16-278-364	LCS	Solid	Mercury 07	01/15/18	01/15/18 15:36	180115L03E			
099-16-278-364	LCSD	Solid	Mercury 07	01/15/18	01/15/18 15:57	180115L03E			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	0.8350	0.7887	94	0.7870	94	82-124	0	0-16	

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0888
 Preparation: EPA 3541
 Method: EPA 8081A

Project: City of Newport Beach - Federal Channels

Page 5 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-858-512	LCS	Solid	GC 41	01/12/18	01/16/18 11:23	180112L17				
099-12-858-512	LCSD	Solid	GC 41	01/12/18	01/16/18 13:32	180112L17				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Aldrin	5.000	4.619	92	4.730	95	50-135	36-149	2	0-25	
Alpha-BHC	5.000	4.624	92	4.714	94	50-135	36-149	2	0-25	
Beta-BHC	5.000	4.560	91	4.670	93	50-135	36-149	2	0-25	
Delta-BHC	5.000	4.740	95	4.861	97	50-135	36-149	3	0-25	
Gamma-BHC	5.000	4.741	95	4.851	97	50-135	36-149	2	0-25	
Dieldrin	5.000	4.910	98	4.954	99	50-135	36-149	1	0-25	
4,4'-DDD	5.000	5.261	105	5.384	108	50-135	36-149	2	0-25	
4,4'-DDE	5.000	5.323	106	5.436	109	50-135	36-149	2	0-25	
4,4'-DDT	5.000	5.747	115	5.863	117	50-135	36-149	2	0-25	
Endosulfan I	5.000	4.757	95	4.860	97	50-135	36-149	2	0-25	
Endosulfan II	5.000	5.388	108	5.499	110	50-135	36-149	2	0-25	
Endosulfan Sulfate	5.000	5.142	103	5.263	105	50-135	36-149	2	0-25	
Endrin	5.000	5.095	102	5.165	103	50-135	36-149	1	0-25	
Endrin Aldehyde	5.000	3.886	78	3.958	79	50-135	36-149	2	0-25	
Endrin Ketone	5.000	5.314	106	5.454	109	50-135	36-149	3	0-25	
Heptachlor	5.000	4.857	97	4.967	99	50-135	36-149	2	0-25	
Heptachlor Epoxide	5.000	4.744	95	4.852	97	50-135	36-149	2	0-25	
Methoxychlor	5.000	5.386	108	5.491	110	50-135	36-149	2	0-25	
Alpha Chlordane	5.000	4.751	95	4.852	97	50-135	36-149	2	0-25	
Gamma Chlordane	5.000	4.687	94	4.787	96	50-135	36-149	2	0-25	

Total number of LCS compounds: 20

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0888
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs

Project: City of Newport Beach - Federal Channels

Page 6 of 8

Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-14-097-252	LCS	Solid		GC/MS AAA	01/12/18	01/15/18 15:57	180112L18			
099-14-097-252	LCSD	Solid		GC/MS AAA	01/12/18	01/15/18 16:17	180112L18			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Acenaphthene	100.0	93.67	94	86.83	87	40-160	20-180	8	0-20	
Acenaphthylene	100.0	90.32	90	84.95	85	40-160	20-180	6	0-20	
Anthracene	100.0	93.80	94	89.63	90	40-160	20-180	5	0-20	
Benzo (a) Anthracene	100.0	99.30	99	94.68	95	40-160	20-180	5	0-20	
Benzo (a) Pyrene	100.0	101.2	101	97.68	98	40-160	20-180	4	0-20	
Benzo (b) Fluoranthene	100.0	117.6	118	107.7	108	40-160	20-180	9	0-20	
Benzo (g,h,i) Perylene	100.0	108.2	108	103.8	104	40-160	20-180	4	0-20	
Benzo (k) Fluoranthene	100.0	94.70	95	99.35	99	40-160	20-180	5	0-20	
Chrysene	100.0	96.82	97	93.19	93	40-160	20-180	4	0-20	
Dibenz (a,h) Anthracene	100.0	111.7	112	107.2	107	40-160	20-180	4	0-20	
Fluoranthene	100.0	98.28	98	97.88	98	40-160	20-180	0	0-20	
Fluorene	100.0	90.76	91	86.65	87	40-160	20-180	5	0-20	
Indeno (1,2,3-c,d) Pyrene	100.0	107.5	108	104.0	104	40-160	20-180	3	0-20	
2-Methylnaphthalene	100.0	96.17	96	92.21	92	40-160	20-180	4	0-20	
1-Methylnaphthalene	100.0	95.25	95	92.46	92	40-160	20-180	3	0-20	
Naphthalene	100.0	90.61	91	82.52	83	40-160	20-180	9	0-20	
Phenanthrene	100.0	97.17	97	91.80	92	40-160	20-180	6	0-20	
Pyrene	100.0	104.0	104	98.50	98	40-160	20-180	5	0-20	

Total number of LCS compounds: 18

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0888
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners

Project: City of Newport Beach - Federal Channels

Page 7 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-16-418-284	LCS	Solid	GC/MS HHH	01/12/18	01/16/18 18:34	180112L19				
099-16-418-284	LCSD	Solid	GC/MS HHH	01/12/18	01/16/18 18:58	180112L19				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
PCB018	50.00	36.07	72	38.71	77	24-132	6-150	7	0-28	
PCB028	50.00	41.76	84	43.85	88	31-133	14-150	5	0-26	
PCB044	50.00	37.52	75	41.05	82	36-120	22-134	9	0-28	
PCB052	50.00	36.56	73	39.67	79	31-121	16-136	8	0-27	
PCB066	50.00	44.15	88	47.56	95	43-139	27-155	7	0-25	
PCB077	50.00	39.13	78	42.64	85	41-131	26-146	9	0-25	
PCB101	50.00	37.36	75	40.92	82	37-121	23-135	9	0-27	
PCB105	50.00	39.84	80	43.82	88	48-132	34-146	10	0-26	
PCB118	50.00	39.55	79	43.55	87	46-136	31-151	10	0-25	
PCB126	50.00	37.83	76	41.13	82	38-134	22-150	8	0-25	
PCB128	50.00	36.70	73	40.36	81	40-130	25-145	9	0-26	
PCB170	50.00	40.11	80	43.24	86	40-124	26-138	8	0-29	
PCB180	50.00	40.92	82	43.96	88	41-143	24-160	7	0-26	
PCB187	50.00	39.62	79	43.59	87	39-129	24-144	10	0-26	
PCB195	50.00	34.20	68	37.54	75	44-128	30-142	9	0-28	
PCB206	50.00	39.79	80	42.89	86	33-135	16-152	7	0-24	
PCB209	50.00	34.92	70	37.12	74	29-137	11-155	6	0-29	

Total number of LCS compounds: 17

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0888
 Preparation: EPA 3550B (M)
 Method: Organotins by Krone et al.

Project: City of Newport Beach - Federal Channels

Page 8 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-07-016-1552	LCS	Solid	GC/MS Y	01/13/18	01/16/18 13:04	180113L03
099-07-016-1552	LCSD	Solid	GC/MS Y	01/13/18	01/16/18 13:22	180113L03

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Tetrabutyltin	100.0	91.01	91	78.95	79	40-142	14	0-20	
Tributyltin	100.0	62.12	62	56.64	57	33-147	9	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Sample Analysis Summary Report

Work Order: 18-01-0888

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
ASTM D4464 (M)	N/A	1106	LPSA 1	1
EPA 6020	EPA 3050B	776	ICP/MS 03	1
EPA 7471A	EPA 7471A Total	868	Mercury 07	1
EPA 8081A	EPA 3541	669	GC 41	1
EPA 8270C SIM PAHs	EPA 3541	907	GC/MS AAA	1
EPA 8270C SIM PCB Congeners	EPA 3541	907	GC/MS HHH	1
EPA 8270D (M)/TQ/EI	EPA 3541	27	GCTQ 2	3
EPA 9060A	N/A	1141	TOC 9	1
Organotins by Krone et al.	EPA 3550B (M)	907	GC/MS Y	1
SM 2540 B (M)	N/A	1136	N/A	1



Return to Contents

Location 1: 7440 Lincoln Way, Garden Grove, CA 92841

Location 3: 11380 Knott Street, Garden Grove, CA 90630

Glossary of Terms and Qualifiers

Work Order: 18-01-0888

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: Anchor QEA

DATE: 01/12/2018

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: +0.2°C); Temperature (w/o CF): 2.8 °C (w/ CF): 3.0 °C; Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: Air Filter

Checked by: J26

CUSTODY SEAL:

Cooler Present and Intact Present but Not Intact Not Present N/A

Checked by: J26

Sample(s) Present and Intact Present but Not Intact Not Present N/A

Checked by: 1050

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sampling date <input type="checkbox"/> Sampling time <input type="checkbox"/> Matrix <input type="checkbox"/> Number of containers			
<input type="checkbox"/> No analysis requested <input type="checkbox"/> Not relinquished <input type="checkbox"/> No relinquished date <input type="checkbox"/> No relinquished time			
Sampler's name indicated on COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sufficient volume/mass for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples for certain analyses received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfide <input type="checkbox"/> Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation chemical(s) noted on COC and/or sample container	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Unpreserved aqueous sample(s) received for certain analyses			
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Total Metals <input type="checkbox"/> Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Container(s) for certain analysis free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Dissolved Gases (RSK-175) <input type="checkbox"/> Dissolved Oxygen (SM 4500)			
<input type="checkbox"/> Carbon Dioxide (SM 4500) <input type="checkbox"/> Ferrous Iron (SM 3500) <input type="checkbox"/> Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:

(Trip Blank Lot Number: _____)

Aqueous: VOA VOAh VOAna2 100PJ 100PJna2 125AGB 125AGBh 125AGBp 125PB 125PBz (pH__9)
 250AGB 250CGB 250CGBs (pH__2) 250PB 250PBn (pH__2) 500AGB 500AGJ 500AGJs (pH__2) 500PB
 1AGB 1AGBna2 1AGBs (pH__2) 1AGBs (O&G) 1PB 1PBna (pH__12) _____ _____ _____

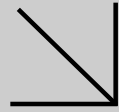
Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (____) EnCores® (____) TerraCores® (____) _____ _____ _____

Air: Tedlar™ Canister Sorbent Tube PUF _____ Other Matrix (Sediment): Z 16ozCGJ _____

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO3, na = NaOH, na2 = Na2S2O3, p = H3PO4, Labeled/Checked by: 1050

s = H2SO4, u = ultra-pure, x = Na2SO3+NaHSO4.H2O, z (na) = Zn (CH3CO2)2 + NaOH Reviewed by: J26


WORK ORDER NUMBER: 18-01-0948
The difference is service


AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For
Client: ANCHOR QEA, LLC

Client Project Name: City of Newport Beach - Federal Channels

Attention: Chris Osuch
 27201 Puerta Real
 Suite 350
 Mission Viejo, CA 92691-8306

 Approved for release on 01/23/2018 by:
 Richard Villafania
 Project Manager

ResultLink ▶

Email your PM ▶

Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Contents

Client Project Name: City of Newport Beach - Federal Channels
 Work Order Number: 18-01-0948

1	Work Order Narrative.	3
2	Sample Summary.	4
3	Client Sample Data.	5
	3.1 EPA 9060A Total Organic Carbon (Solid).	5
	3.2 SM 2540 B (M) Total Solids (Solid).	6
	3.3 Pyrethroids by EPA 8270D (M)/TQ/EI (Solid).	7
	3.4 EPA 6020 ICP/MS Metals (Solid).	9
	3.5 EPA 7471A Mercury (Solid).	10
	3.6 ASTM D4464 (M) Particle Size Laser (Solid).	11
	3.7 EPA 8081A Organochlorine Pesticides (Solid).	12
	3.8 EPA 8270C SIM PAHs (Solid).	15
	3.9 EPA 8270C SIM PCB Congeners (Solid).	17
	3.10 Krone et al. Organotins (Solid).	21
4	Quality Control Sample Data.	22
	4.1 MS/MSD.	22
	4.2 PDS/PDSD.	30
	4.3 Sample Duplicate.	31
	4.4 LCS/LCSD.	32
5	Sample Analysis Summary.	40
6	Glossary of Terms and Qualifiers.	41
7	Chain-of-Custody/Sample Receipt Form.	42

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 01/12/18. They were assigned to Work Order 18-01-0948.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Sample Summary

Client: ANCHOR QEA, LLC	Work Order: 18-01-0948
27201 Puerta Real, Suite 350	Project Name: City of Newport Beach - Federal Channels
Mission Viejo, CA 92691-8306	PO Number:
	Date/Time Received: 01/12/18 18:00
	Number of Containers: 2

Attn: Chris Osuch

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
TB-COMP-011218	18-01-0948-1	01/12/18 16:40	2	Sediment

Analytical Report

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0948
Preparation: N/A
Method: EPA 9060A
Units: %

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TB-COMP-011218	18-01-0948-1-AA	01/12/18 16:40	Sediment	TOC 9	01/16/18	01/16/18 16:53	I0116TOCL1

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Carbon, Total Organic	1.9	0.11	0.039	1.00	

Method Blank	099-06-013-1791	N/A	Solid	TOC 9	01/16/18	01/16/18 16:53	I0116TOCL1

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Carbon, Total Organic	ND	0.050	0.017	1.00	

Analytical Report

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0948
Preparation: N/A
Method: SM 2540 B (M)
Units: %

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TB-COMP-011218	18-01-0948-1-AA	01/12/18 16:40	Sediment	N/A	01/17/18	01/17/18 21:30	I0117TSB2

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Solids, Total	45.1	0.100	0.100	1.00	

Method Blank	099-05-019-3924	N/A	Solid	N/A	01/17/18	01/17/18 21:30	I0117TSB2
--------------	-----------------	-----	-------	-----	----------	-------------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Solids, Total	ND	0.100	0.100	1.00	

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0948
 Preparation: EPA 3541
 Method: EPA 8270D (M)/TQ/EI
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TB-COMP-011218	18-01-0948-1-AA	01/12/18 16:40	Sediment	GCTQ 2	01/15/18	01/16/18 00:45	180115L03

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Allethrin	ND	1.1	0.55	1.00	
Bifenthrin	2.6	1.1	0.67	1.00	
Cyfluthrin	1.4	1.1	0.55	1.00	
Cypermethrin	1.0	1.1	0.55	1.00	J
Deltamethrin/Tralomethrin	ND	1.1	0.55	1.00	
Fenpropathrin	ND	1.1	0.55	1.00	
Fenvalerate/Esfenvalerate	ND	1.1	0.55	1.00	
Fluvalinate	1.2	1.1	0.55	1.00	
Permethrin (cis/trans)	1.5	2.2	1.1	1.00	J
Phenothrin	ND	1.1	0.55	1.00	
Resmethrin/Bioresmethrin	ND	1.1	0.94	1.00	
Tetramethrin	ND	1.1	0.67	1.00	
lambda-Cyhalothrin	ND	1.1	0.55	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
Dibutylchloroendate	131	40-160			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0948
 Preparation: EPA 3541
 Method: EPA 8270D (M)/TQ/EI
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-403-143	N/A	Solid	GCTQ 2	01/15/18	01/15/18 20:54	180115L03

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Allethrin	ND	0.50	0.25	1.00	
Bifenthrin	ND	0.50	0.30	1.00	
Cyfluthrin	ND	0.50	0.25	1.00	
Cypermethrin	ND	0.50	0.25	1.00	
Deltamethrin/Tralomethrin	ND	0.50	0.25	1.00	
Fenpropathrin	ND	0.50	0.25	1.00	
Fenvalerate/Esfenvalerate	ND	0.50	0.25	1.00	
Fluvalinate	ND	0.50	0.25	1.00	
Permethrin (cis/trans)	ND	1.0	0.50	1.00	
Phenothrin	ND	0.50	0.25	1.00	
Resmethrin/Bioresmethrin	ND	0.50	0.42	1.00	
Tetramethrin	ND	0.50	0.30	1.00	
lambda-Cyhalothrin	ND	0.50	0.25	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
Dibutylchloroendate	68	40-160			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0948
 Preparation: EPA 3050B
 Method: EPA 6020
 Units: mg/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TB-COMP-011218	18-01-0948-1-AA	01/12/18 16:40	Sediment	ICP/MS 03	01/18/18	01/19/18 11:15	180118L01E

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Arsenic	10.0	0.222	0.194	1.00	
Cadmium	1.41	0.222	0.127	1.00	
Chromium	45.2	0.222	0.138	1.00	
Copper	127	0.222	0.0929	1.00	
Lead	85.8	0.222	0.146	1.00	
Nickel	26.6	0.222	0.112	1.00	
Selenium	0.798	0.222	0.162	1.00	
Silver	0.301	0.222	0.0694	1.00	
Zinc	208	2.22	1.76	1.00	

Method Blank	099-15-254-568	N/A	Solid	ICP/MS 03	01/18/18	01/18/18 20:35	180118L01E
---------------------	-----------------------	------------	--------------	------------------	-----------------	---------------------------	-------------------

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Arsenic	ND	0.100	0.0873	1.00	
Cadmium	ND	0.100	0.0572	1.00	
Chromium	ND	0.100	0.0621	1.00	
Copper	ND	0.100	0.0419	1.00	
Lead	ND	0.100	0.0659	1.00	
Nickel	ND	0.100	0.0506	1.00	
Selenium	ND	0.100	0.0731	1.00	
Silver	ND	0.100	0.0313	1.00	
Zinc	ND	1.00	0.795	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0948
 Preparation: EPA 7471A Total
 Method: EPA 7471A
 Units: mg/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TB-COMP-011218	18-01-0948-1-AA	01/12/18 16:40	Sediment	Mercury 08	01/19/18	01/19/18 15:46	180119L01E

Comment(s): - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Mercury	3.64	0.422	0.124	10.0	

Method Blank	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-278-365	N/A	Solid	Mercury 08	01/19/18	01/19/18 13:08	180119L01E

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Mercury	ND	0.0197	0.00578	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0948
 Preparation: N/A
 Method: ASTM D4464 (M)
 Units: %

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TB-COMP-011218	18-01-0948-1-B	01/12/18 16:40	Sediment	LPSA 1	N/A	01/15/18 14:38	

<u>Parameter</u>	<u>Result</u>	<u>Qualifiers</u>
Clay (less than 0.00391mm)	25.70	
Silt (0.00391 to 0.0625mm)	56.62	
Total Silt and Clay (0 to 0.0625mm)	82.31	
Very Fine Sand (0.0625 to 0.125mm)	10.50	
Fine Sand (0.125 to 0.25mm)	7.18	
Medium Sand (0.25 to 0.5mm)	ND	
Coarse Sand (0.5 to 1mm)	ND	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0948
 Preparation: EPA 3541
 Method: EPA 8081A
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TB-COMP-011218	18-01-0948-1-AA	01/12/18 16:40	Sediment	GC 41	01/12/18	01/16/18 15:16	180112L17

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Aldrin	ND	2.2	0.96	1.00	
Alpha-BHC	ND	4.4	1.6	1.00	
Beta-BHC	ND	2.2	1.1	1.00	
Delta-BHC	ND	4.4	1.9	1.00	
Gamma-BHC	ND	2.2	0.98	1.00	
Dieldrin	1.9	2.2	0.96	1.00	J
Trans-nonachlor	2.8	2.2	0.60	1.00	
2,4'-DDD	ND	2.2	0.63	1.00	
2,4'-DDE	5.2	4.4	2.2	1.00	
2,4'-DDT	ND	2.2	0.69	1.00	
4,4'-DDD	12	2.2	1.1	1.00	
4,4'-DDT	5.6	2.2	0.96	1.00	
Endosulfan I	ND	2.2	0.87	1.00	
Endosulfan II	ND	2.2	1.0	1.00	
Endosulfan Sulfate	ND	2.2	1.1	1.00	
Endrin	ND	2.2	1.1	1.00	
Endrin Aldehyde	ND	2.2	1.3	1.00	
Endrin Ketone	ND	2.2	1.1	1.00	
Heptachlor	ND	2.2	0.95	1.00	
Heptachlor Epoxide	3.6	4.4	1.6	1.00	J
Methoxychlor	ND	2.2	1.2	1.00	
Toxaphene	ND	44	20	1.00	
Alpha Chlordane	1.4	2.2	0.89	1.00	J
Gamma Chlordane	2.1	4.4	1.9	1.00	J
Cis-nonachlor	ND	2.2	0.57	1.00	
Oxychlordane	ND	2.2	0.59	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
2,4,5,6-Tetrachloro-m-Xylene	79	25-145	
Decachlorobiphenyl	116	24-168	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC	Date Received:	01/12/18
27201 Puerta Real, Suite 350	Work Order:	18-01-0948
Mission Viejo, CA 92691-8306	Preparation:	EPA 3541
	Method:	EPA 8081A
	Units:	ug/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TB-COMP-011218	18-01-0948-1-AA	01/12/18 16:40	Sediment	GC 41	01/12/18	01/16/18 16:46	180112L17

Comment(s):
 - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
4,4'-DDE	37	11	4.9	5.00	
 <u>Surrogate</u>	 <u>Rec. (%)</u>	 <u>Control Limits</u>	 <u>Qualifiers</u>		
2,4,5,6-Tetrachloro-m-Xylene	81	25-145			
Decachlorobiphenyl	110	24-168			

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0948
 Preparation: EPA 3541
 Method: EPA 8081A
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-858-512	N/A	Solid	GC 41	01/12/18	01/16/18 15:46	180112L17

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	1.0	0.44	1.00	
Alpha-BHC	ND	2.0	0.74	1.00	
Beta-BHC	ND	1.0	0.50	1.00	
Delta-BHC	ND	2.0	0.88	1.00	
Gamma-BHC	ND	1.0	0.45	1.00	
Dieldrin	ND	1.0	0.44	1.00	
Trans-nonachlor	ND	1.0	0.27	1.00	
2,4'-DDD	ND	1.0	0.29	1.00	
2,4'-DDE	ND	2.0	0.99	1.00	
2,4'-DDT	ND	1.0	0.31	1.00	
4,4'-DDD	ND	1.0	0.50	1.00	
4,4'-DDE	ND	1.0	0.44	1.00	
4,4'-DDT	ND	1.0	0.44	1.00	
Endosulfan I	ND	1.0	0.40	1.00	
Endosulfan II	ND	1.0	0.47	1.00	
Endosulfan Sulfate	ND	1.0	0.52	1.00	
Endrin	ND	1.0	0.48	1.00	
Endrin Aldehyde	ND	1.0	0.60	1.00	
Endrin Ketone	ND	1.0	0.50	1.00	
Heptachlor	ND	1.0	0.43	1.00	
Heptachlor Epoxide	ND	2.0	0.74	1.00	
Methoxychlor	ND	1.0	0.56	1.00	
Toxaphene	ND	20	9.0	1.00	
Alpha Chlordane	ND	1.0	0.41	1.00	
Gamma Chlordane	ND	2.0	0.89	1.00	
Cis-nonachlor	ND	1.0	0.26	1.00	
Oxychlordane	ND	1.0	0.27	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2,4,5,6-Tetrachloro-m-Xylene	55	25-145	
Decachlorobiphenyl	101	24-168	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0948
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TB-COMP-011218	18-01-0948-1-AA	01/12/18 16:40	Sediment	GC/MS AAA	01/12/18	01/15/18 18:33	180112L18

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Acenaphthene	ND	22	5.2	1.00	
Acenaphthylene	8.1	22	4.0	1.00	J
Anthracene	19	22	7.7	1.00	J
Benzo (a) Anthracene	50	22	4.8	1.00	
Benzo (a) Pyrene	130	22	4.1	1.00	
Benzo (b) Fluoranthene	180	22	6.1	1.00	
Benzo (g,h,i) Perylene	120	22	3.4	1.00	
Benzo (k) Fluoranthene	140	22	6.2	1.00	
Chrysene	74	22	4.9	1.00	
Dibenz (a,h) Anthracene	32	22	4.3	1.00	
Fluoranthene	77	22	4.0	1.00	
Fluorene	ND	22	6.9	1.00	
Indeno (1,2,3-c,d) Pyrene	96	22	3.5	1.00	
2-Methylnaphthalene	ND	22	5.2	1.00	
1-Methylnaphthalene	ND	22	5.2	1.00	
Naphthalene	ND	22	7.7	1.00	
Phenanthrene	30	22	4.9	1.00	
Pyrene	95	22	5.0	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
2-Fluorobiphenyl	79	14-146	
Nitrobenzene-d5	69	18-162	
p-Terphenyl-d14	101	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0948
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-097-252	N/A	Solid	GC/MS AAA	01/12/18	01/15/18 15:38	180112L18

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	ND	10	2.4	1.00	
Acenaphthylene	ND	10	1.8	1.00	
Anthracene	ND	10	3.5	1.00	
Benzo (a) Anthracene	ND	10	2.2	1.00	
Benzo (a) Pyrene	ND	10	1.8	1.00	
Benzo (b) Fluoranthene	ND	10	2.7	1.00	
Benzo (g,h,i) Perylene	ND	10	1.5	1.00	
Benzo (k) Fluoranthene	ND	10	2.8	1.00	
Chrysene	ND	10	2.2	1.00	
Dibenz (a,h) Anthracene	ND	10	2.0	1.00	
Fluoranthene	ND	10	1.8	1.00	
Fluorene	ND	10	3.1	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	10	1.6	1.00	
2-Methylnaphthalene	ND	10	2.3	1.00	
1-Methylnaphthalene	ND	10	2.3	1.00	
Naphthalene	ND	10	3.5	1.00	
Phenanthrene	ND	10	2.2	1.00	
Pyrene	ND	10	2.2	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	89	14-146	
Nitrobenzene-d5	80	18-162	
p-Terphenyl-d14	100	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0948
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TB-COMP-011218	18-01-0948-1-AA	01/12/18 16:40	Sediment	GC/MS HHH	01/12/18	01/16/18 20:55	180112L19

Comment(s): - Results are reported on a dry weight basis.

- Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB018	6.8	0.44	0.14	1.00	
PCB028	8.2	0.44	0.15	1.00	
PCB037	ND	0.44	0.13	1.00	
PCB044	8.0	0.44	0.34	1.00	
PCB049	7.9	0.44	0.11	1.00	
PCB052	10	0.44	0.42	1.00	
PCB066	14	0.44	0.27	1.00	
PCB070	10	0.44	0.16	1.00	
PCB074	5.3	0.44	0.20	1.00	
PCB077	2.6	0.44	0.26	1.00	
PCB081	ND	0.44	0.20	1.00	
PCB087	3.9	0.44	0.25	1.00	
PCB099	8.2	0.44	0.11	1.00	
PCB101	13	0.44	0.098	1.00	
PCB105	5.1	0.44	0.12	1.00	
PCB110	12	0.44	0.075	1.00	
PCB114	ND	0.44	0.16	1.00	
PCB118	12	0.44	0.077	1.00	
PCB119	ND	0.44	0.14	1.00	
PCB123	ND	0.44	0.16	1.00	
PCB126	ND	0.44	0.12	1.00	
PCB128	ND	0.44	0.27	1.00	
PCB132/153	14	0.89	0.36	1.00	
PCB138/158	12	0.89	0.78	1.00	
PCB149	8.2	0.44	0.26	1.00	
PCB151	3.2	0.44	0.19	1.00	
PCB156	ND	0.44	0.17	1.00	
PCB157	ND	0.44	0.19	1.00	
PCB167	ND	0.44	0.29	1.00	
PCB168	ND	0.44	0.32	1.00	
PCB169	0.61	0.44	0.14	1.00	
PCB170	3.8	0.44	0.25	1.00	
PCB177	2.5	0.44	0.26	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0948
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 2 of 4

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB180	9.2	0.44	0.20	1.00	
PCB183	2.3	0.44	0.21	1.00	
PCB187	5.8	0.44	0.23	1.00	
PCB189	ND	0.44	0.14	1.00	
PCB194	3.0	0.44	0.16	1.00	
PCB201	0.64	0.44	0.075	1.00	
PCB206	2.6	0.44	0.26	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	90	14-146			
p-Terphenyl-d14	102	34-148			

Analytical Report

ANCHOR QEA, LLC	Date Received:	01/12/18
27201 Puerta Real, Suite 350	Work Order:	18-01-0948
Mission Viejo, CA 92691-8306	Preparation:	EPA 3541
	Method:	EPA 8270C SIM PCB Congeners
	Units:	ug/kg

Project: City of Newport Beach - Federal Channels

Page 3 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-418-284	N/A	Solid	GC/MS HHH	01/12/18	01/16/18 21:19	180112L19

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB018	ND	0.20	0.065	1.00	
PCB028	ND	0.20	0.069	1.00	
PCB037	ND	0.20	0.061	1.00	
PCB044	ND	0.20	0.15	1.00	
PCB049	ND	0.20	0.050	1.00	
PCB052	ND	0.20	0.19	1.00	
PCB066	ND	0.20	0.12	1.00	
PCB070	ND	0.20	0.072	1.00	
PCB074	ND	0.20	0.090	1.00	
PCB077	ND	0.20	0.12	1.00	
PCB081	ND	0.20	0.090	1.00	
PCB087	ND	0.20	0.11	1.00	
PCB099	ND	0.20	0.047	1.00	
PCB101	ND	0.20	0.044	1.00	
PCB105	ND	0.20	0.053	1.00	
PCB110	ND	0.20	0.034	1.00	
PCB114	ND	0.20	0.074	1.00	
PCB118	ND	0.20	0.035	1.00	
PCB119	ND	0.20	0.062	1.00	
PCB123	ND	0.20	0.073	1.00	
PCB126	ND	0.20	0.055	1.00	
PCB128	ND	0.20	0.12	1.00	
PCB132/153	ND	0.40	0.16	1.00	
PCB138/158	ND	0.40	0.35	1.00	
PCB149	ND	0.20	0.12	1.00	
PCB151	ND	0.20	0.088	1.00	
PCB156	ND	0.20	0.077	1.00	
PCB157	ND	0.20	0.085	1.00	
PCB167	ND	0.20	0.13	1.00	
PCB168	ND	0.20	0.14	1.00	
PCB169	ND	0.20	0.065	1.00	
PCB170	ND	0.20	0.11	1.00	
PCB177	ND	0.20	0.12	1.00	
PCB180	ND	0.20	0.092	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0948
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 4 of 4

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB183	ND	0.20	0.093	1.00	
PCB187	ND	0.20	0.10	1.00	
PCB189	ND	0.20	0.064	1.00	
PCB194	ND	0.20	0.074	1.00	
PCB201	ND	0.20	0.034	1.00	
PCB206	ND	0.20	0.12	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	83	14-146			
p-Terphenyl-d14	82	34-148			

Analytical Report

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0948
 Preparation: EPA 3550B (M)
 Method: Organotins by Krone et al.
 Units: ug/kg

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TB-COMP-011218	18-01-0948-1-AA	01/12/18 16:40	Sediment	GC/MS Y	01/13/18	01/15/18 13:39	180113L03

Comment(s):
 - Results are reported on a dry weight basis.
 - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Dibutyltin	40	6.6	1.6	1.00	
Monobutyltin	ND	6.6	3.0	1.00	
Tetrabutyltin	ND	6.6	1.6	1.00	
Tributyltin	6.8	6.6	3.3	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Tripentyltin	81	27-135	

Method Blank	099-07-016-1552	N/A	Solid	GC/MS Y	01/13/18	01/15/18 10:59	180113L03
---------------------	------------------------	------------	--------------	----------------	-----------------	---------------------------	------------------

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Dibutyltin	ND	3.0	0.73	1.00	
Monobutyltin	ND	3.0	1.4	1.00	
Tetrabutyltin	ND	3.0	0.74	1.00	
Tributyltin	ND	3.0	1.5	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Tripentyltin	49	27-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0948
Preparation: N/A
Method: EPA 9060A

Project: City of Newport Beach - Federal Channels

Page 1 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
TB-COMP-011218	Sample	Sediment	TOC 9	01/16/18	01/16/18 16:53	I0116TOCS1
TB-COMP-011218	Matrix Spike	Sediment	TOC 9	01/16/18	01/16/18 16:53	I0116TOCS1
TB-COMP-011218	Matrix Spike Duplicate	Sediment	TOC 9	01/16/18	01/16/18 16:53	I0116TOCS1

<u>Parameter</u>	<u>Sample Conc.</u>	<u>Spike Added</u>	<u>MS Conc.</u>	<u>MS %Rec.</u>	<u>MSD Conc.</u>	<u>MSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Carbon, Total Organic	0.8390	3.000	3.881	101	4.136	110	75-125	6	0-25	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0948
Preparation: EPA 3541
Method: EPA 8270D (M)/TQ/EI

Project: City of Newport Beach - Federal Channels

Page 2 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
18-01-0888-1	Sample	Sediment	GCTQ 2	01/15/18	01/15/18 23:59	180115S03
18-01-0888-1	Matrix Spike	Sediment	GCTQ 2	01/15/18	01/16/18 01:31	180115S03
18-01-0888-1	Matrix Spike Duplicate	Sediment	GCTQ 2	01/15/18	01/16/18 02:17	180115S03

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Allethrin	ND	5.000	4.438	89	4.287	86	10-148	3	0-30	
Bifenthrin	ND	5.000	6.345	127	5.501	110	26-128	14	0-30	
Cyfluthrin	ND	5.000	7.963	159	6.946	139	10-131	14	0-30	3
Cypermethrin	ND	5.000	7.947	159	6.741	135	10-136	16	0-30	3
Deltamethrin/Tralomethrin	ND	5.000	5.346	107	4.772	95	13-190	11	0-30	
Fenpropathrin	ND	5.000	7.511	150	6.725	134	10-148	11	0-30	3
Fenvalerate/Esfenvalerate	ND	5.000	10.27	205	8.857	177	10-149	15	0-30	3
Fluvalinate	ND	5.000	6.619	132	5.893	118	10-121	12	0-30	3
Permethrin (cis/trans)	ND	5.000	7.301	146	6.516	130	45-123	11	0-30	3
Phenothrin	ND	5.000	7.069	141	6.318	126	45-165	11	0-30	
Resmethrin/Bioresmethrin	ND	5.000	7.220	144	6.729	135	38-164	7	0-30	
Tetramethrin	ND	5.000	8.278	166	7.869	157	15-153	5	0-30	3
lambda-Cyhalothrin	ND	5.000	9.523	190	8.624	172	10-123	10	0-30	3

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0948
Preparation: EPA 3050B
Method: EPA 6020

Project: City of Newport Beach - Federal Channels

Page 3 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
18-01-0711-1	Sample	Filter	ICP/MS 03	01/18/18	01/18/18 20:53	180118S01
18-01-0711-1	Matrix Spike	Filter	ICP/MS 03	01/18/18	01/18/18 20:43	180118S01
18-01-0711-1	Matrix Spike Duplicate	Filter	ICP/MS 03	01/18/18	01/18/18 20:46	180118S01

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	ND	600.0	620.6	103	629.5	105	80-120	1	0-20	
Cadmium	ND	600.0	658.5	110	671.2	112	80-120	2	0-20	
Chromium	ND	600.0	669.4	112	654.6	109	80-120	2	0-20	
Copper	339.5	600.0	1007	111	1004	111	80-120	0	0-20	
Lead	ND	600.0	660.1	110	664.4	111	80-120	1	0-20	
Nickel	ND	600.0	647.2	108	622.2	104	80-120	4	0-20	
Selenium	ND	600.0	645.7	108	641.3	107	80-120	1	0-20	
Silver	ND	300.0	328.7	110	334.2	111	80-120	2	0-20	
Zinc	735.9	600.0	1490	126	1448	119	80-120	3	0-20	3

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0948
Preparation: EPA 7471A Total
Method: EPA 7471A

Project: City of Newport Beach - Federal Channels

Page 4 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
18-01-1320-1	Sample	Solid	Mercury 08	01/19/18	01/19/18 13:13	180119S01
18-01-1320-1	Matrix Spike	Solid	Mercury 08	01/19/18	01/19/18 13:15	180119S01
18-01-1320-1	Matrix Spike Duplicate	Solid	Mercury 08	01/19/18	01/19/18 13:17	180119S01

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	ND	0.8350	0.8298	99	0.7696	92	71-137	8	0-14	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0948
Preparation: EPA 3541
Method: EPA 8081A

Project: City of Newport Beach - Federal Channels

Page 5 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
18-01-0888-1	Sample	Sediment	GC 41	01/12/18	01/16/18 16:01	180112S17
18-01-0888-1	Matrix Spike	Sediment	GC 41	01/12/18	01/16/18 13:46	180112S17
18-01-0888-1	Matrix Spike Duplicate	Sediment	GC 41	01/12/18	01/16/18 14:01	180112S17

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Aldrin	ND	5.000	3.713	74	3.993	80	50-135	7	0-25	
Alpha-BHC	ND	5.000	4.105	82	4.334	87	50-135	5	0-25	
Beta-BHC	ND	5.000	3.744	75	3.934	79	50-135	5	0-25	
Delta-BHC	ND	5.000	3.485	70	3.702	74	50-135	6	0-25	
Gamma-BHC	ND	5.000	5.492	110	5.792	116	50-135	5	0-25	
Dieldrin	ND	5.000	4.630	93	5.016	100	50-135	8	0-25	
4,4'-DDD	13.03	5.000	16.82	76	18.06	101	50-135	7	0-25	
4,4'-DDE	52.82	5.000	49.65	0	51.47	0	50-135	4	0-25	3
4,4'-DDT	3.107	5.000	7.087	80	7.525	88	50-135	6	0-25	
Endosulfan I	ND	5.000	4.554	91	4.882	98	50-135	7	0-25	
Endosulfan II	ND	5.000	3.965	79	4.245	85	50-135	7	0-25	
Endosulfan Sulfate	ND	5.000	3.842	77	4.169	83	50-135	8	0-25	
Endrin	ND	5.000	4.019	80	4.370	87	50-135	8	0-25	
Endrin Aldehyde	ND	5.000	0	0	0	0	50-135	0	0-25	3
Endrin Ketone	ND	5.000	4.185	84	4.527	91	50-135	8	0-25	
Heptachlor	ND	5.000	3.718	74	3.914	78	50-135	5	0-25	
Heptachlor Epoxide	ND	5.000	5.603	112	6.026	121	50-135	7	0-25	
Methoxychlor	ND	5.000	4.464	89	4.638	93	50-135	4	0-25	
Alpha Chlordane	ND	5.000	5.202	104	5.553	111	50-135	7	0-25	
Gamma Chlordane	ND	5.000	5.026	101	5.336	107	50-135	6	0-25	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0948
Preparation: EPA 3541
Method: EPA 8270C SIM PAHs

Project: City of Newport Beach - Federal Channels

Page 6 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
18-01-0888-1	Sample	Sediment	GC/MS AAA	01/12/18	01/16/18 15:34	180112S18
18-01-0888-1	Matrix Spike	Sediment	GC/MS AAA	01/12/18	01/15/18 16:36	180112S18
18-01-0888-1	Matrix Spike Duplicate	Sediment	GC/MS AAA	01/12/18	01/15/18 16:56	180112S18

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Acenaphthene	ND	100.0	84.88	85	80.90	81	40-160	5	0-20	
Acenaphthylene	ND	100.0	80.59	81	75.62	76	40-160	6	0-20	
Anthracene	ND	100.0	94.90	95	91.04	91	40-160	4	0-20	
Benzo (a) Anthracene	10.29	100.0	105.9	96	100.7	90	40-160	5	0-20	
Benzo (a) Pyrene	15.72	100.0	112.1	96	108.8	93	40-160	3	0-20	
Benzo (b) Fluoranthene	20.42	100.0	123.3	103	117.7	97	40-160	5	0-20	
Benzo (g,h,i) Perylene	17.84	100.0	120.5	103	117.9	100	40-160	2	0-20	
Benzo (k) Fluoranthene	16.99	100.0	107.7	91	102.9	86	40-160	5	0-20	
Chrysene	13.84	100.0	105.9	92	100.9	87	40-160	5	0-20	
Dibenz (a,h) Anthracene	ND	100.0	112.8	113	111.0	111	40-160	2	0-20	
Fluoranthene	16.25	100.0	110.4	94	107.7	91	40-160	2	0-20	
Fluorene	ND	100.0	83.21	83	80.10	80	40-160	4	0-20	
Indeno (1,2,3-c,d) Pyrene	14.27	100.0	117.6	103	115.9	102	40-160	2	0-20	
2-Methylnaphthalene	ND	100.0	80.96	81	81.77	82	40-160	1	0-20	
1-Methylnaphthalene	ND	100.0	79.62	80	80.32	80	40-160	1	0-20	
Naphthalene	ND	100.0	74.96	75	72.72	73	40-160	3	0-20	
Phenanthrene	ND	100.0	101.3	101	96.61	97	40-160	5	0-20	
Pyrene	29.05	100.0	132.9	104	128.4	99	40-160	3	0-46	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0948
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners

Project: City of Newport Beach - Federal Channels

Page 7 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
18-01-0888-1	Sample	Sediment	GC/MS HHH	01/12/18	01/16/18 20:32	180112S19
18-01-0888-1	Matrix Spike	Sediment	GC/MS HHH	01/12/18	01/16/18 19:21	180112S19
18-01-0888-1	Matrix Spike Duplicate	Sediment	GC/MS HHH	01/12/18	01/16/18 19:44	180112S19

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
PCB018	ND	50.00	33.40	67	34.38	69	50-150	3	0-25	
PCB028	ND	50.00	38.64	77	40.64	81	50-150	5	0-25	
PCB044	0.5170	50.00	35.78	71	36.72	72	50-150	3	0-25	
PCB052	0.5942	50.00	34.39	68	35.91	71	50-150	4	0-25	
PCB066	0.4339	50.00	40.83	81	41.99	83	50-150	3	0-25	
PCB077	ND	50.00	36.32	73	38.09	76	50-150	5	0-25	
PCB101	0.7929	50.00	35.73	70	37.08	73	50-150	4	0-25	
PCB105	ND	50.00	38.63	77	39.65	79	50-150	3	0-25	
PCB118	0.5260	50.00	38.25	75	39.63	78	50-150	4	0-25	
PCB126	ND	50.00	36.29	73	37.70	75	50-150	4	0-25	
PCB128	ND	50.00	35.38	71	38.05	76	50-150	7	0-25	
PCB170	ND	50.00	38.85	78	40.28	81	50-150	4	0-25	
PCB180	0.7963	50.00	40.67	80	43.22	85	50-150	6	0-25	
PCB187	0.6084	50.00	39.33	77	41.54	82	50-150	5	0-25	
PCB195	ND	50.00	33.61	67	35.34	71	50-150	5	0-25	
PCB206	ND	50.00	39.67	79	42.05	84	50-150	6	0-25	
PCB209	ND	50.00	33.96	68	35.34	71	50-150	4	0-25	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0948
Preparation: EPA 3550B (M)
Method: Organotins by Krone et al.

Project: City of Newport Beach - Federal Channels

Page 8 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
18-01-0888-1	Sample	Sediment	GC/MS Y	01/13/18	01/15/18 12:30	180113S03				
18-01-0888-1	Matrix Spike	Sediment	GC/MS Y	01/13/18	01/15/18 11:55	180113S03				
18-01-0888-1	Matrix Spike Duplicate	Sediment	GC/MS Y	01/13/18	01/15/18 12:12	180113S03				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Tetrabutyltin	ND	100.0	90.28	90	89.10	89	33-129	1	0-36	
Tributyltin	ND	100.0	65.29	65	63.23	63	34-142	3	0-50	


 Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - PDS

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0948
Preparation: EPA 3050B
Method: EPA 6020

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
18-01-0711-1	Sample	Filter	ICP/MS 03	01/18/18 00:00	01/18/18 20:53	180118S01
18-01-0711-1	PDS	Filter	ICP/MS 03	01/18/18 00:00	01/18/18 20:48	180118S01
Parameter	Sample Conc.	Spike Added	PDS Conc.	PDS %Rec.	%Rec. CL	Qualifiers
Arsenic	ND	600.0	591.5	99	75-125	
Cadmium	ND	600.0	619.1	103	75-125	
Chromium	ND	600.0	610.8	102	75-125	
Copper	339.5	600.0	963.7	104	75-125	
Lead	ND	600.0	622.9	104	75-125	
Nickel	ND	600.0	578.8	96	75-125	
Selenium	ND	600.0	606.2	101	75-125	
Silver	ND	300.0	308.1	103	75-125	
Zinc	735.9	600.0	1377	107	75-125	



Calscience

Quality Control - Sample Duplicate

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0948
Preparation: N/A
Method: SM 2540 B (M)

Project: City of Newport Beach - Federal Channels

Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
18-01-1094-1	Sample	Sediment	N/A	01/17/18 00:00	01/17/18 21:30	I0117TSD2
18-01-1094-1	Sample Duplicate	Sediment	N/A	01/17/18 00:00	01/17/18 21:30	I0117TSD2

<u>Parameter</u>	<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Solids, Total	45.50	45.60	0	0-10	



Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0948
Preparation: N/A
Method: EPA 9060A

Project: City of Newport Beach - Federal Channels

Page 1 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-06-013-1791	LCS	Solid	TOC 9	01/16/18	01/16/18 16:53	I0116TOCL1			
099-06-013-1791	LCSD	Solid	TOC 9	01/16/18	01/16/18 16:53	I0116TOCL1			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Carbon, Total Organic	0.6000	0.6572	110	0.6705	112	80-120	2	0-20	

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0948
 Preparation: EPA 3541
 Method: EPA 8270D (M)/TQ/EI

Project: City of Newport Beach - Federal Channels

Page 2 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-14-403-143	LCS	Solid	GCTQ 2	01/15/18	01/15/18 18:36	180115L03				
099-14-403-143	LCSD	Solid	GCTQ 2	01/15/18	01/15/18 19:22	180115L03				
<u>Parameter</u>	<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>LCSD Conc.</u>	<u>LCSD %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Allethrin	5.000	4.953	99	4.632	93	10-148	0-171	7	0-25	
Bifenthrin	5.000	4.432	89	3.925	79	26-128	9-145	12	0-25	
Cyfluthrin	5.000	4.007	80	3.674	73	10-131	0-151	9	0-25	
Cypermethrin	5.000	3.754	75	3.501	70	10-136	0-157	7	0-25	
Deltamethrin/Tralomethrin	5.000	3.469	69	3.427	69	13-190	0-220	1	0-25	
Fenpropathrin	5.000	3.527	71	3.397	68	10-148	0-171	4	0-25	
Fenvalerate/Esfenvalerate	5.000	3.968	79	3.874	77	10-149	0-172	2	0-25	
Fluvalinate	5.000	3.345	67	3.259	65	10-121	0-140	3	0-25	
Permethrin (cis/trans)	5.000	4.557	91	4.299	86	45-123	32-136	6	0-25	
Phenothrin	5.000	4.523	90	4.250	85	45-165	25-185	6	0-25	
Resmethrin/Bioresmethrin	5.000	5.909	118	5.678	114	38-164	17-185	4	0-25	
Tetramethrin	5.000	4.656	93	4.235	85	15-153	0-176	9	0-25	
lambda-Cyhalothrin	5.000	4.083	82	3.921	78	10-123	0-142	4	0-25	

Total number of LCS compounds: 13

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received: 01/12/18
Work Order: 18-01-0948
Preparation: EPA 3050B
Method: EPA 6020

Project: City of Newport Beach - Federal Channels

Page 3 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-254-568	LCS	Solid	ICP/MS 03	01/18/18	01/18/18 20:38	180118L01E
099-15-254-568	LCSD	Solid	ICP/MS 03	01/18/18	01/18/18 20:41	180118L01E

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	25.00	24.31	97	24.20	97	80-120	0	0-20	
Cadmium	25.00	25.33	101	25.51	102	80-120	1	0-20	
Chromium	25.00	25.06	100	24.94	100	80-120	0	0-20	
Copper	25.00	25.69	103	25.47	102	80-120	1	0-20	
Lead	25.00	25.29	101	25.42	102	80-120	1	0-20	
Nickel	25.00	24.89	100	24.45	98	80-120	2	0-20	
Selenium	25.00	25.34	101	24.03	96	80-120	5	0-20	
Silver	12.50	12.30	98	12.39	99	80-120	1	0-20	
Zinc	25.00	25.77	103	26.16	105	80-120	1	0-20	



Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0948
 Preparation: EPA 7471A Total
 Method: EPA 7471A

Project: City of Newport Beach - Federal Channels

Page 4 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-16-278-365	LCS	Solid	Mercury 08	01/19/18	01/19/18 13:10	180119L01E			
099-16-278-365	LCSD	Solid	Mercury 08	01/19/18	01/19/18 13:49	180119L01E			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	0.8350	0.8277	99	0.8529	102	82-124	3	0-16	

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0948
 Preparation: EPA 3541
 Method: EPA 8081A

Project: City of Newport Beach - Federal Channels

Page 5 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-858-512	LCS	Solid	GC 41	01/12/18	01/16/18 11:23	180112L17				
099-12-858-512	LCSD	Solid	GC 41	01/12/18	01/16/18 13:32	180112L17				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Aldrin	5.000	4.619	92	4.730	95	50-135	36-149	2	0-25	
Alpha-BHC	5.000	4.624	92	4.714	94	50-135	36-149	2	0-25	
Beta-BHC	5.000	4.560	91	4.670	93	50-135	36-149	2	0-25	
Delta-BHC	5.000	4.740	95	4.861	97	50-135	36-149	3	0-25	
Gamma-BHC	5.000	4.741	95	4.851	97	50-135	36-149	2	0-25	
Dieldrin	5.000	4.910	98	4.954	99	50-135	36-149	1	0-25	
4,4'-DDD	5.000	5.261	105	5.384	108	50-135	36-149	2	0-25	
4,4'-DDE	5.000	5.323	106	5.436	109	50-135	36-149	2	0-25	
4,4'-DDT	5.000	5.747	115	5.863	117	50-135	36-149	2	0-25	
Endosulfan I	5.000	4.757	95	4.860	97	50-135	36-149	2	0-25	
Endosulfan II	5.000	5.388	108	5.499	110	50-135	36-149	2	0-25	
Endosulfan Sulfate	5.000	5.142	103	5.263	105	50-135	36-149	2	0-25	
Endrin	5.000	5.095	102	5.165	103	50-135	36-149	1	0-25	
Endrin Aldehyde	5.000	3.886	78	3.958	79	50-135	36-149	2	0-25	
Endrin Ketone	5.000	5.314	106	5.454	109	50-135	36-149	3	0-25	
Heptachlor	5.000	4.857	97	4.967	99	50-135	36-149	2	0-25	
Heptachlor Epoxide	5.000	4.744	95	4.852	97	50-135	36-149	2	0-25	
Methoxychlor	5.000	5.386	108	5.491	110	50-135	36-149	2	0-25	
Alpha Chlordane	5.000	4.751	95	4.852	97	50-135	36-149	2	0-25	
Gamma Chlordane	5.000	4.687	94	4.787	96	50-135	36-149	2	0-25	

Total number of LCS compounds: 20

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0948
 Preparation: EPA 3541
 Method: EPA 8270C SIM PAHs

Project: City of Newport Beach - Federal Channels

Page 6 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-14-097-252	LCS	Solid	GC/MS AAA	01/12/18	01/15/18 15:57	180112L18				
099-14-097-252	LCSD	Solid	GC/MS AAA	01/12/18	01/15/18 16:17	180112L18				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Acenaphthene	100.0	93.67	94	86.83	87	40-160	20-180	8	0-20	
Acenaphthylene	100.0	90.32	90	84.95	85	40-160	20-180	6	0-20	
Anthracene	100.0	93.80	94	89.63	90	40-160	20-180	5	0-20	
Benzo (a) Anthracene	100.0	99.30	99	94.68	95	40-160	20-180	5	0-20	
Benzo (a) Pyrene	100.0	101.2	101	97.68	98	40-160	20-180	4	0-20	
Benzo (b) Fluoranthene	100.0	117.6	118	107.7	108	40-160	20-180	9	0-20	
Benzo (g,h,i) Perylene	100.0	108.2	108	103.8	104	40-160	20-180	4	0-20	
Benzo (k) Fluoranthene	100.0	94.70	95	99.35	99	40-160	20-180	5	0-20	
Chrysene	100.0	96.82	97	93.19	93	40-160	20-180	4	0-20	
Dibenz (a,h) Anthracene	100.0	111.7	112	107.2	107	40-160	20-180	4	0-20	
Fluoranthene	100.0	98.28	98	97.88	98	40-160	20-180	0	0-20	
Fluorene	100.0	90.76	91	86.65	87	40-160	20-180	5	0-20	
Indeno (1,2,3-c,d) Pyrene	100.0	107.5	108	104.0	104	40-160	20-180	3	0-20	
2-Methylnaphthalene	100.0	96.17	96	92.21	92	40-160	20-180	4	0-20	
1-Methylnaphthalene	100.0	95.25	95	92.46	92	40-160	20-180	3	0-20	
Naphthalene	100.0	90.61	91	82.52	83	40-160	20-180	9	0-20	
Phenanthrene	100.0	97.17	97	91.80	92	40-160	20-180	6	0-20	
Pyrene	100.0	104.0	104	98.50	98	40-160	20-180	5	0-20	

Total number of LCS compounds: 18

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

ANCHOR QEA, LLC
 27201 Puerta Real, Suite 350
 Mission Viejo, CA 92691-8306

Date Received: 01/12/18
 Work Order: 18-01-0948
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners

Project: City of Newport Beach - Federal Channels

Page 7 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-16-418-284	LCS	Solid	GC/MS HHH	01/12/18	01/16/18 18:34	180112L19				
099-16-418-284	LCSD	Solid	GC/MS HHH	01/12/18	01/16/18 18:58	180112L19				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
PCB018	50.00	36.07	72	38.71	77	24-132	6-150	7	0-28	
PCB028	50.00	41.76	84	43.85	88	31-133	14-150	5	0-26	
PCB044	50.00	37.52	75	41.05	82	36-120	22-134	9	0-28	
PCB052	50.00	36.56	73	39.67	79	31-121	16-136	8	0-27	
PCB066	50.00	44.15	88	47.56	95	43-139	27-155	7	0-25	
PCB077	50.00	39.13	78	42.64	85	41-131	26-146	9	0-25	
PCB101	50.00	37.36	75	40.92	82	37-121	23-135	9	0-27	
PCB105	50.00	39.84	80	43.82	88	48-132	34-146	10	0-26	
PCB118	50.00	39.55	79	43.55	87	46-136	31-151	10	0-25	
PCB126	50.00	37.83	76	41.13	82	38-134	22-150	8	0-25	
PCB128	50.00	36.70	73	40.36	81	40-130	25-145	9	0-26	
PCB170	50.00	40.11	80	43.24	86	40-124	26-138	8	0-29	
PCB180	50.00	40.92	82	43.96	88	41-143	24-160	7	0-26	
PCB187	50.00	39.62	79	43.59	87	39-129	24-144	10	0-26	
PCB195	50.00	34.20	68	37.54	75	44-128	30-142	9	0-28	
PCB206	50.00	39.79	80	42.89	86	33-135	16-152	7	0-24	
PCB209	50.00	34.92	70	37.12	74	29-137	11-155	6	0-29	

Total number of LCS compounds: 17

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits