



City of Tacoma
Environmental Services Laboratory

20 June 2017

Mary Henley
ES Science and Engineering
326 East D Street
Tacoma, WA 98421

Subject: Storm PCB - Port of Tacoma, 1940 E 11th Street

Enclosed are the analytical results for samples collected 05/19/2017.

Quality Control Data are included with the sample results for your review.

If you have any questions concerning this report, call me at (253)502-2130. Please note that remaining samples associated with this report will be discarded **3 months** from the date of this report unless we are notified otherwise.

Sincerely,

A handwritten signature in blue ink, appearing to read "Stuart Magoon".

Stuart Magoon
Assistant Division Manager
Environmental Services Laboratory

cc. Chris Burke

326 East D Street | Tacoma, Washington 98421-1801 | (253) 591-5588

ES Science and Engineering
326 East D Street
Tacoma WA, 98421

Project: **Storm PCB - Port of Tacoma, 1940 E 11th Street**
Project Number: 521400
Project Manager: Mary Henley

Reported:
20-Jun-17 10:06

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled
MH6759894	1705301-01	Soil	19-May-17 10:35
MH6759866	1705301-02	Soil	19-May-17 11:00

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CHAIN OF CUSTODY, SAMPLE RECEIPT, PRESERVATION AND STORAGE

Samples were received under appropriate Chain of Custody procedures. Containers were properly preserved and stored in accordance with the applicable method requirements.

HOLDING TIMES

All analyses were performed within the required holding times.

METHODS

The samples were analyzed by the following methods:

Standard Methods 2540
EPA Method 8270

MINIMUM REPORTING LIMITS

All analytes are reported to the Practical Quantitation Limit (PQL) which is below or no greater than the Minimum Project Reporting Limit.

BLANKS

Blanks were analyzed at the required frequencies of the methods. Analytes were not detected in the blanks.

SURROGATE COMPOUNDS

Surrogate compounds were added to each sample to monitor system performance. Surrogate recoveries were within the laboratory limits.

LABORATORY CONTROL SAMPLES

Laboratory Control Samples were analyzed with these samples. The recoveries were within the laboratory limits.

DUPLICATE SAMPLE ANALYSIS

Duplicate analysis was performed with these samples. Relative percent differences were within the laboratory limits.

MATRIX SPIKE AND MATRIX SPIKE DUPLICATE ANALYSIS

Matrix Spike and/or Matrix Spike Duplicate analysis was performed with these samples. The recoveries were within the laboratory limits.

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INTERNAL STANDARDS

Internal Standards were added to these samples for quantitation purposes. The area counts of these standards must not vary more than a factor of two from the mid-point standard of the calibration curve according to the method. The retention times must not vary by more than 30 seconds. The internal standard criteria were met for these samples.

DATA AVAILABILITY

All data associated with the samples referenced in this report are archived at the Environmental Services Laboratory and are available upon request.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan and project QAPP.


Reviewed By T. Ryan

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Environmental Services Laboratory

MH6759894

1705301-01 (Soil)

19-May-17 10:35

Analyte	Result	PQL	Units
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Conventional

SM 2540 G Prepared: 23-May-17 Analyzed: 24-May-17

Total Solids **83.8** **1.0** **%**

Semi-VOA

EPA 8270D Prepared: 01-Jun-17 Analyzed: 06-Jun-17

Aroclor-1016	9	U	9	ug/Kg dry
Aroclor-1221	9	U	9	ug/Kg dry
Aroclor-1232	9	U	9	ug/Kg dry
Aroclor-1242	9	U	9	ug/Kg dry
Aroclor-1248	9	U	9	ug/Kg dry
Aroclor-1254	9	U	9	ug/Kg dry
Aroclor-1260	9	U	9	ug/Kg dry

Surrogate: Decachlorobiphenyl **131 %** **30-150**

Surrogate: Tetrachloro-meta-xylene **98.5 %** **30-150**

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Reported:
20-Jun-17 09:51

MH6759866

1705301-02 (Soil)

19-May-17 11:00

Analyte	Result	PQL	Units
Conventional			
SM 2540 G	Prepared: 23-May-17	Analyzed: 24-May-17	
Total Solids	79.7	1.0	%

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Project Manager: Mary Henley

Reported:
20-Jun-17 09:51

MH6759866
1705301-02RE1 (Soil)
19-May-17 11:00

Analyte	Result	PQL	Units
Semi-VOA			
EPA 8270D	Prepared: 01-Jun-17	Analyzed: 13-Jun-17	
Aroclor-1016	10	U	ug/Kg dry
Aroclor-1221	10	U	ug/Kg dry
Aroclor-1232	10	U	ug/Kg dry
Aroclor-1242	10	U	ug/Kg dry
Aroclor-1248	10	U	ug/Kg dry
Aroclor-1254	99	10	ug/Kg dry
Aroclor-1260	81	10	ug/Kg dry
<i>Surrogate: Decachlorobiphenyl</i>	80.0 %	30-150	
<i>Surrogate: Tetrachloro-meta-xylene</i>	126 %	30-150	

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Conventional - Quality Control
Environmental Services Laboratory

Sample ID Analyte	Result	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B721044 - SM 2540 G

Blank Prepared: 23-May-17 Analyzed: 24-May-17

B721044-BLK1

Total Solids 1.0 U 1.0 %

Duplicate Prepared: 23-May-17 Analyzed: 24-May-17

B721044-DUP1

Total Solids 84.5 1.0 % 83.8 0.8 35

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Semi-VOA - Quality Control
Environmental Services Laboratory

Sample ID Analyte	Result	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B722070 - EPA 8270D

Blank

Prepared: 01-Jun-17 Analyzed: 06-Jun-17

B722070-BLK1

Aroclor-1016	10	U	1	ug/Kg wet						
Aroclor-1221	10	U	1	ug/Kg wet						
Aroclor-1232	10	U	1	ug/Kg wet						
Aroclor-1242	10	U	0.8	ug/Kg wet						
Aroclor-1248	10	U	0.8	ug/Kg wet						
Aroclor-1254	10	U	0.8	ug/Kg wet						
Aroclor-1260	10	U	0.8	ug/Kg wet						
Surrogate: Tetrachloro-meta-xylene	380		ug/Kg wet	500		75.2	30-150			
Surrogate: Decachlorobiphenyl	530		ug/Kg wet	500		106	30-150			

LCS Prepared: 01-Jun-17 Analyzed: 06-Jun-17

B722070-BS1

Aroclor-1254	420	0.8	ug/Kg wet	500	84.8	60-140		200		
Surrogate: Tetrachloro-meta-xylene	340		ug/Kg wet	500	67.3	30-150				
Surrogate: Decachlorobiphenyl	510		ug/Kg wet	500	102	30-150				

Matrix Spike Source: 1705301-01 Prepared: 01-Jun-17 Analyzed: 06-Jun-17

B722070-MS1

Aroclor-1254	500	0.8	ug/Kg dry	470	9 U	107	50-150		35	
Surrogate: Tetrachloro-meta-xylene	460		ug/Kg dry	470		97.0	30-150			
Surrogate: Decachlorobiphenyl	570		ug/Kg dry	470		120	30-150			

Matrix Spike Dup Source: 1705301-01 Prepared: 01-Jun-17 Analyzed: 06-Jun-17

B722070-MSD1

Aroclor-1254	510	0.8	ug/Kg dry	460	9 U	110	50-150	1.03	35	
Surrogate: Tetrachloro-meta-xylene	450		ug/Kg dry	460		98.9	30-150			
Surrogate: Decachlorobiphenyl	590		ug/Kg dry	460		128	30-150			

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Notes and Definitions

- U Analyte Not Detected at or above the associated value
- UJ Analyte Not Detected at or above the associated estimated value
- ND Analyte NOT DETECTED at or above the reporting limit
- E Analyte was determined above the upper quantitation range of the method. The associated value is an estimate.
- NJ There is evidence the analyte is present. The associated value is an estimate.
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference



326 East D Street
Tacoma
WA 98421-1801

phone (253) 502-2130
fax (253) 502-2170

Chain of Custody

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Lab Work Order Number

1705301

Relinquished By <i>Chris Banke</i>	Received By <i>Jeffrey Bogart</i>	Date/Time 5/19/2017 12:30	Comments
Relinquished By	Received By	Date/Time	
Relinquished By	Received By	Date/Time	
Cooler Numbers and Temperatures			

Matrix Codes:

S=Soil

Preserv. Codes:

P00=Cool <6°C

Cont. Codes

C09=250 mL WM CG

MMH 5/18/17 @ 2:33