Burnt Bridge Creek PCB and Dieldrin Screening Study

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Burnt Bridge Creek PCB and Dieldrin Screening Study

by

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Abstract

The Washington State Department of Ecology (Ecology) investigated sources of polychlorinated biphenyls (PCBs) and dieldrin, a chlorinated insecticide, within the Burnt Bridge Creek basin from December 2013 to October 2014. A recent Ecology report had ranked Burnt Bridge Creek as the most impacted of the three surface water discharges to Vancouver Lake and recommended this study.

The study was conducted in two phases: (1) a screening survey measured PCBs and dieldrin in water at 7 sites and (2) a source assessment survey measured PCBs and dieldrin in sediment at 17 sites.

Fall PCB concentrations in water were moderate and showed no detections exceeding the National Toxics Rule (NTR) human health criterion used in Washington State. However, spring PCB concentrations in two tributaries to Burnt Bridge Creek (Cold Creek and Peterson Channel) exceeded the NTR. The adjacent Burnt Bridge Creek sites also had PCB levels exceeding the NTR, due to inputs from Cold Creek and Peterson Channel.

In both fall and spring, dieldrin concentrations in water were high, exceeding the NTR at all Burnt Bridge Creek sites and Burton Channel. Concentration patterns over both seasons suggested a persistent source. Burnt Bridge Creek at Burton Channel had the highest dieldrin concentrations in both fall and spring.

PCB concentrations in sediment were moderate. The highest levels were measured in the downstream wetland and at two sites on Peterson Channel.

If future toxics work is performed in the Burnt Bridge Creek watershed, it should include:

- The stormwater collection system discharging to the downstream wetland should be evaluated for PCBs during rain events.
- PCBs and dieldrin should be evaluated based on water concentrations, because sediment concentrations were not as informative in locating hot spots.
- A survey should be conducted to determine what chemicals land managers apply adjacent to the stream.

Acknowledgements

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Introduction

In 2006 and 2010, the Washington State Department of Ecology (Ecology) conducted studies of Vancouver Lake and three of its major surface water sources (Coots, 2007; Coots and Friese, 2011). These studies reported polychlorinated biphenyls (PCBs) and dieldrin concentrations exceeding human health standards in fish and water. The 2006 study measured PCBs, chlorinated pesticides, and dioxins and furans in Vancouver Lake fish tissue and sediment. In 2010, the three major surface-water inputs to Vancouver Lake – Flushing Channel, Lake River, and Burnt Bridge Creek – were analyzed for the same suite of parameters in water and evaluated as possible sources to fish and sediment.

The 2010 study included seasonal sampling (winter, spring, and fall) of the Flushing Channel, Lake River, and Burnt Bridge Creek. The highest concentrations of toxic parameters were reported in spring and fall. Burnt Bridge Creek had the highest concentrations for most toxic parameters and was the highest priority for a follow-up investigation. Water quality criteria for human health were exceeded in all three seasons for PCBs and in winter and spring for dieldrin.

Regulatory Setting

The fishery (i.e., aquatic life) is the main beneficial use and therefore has the highest potential for impairment by toxic substances. The human health criteria for edible fish tissue have been exceeded for PCBs and dieldrin within Vancouver Lake (Coots, 2007). The National Toxics Rule (NTR) criteria for fish tissue are determined differently than NTR criteria for water. The NTR value is a Fish Tissue Equivalent Concentration (FTEC). Washington uses FTECs of contaminants to determine whether water quality standards for toxic chemicals are being met.

The FTEC is the concentration of a contaminant in edible fish tissue that equates to Washington's water quality criterion for the protection of human health from that contaminant. Fish tissue sample concentrations lower than the FTEC indicate that water quality standards are met for that specific contaminant.

Human health-based water quality criteria used by Washington are contained in the NTR and used in Washington's Water Quality Assessment (WQA) process. The WQA process involves the review of information from sampling efforts in the context of water quality standards. Water bodies are then assigned to one of five categories which help guide the management of pollution problems. Currently there are no 303(d) listings (Ecology, 2015) under category 5 for toxics in the Burnt Bridge Creek watershed. Very little work on toxics has been conducted in the Burnt Bridge Creek watershed.

For the screening survey, estimated water concentrations were compared to water quality criteria. PCBs and dieldrin were measured by Continuous Low-Level Aquatic Monitoring (CLAM™) systems using solid phase extraction (SPE) methods in the field. This method lowers detection limits by sampling large volumes over a 24-hour period. A linear model is used for estimating sample volumes, which likely over-estimates the final volume. Therefore the CLAM™ concentration estimates should be viewed as conservative estimates.

Based on current Ecology policy, results determined by CLAM™ samplers cannot be used for 303(d) listing or considered in violation of water quality standards. Results generated by CLAM™ samplers are considered provisional until standard operating procedures (SOPs) and method comparison studies are conducted. Table 1 lists total PCBs and dieldrin criteria for the NTR and Aquatic Life Standards for water and the Sediment Management Standards for sediment.

Table 1. Total PCBs and Dieldrin Criteria for Water and Sediment.

Analyte	Matrix	Units	National Toxics Rule	Aquatic Life Std.	SMS[1]
Total PCBs	Water	pg/L[2]	170	14,000	-
Dieldrin	Water	pg/L	140	56,000	-
Total PCBs	Sediment	ug/Kg, dw[3]	-	-	110
Dieldrin	Sediment	ug/Kg, dw	-	-	4.9

[1] Sediment Management Standards.
[2] Picograms per liter, parts per quadrillion.
[3] Micrograms per kilogram, dry weight, parts per billion.

Study Area

Burnt Bridge Creek is a small urban stream situated within the City of Vancouver, Clark County, in southwest Washington. The creek flows about 13 miles to the west, from rural agricultural areas east of Interstate-205 (I-205) through the highly developed City of Vancouver, and eventually discharges into the southeast corner of Vancouver Lake (Figure 1). The Burnt Bridge Creek watershed encompasses about 28 square miles. Overall, it is a very low-gradient stream, with a reported 80% of the basin less than 0.1 percent slope (Herrera, 2013).

Many of the surface waters in the City of Vancouver region, including the study streams, have been modified or channelized. A number of small tributaries discharge to Burnt Bridge Creek. The three most significant tributaries are a part of this study: Cold Creek, Burton Channel, and Peterson Channel. Upstream in the Burnt Bridge Creek basin, channelization starts around river mile 3 to 4, near State Route 500. The downstream reach prior to discharge to Vancouver Lake is a more natural channel and encompasses a wetland. Discharge to Vancouver Lake's southeast corner is through two eight-foot box culverts, one beneath the NW Fruit Valley Road and the other under the BNSF Railroad line.

Historical Data

From January through October 2010, Ecology investigated sources of PCBs, dioxin and furans, and chlorinated pesticides to Vancouver Lake (Coots and Friese, 2011). The 2010 study identified Burnt Bridge Creek as the highest priority for follow-up sampling, based on levels of PCBs and dieldrin. A study was recommended to identify potential sources or areas of concern within the Burnt Bridge Creek basin. The highest total PCB concentrations were measured

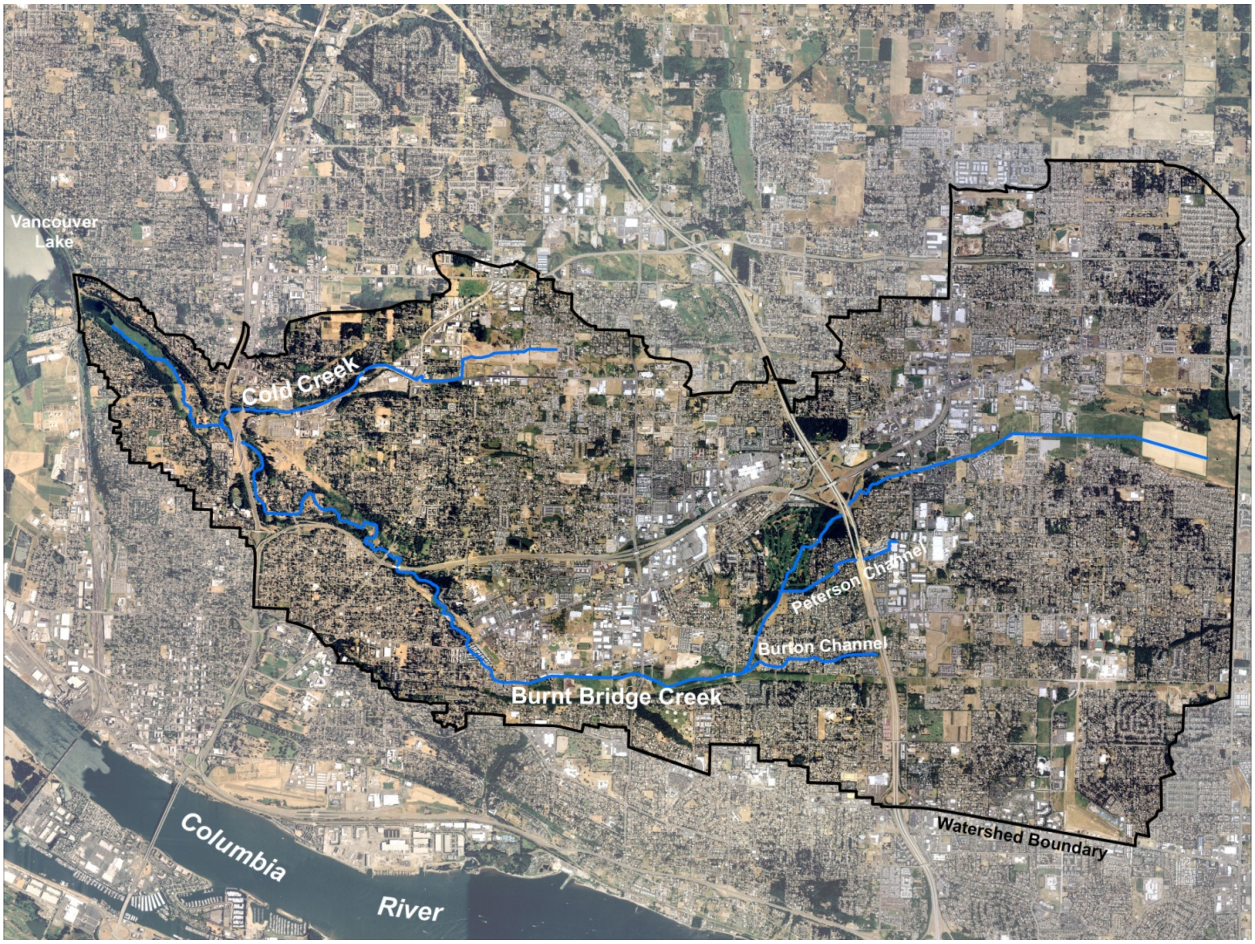

Figure 1. Burnt Bridge Creek Watershed Study Area.

during wash-off of spring and fall by semipermeable membrane devices (SPMDs); estimates averaged about three times the NTR human health criteria of 170 pg/L dissolved (parts per quadrillion). Dieldrin concentration estimates exceeded the 140 pg/L NTR human health standard in winter and spring, measuring 397 and 141 pg/L dissolved, respectively.

In 2009, a U.S. Environmental Protection Agency (EPA) contractor analyzed sediments from Vancouver Lake, the Flushing Channel, Burnt Bridge Creek, Lake River, and the Columbia River (Ecology and Environment, Inc., 2010). In Burnt Bridge Creek, PCBs were present in sediment at two sites. Relative to criteria, levels were low to moderate, ranging from 8.2 to 35 ug/Kg dry weight (parts per billion). These levels were well below the freshwater cleanup objectives of 110 ug/Kg or cleanup screening levels of 2500 ug/Kg, per WAC 173-204-563. Historical data collected within the Burnt Bridge Creek basin for PCBs or dieldrin are very sparse. We found no other studies conducted within the last 10 to 15 years.

Methods

Study Overview

At the request of Ecology's Water Quality Program, Vancouver Field Office, Ecology's Environmental Assessment Program conducted a source assessment in the Burnt Bridge Creek basin for PCBs and dieldrin.

Previous studies measuring PCBs and dieldrin in Burnt Bridge Creek have reported concentrations exceeding water quality criteria. Watershed sources had not been systematically evaluated but were thought to be related to run-off from land surfaces during rain events, wet and dry atmospheric deposition, and past and present handling practices.

A screening survey was conducted to identify areas for further study, and a source assessment was based on screening survey results. Areas with low concentrations of target parameters in the screening survey were eliminated from further study. Upstream areas of sites identified for follow-up were evaluated as possible sources. Additional sample sites were included for the source assessment. Upstream areas of sites with elevated concentrations of target parameters were divided into reaches with similar land-use characteristics. We identified locations where the stream could be accessed for collection of sediment within each of these reaches.

The screening survey collected water samples from four mainstem and the three major tributary sites during fall 2013 and spring 2014. Water samples were analyzed by *in situ* solid phase extraction (SPE) techniques for PCB congeners and dieldrin. After receiving results, we ranked and prioritized sample concentrations for the follow-up source assessment survey. The source assessment survey collected sediments and analyzed them for PCB Aroclors, dieldrin, total organic carbon (TOC), and grain size.

Specific descriptions of field procedures, sample collection, and analytical methods can be found in the Quality Assurance (QA) Project Plan developed for the study:
https://fortress.wa.gov/ecy/publications/SummaryPages/1403101.html

Measurement Procedures

The analytical parameters, sample numbers, reporting limits, and analytical methods are presented in Table 2. Study objectives and the analytical reporting limits determined which method we selected.

Table 2. Laboratory Parameters, Number of Samples, Reporting Limits, and Analytical Methods.

Parameter	Sample Number[1]	Reporting Limits	Sample Clean-up and Extraction Methods	Analytical Method
CLAM™-SPE Disk				
PCB Congeners	16	10 pg/L[2]	EPA 3535	EPA 1668C
Dieldrin	16	3 – 10 pg/L	EPA 3535M	EPA 8081M
Water				
TOC[3]	32	1 mg/L	SM 5310B	
TSS[4]	32	1 mg/L	SM 2540D	
Sediment				
PCB Aroclors	18	10 ug/Kg	EPA 3620C, 3660B, 3665A/ EPA 3535 and 3541	SW-846 EPA 8082 GC/ECD
Dieldrin	18	1 – 5 ug/Kg	EPA 3620C, 3660B/ EPA 3535 and 3541	EPA 8081/8270
TOC	18	0.1%	PSEP – TOC, Combustion NDIR	
Grain Size	20	0.1%	PSEP 1986, Sieve and Pipet	

[1] Sample number includes field samples and replicates but not laboratory quality control (QC) samples.
[2] PCB reporting limits are congener specific.
[3] Total organic carbon.
[4] Total suspended solids.

Goal and Objectives

The goal of the present study was to identify possible sources of PCBs and dieldrin in the Burnt Bridge Creek basin. The specific objectives for the study were to:

- Conduct a screening survey for PCBs and dieldrin in the water column by sampling reaches and tributaries within the Burnt Bridge Creek watershed.
- Prioritize study reaches based on screening results for more focused source identification.
- Conduct sediment sampling of problem areas for the purpose of follow-up.

Quality Assessment Overview

In addition to the quality assessment of study data, summary results are presented below. Data quality results for the study are in Appendix B, Tables B-1 through B-5.

Data sets like PCBs can have large numbers of non-detected or qualified results. PCBs data sets require decisions about how sample totals are determined. For this study, total PCBs included all detected Aroclors or congeners per sample and any “J” (estimated concentration, positively identified) qualified results at full value. Results qualified as “NJ” (approximate concentration, tentatively identified) were not included in total PCB or homolog totals. “Non-detected” PCB values (“U” and “UJ”) were also excluded. The standard summing method for PCB Aroclors was used, where only detected concentrations are summed. When all Aroclors are non-detect, the sample concentration is reported as non-detected at the highest Aroclor detection limit. For congener analysis, samples detected and “J” qualified congeners within each homolog group were totaled. The 10 homolog group totals for each sample are then summed for a sample total PCB result.

All laboratory results for the study will be included in Ecology's Environmental Information Management (EIM) database except the congener data measured by CLAM^{TM} samplers. Water concentrations measured by CLAM^{TM} samplers and SPE disks are considered estimates and cannot be used to list a waterbody under 303(d). These results can be shared by the study author, upon request, but currently are considered provisional data. Public access to electronic data and the final report for the study will be available through Ecology's Internet homepage (www.ecy.wa.gov).

Quality Assessment

Results were reviewed for qualitative and quantitative accuracy following the National Functional Guidelines for Organic Data Review under the Contract Laboratory Program (CLP). Written case narratives assessing the quality of the data reports are provided by Ecology's Manchester Environmental Laboratory (MEL). These narratives included descriptions of the analytical methods, a review of sample holding times, instrument calibration checks, blank results, surrogate recoveries, matrix spike recoveries, and laboratory control samples. The case narratives and complete data reports can be obtained from the report author, by request.

The quality assurance (QA) review verified laboratory performance met most quality control (QC) specifications outlined in the analytical methods. The quality of the data reported here is appropriate for the intended uses. To verify results generated for the study were of the quality needed, control sample results were compared to data quality objectives established in the QA Project Plan (Coots, 2014). Specific quality issues noted in the case narratives are discussed below.

Sample Holding

All study samples were maintained and transferred to Ecology under chain-of-custody from the time of collection. Study samples were sent by courier to MEL and arrived in coolers on ice within the proper holding temperature of <6 ^{o}C for water and <-10 ^{o}C for sediment. Samples were prepared and analyzed within method hold-time limits, except for one dieldrin sediment sample from the wetland (WET-04) that was "J" qualified.

Samples intended for analysis at contract laboratories were preserved and stored under chain-of-custody procedures at MEL until shipped. Samples were repackaged and shipped by MEL to Pacific Rim Laboratories, the contract laboratory conducting PCB congeners, and Analytical Resources, Incorporated, the contractor analyzing the sediment grain size.

PCB Congeners

PCB congener samples were collected by CLAM^{TM} samplers using SPE discs for the screening survey. EPA method 1668C was used for the PCB analysis, resolving all 209 congeners with some co-elutes. Congener concentrations less than 10 times the concentration reported in the laboratory method blank were qualified as non-detected at the sample Estimated Detection Limit (EDL). When congeners were detected in laboratory method blanks at less than 10% of the sample concentration, no qualification was applied.

QC results are expressed as percent recovery for labeled PCB congeners spiked at the laboratory just prior to extraction. These results are listed in Appendix B, Table B-1. Labeled PCB congener recovery was good, with few exceptions. Recovery criteria for PCB congener spikes ranged from 40-150%. All labeled PCB spikes added at the laboratory prior to extraction were within acceptance criteria for all field samples collected in both fall and spring.

During analysis of fall samples, the field blank (1312033-16) was reported with a slightly low recovery of 36% for PCB 169L. The fall transport spike (1312033-17) had labeled PCBs spiked pre-deployment and unlabeled PCB spikes (laboratory control sample, LCS) pre-extraction. The LCS spikes (PCB 151 and PCB 139/149) recovered high at 161% and 202%, respectively. For the spring samples, the LCS spike sample also had PCB-151 and PCB-139/149 recovering high at 171% and 196.1%, respectively. Congener PCB-170 recovered just below range at 39%. Data were considered acceptable as qualified for their intended use.

The SPE sample discs used for the screening study were pre-conditioned with solvent and spiked with isotopically labeled PCB congeners at the contract laboratory. Discs were spiked with 5 ng of labeled compounds PCB-028L, PCB-111L, and PCB-178L prior to field deployment. The pre-deployment spikes went through the entire field deployment, sampling, packaging and shipping, and analytical process. There are no acceptance criteria for the pre-deployment spikes. Table B-2 in Appendix B lists recovery of the pre-deployment spikes, ranging from 24 to 88%.

During the spring, a field replicate was collected from BBC-04 (1404033-12 and -18) by CLAM™ samplers and analyzed. The replicate was collected at the same time and location as the study sample. Field replicates provide a measure of the total sample variability, field plus laboratory. Relative percent differences (RPDs) were calculated for those congeners reported detected and estimated (“J”) in both the sample and field replicate. The mean RPD for the field replicate pair was 22%. The RPDs for congener pairs ranged from 0.4 to 67.6%.

PCB Aroclors

PCB Aroclors were analyzed in sediment for the source area assessment by a gas chromatograph/ electron capture detector (GC/ECD) method. PCB Aroclor samples were collected as composite grabs from Burnt Bridge Creek and the downstream wetland, Cold Creek, Burton Channel, and Peterson Channel. EPA methods 3541B, 3620C, 3660B, and 3665B were applied to samples for cleanup and extraction and for the analysis EPA method 8082A.

The laboratory reported sample results and QC results for surrogates and matrix spikes that are spiked at the laboratory just prior to extraction. Surrogates included decachlorobiphenyl (DCB), dibutylchlorendate, and tetrachloro-m-xylene, while matrix spikes were Aroclor 1016, Aroclor 1260, and dieldrin. Surrogate recovery was good; few results were reported beyond the 50-150% recovery criteria. Four results (4 of 93) were below 50% recovery, all related to the same field sample (Wet-04). Three of the four low recoveries were for the compound decachlorobiphenyl (DCB), a surrogate that at times has been a poor performer. The fourth was tetrachloro-m-xylene reported at 47%, just below recovery criteria. Recovery for matrix spikes was good; only Aroclor 1260 recovered just below the lower criteria limit for a matrix spike (MS) and matrix spike duplicate (MSD) sample pair (B14G181-MS1 and -MSD1). Data were considered acceptable as qualified for their intended use. Results are listed in Appendix B, Table B-5.

PCB Blanks

Congeners

Laboratory blanks were analyzed along with study samples for both the fall and spring screening surveys. A field blank was analyzed for the fall survey consisting of an SPE disc conditioned at the analytical laboratory and returned to the original Ziploc foil pouch. The field blank was carried through the sample day with the other SPE discs, exposed to air for a period of time and analyzed just as other samples. To estimate concentration for field blanks, SPE disks require a sample volume. The average estimated volume for CLAM™ samples per season was used for the field blanks.

Field blank results were expected to show higher levels of contamination than the laboratory blanks. Field blanks are exposed to more threats of contamination from transportation and sample collection procedures than are laboratory blanks. Table B-3 in Appendix B lists results for laboratory and field blanks.

Total PCB results for the fall and spring laboratory blanks were reported at 5.89 and 7.75 pg/L (parts per quadrillion), respectively. Low levels of PCB congeners were detected for the fall laboratory blank in six of the 10 homolog groups (di-, tri-, tetra-, penta-, hexa-, and hepta-). Only lighter weight PCB congeners, PCB-044 and lower, were detected in the spring laboratory blank. The spring blank showed a slightly higher total PCB concentration than the fall blank but still low overall. Congeners were detected from only three homolog groups for the spring blank (di-, tri-, and tetra-).

Results for the fall field blank (1312033-16) were slightly higher than results for the laboratory blanks. Total PCBs for the field blank were 14.2 pg/L. Detected PCB congeners were made up of the lighter PCBs, as with the spring laboratory blank. None of the 209 congeners were detected above PCB-51.

Aroclors

Laboratory method blanks were analyzed for Aroclors and dieldrin, along with study samples, for the source assessment survey. No target analytes were detected in any laboratory method blanks, and no study data were qualified as a result of blank contamination. Aroclor analysis had a reporting limit for method blanks of 2.5 ug/Kg; dieldrin had a reporting limit for method blanks of 0.12 ug/Kg.

Sample Detection Limits

Congeners

Limits of quantitation and detection are sample-specific for PCB analyses. Table 3 summarizes sample mean Estimated Quantitation Limits (EQL) and Estimated Detection Limits (EDL) for the PCB congener methods in units of pg/L. EQLs for PCB congener analysis are the same for all congeners per sample and are listed in Table 3. EDLs are sample-specific and congener-specific and listed as a mean and highest value per sample. The full list of EDLs reported for the study can be found in Appendix B, Table B-4.

Table 3. Sample Detection Limits for the PCB Congener Methods, Fall and Spring (pg/L).

MEL ID	Field ID	EQLs[1]	EDLs[2]	MEL ID	Field ID	EQLs	EDLs
1312033-14	BBC-01	0.206	0.0523/0.183[3]	1404033-17	BBC-01	1.0204	0.0721/0.253
1312033-12	BBC-02	0.2407	0.0782/0.279	1404033-15	BBC-02	1.0152	0.0519/0.171
1312033-11	BBC-03	0.2348	0.0819/0.287	1404033-14	BBC-03	0.9217	0.0537/0.194
1312033-09	BBC-04	0.1403	0.0374/0.134	1404033-12	BBC-04	0.8529	0.0905/0.346
1312033-15	COL-01	0.1334	0.0497/0.156	1404033-16	COL-01	0.8772	0.0969/0.246
1312033-10	BUR-01	0.2571	0.0801/0.301	1404033-13	BUR-01	0.8677	0.0356/0.121
1312033-08	PET-01	0.1921	0.0508/0.171	1404033-11	PET-01	0.6483	0.0593/0.225

[1] Sample "Estimated Quantitation Limit".
[2] Congener-specific "Estimated Detection Limit".
[3] EDL numbers represent the mean of sample congeners/highest sample congener value.

Congener analysis has reported both the EQL and EDL as a PCB reporting limit for non-detected sample results. The EQL is calculated from a clean matrix or ideal sample like a low level laboratory standard. The EDL is calculated as 2.5 times the sample average signal-to-noise ratio. When sample matrix interference pushes the signal-to-noise ratio upwards, the EDL is increased proportionally. The EDL was used for this study as the sample reporting limit for non-detected congeners.

For fall results, EQLs ranged from 0.133 to 0.257 pg/L, while EDLs ranged from 0.003 to 0.301 pg/L. For spring results, EQLs ranged from 0.648 to 1.02 pg/L, while EDLs ranged from 0.003 to 0.346 pg/L.

Aroclors and Dieldrin

Limits of detection and reporting for the Aroclor analysis are sample- and Aroclor-specific. Table 4 shows reporting limits (RL) and method detection limits (MDL) for PCB Aroclor and dieldrin sample analyses of sediments in units of ug/Kg. Shown are the highest RL and mean MDL for all Aroclors in each sample and the RL and MDL for dieldrin samples.

Sediment RLs for PCB Aroclor analysis ranged from 3.4 to 21 ug/Kg; MDLs ranged from 0.33 to 2.06 ug/Kg. Dieldrin RLs ranged from 0.38 to 1.9 ug/Kg; MDLs ranged from 0.044 to 0.25 ug/Kg. The highest Aroclor RL per sample was used for the non-detected sample reporting limit.

Table 4. Reporting and Method Detection Limits for PCB Aroclors and Dieldrin in Sediment (ug/Kg).

MEL ID	Site ID	PCBs		Dieldrin	
		RL[1]	MDL[2]	RL[1]	MDL[3]
1409081-02	WET-02	6.5	0.63	-	-
1409081-03	WET-03	15	1.50	-	-
1409081-04	WET-04	14	1.36	0.72	0.17
1409081-05	WET-03REP	15	1.48	-	-
1407083-04	BBC-11	3.8	0.37	0.38	0.044
1407083-05	BBC-02	4.5	0.43	0.45	0.052
1407083-06	BBC-03	6.2	1.21	1.2	0.14
1407083-07	BBC-04	16	1.59	1.6	0.19
1407083-08	BBC-05	19	1.86	1.9/1.9[4]	0.22/0.23[4]
1407083-09	BBC-06	21	2.06	2.1	0.25
1407083-17	COL-02	4.0	0.39	-	-
1407083-02	COL-03	3.4	0.33	-	-
1407083-03	COL-04	7.6	0.73	-	-
1407083-13	BUR-01	12	1.13	1.2	0.13
1407083-14	BUR-02	7.1	0.69	0.71	0.083
1407083-10	PET-01	8.7	0.84	-	-
1407083-11	PET-02	17	1.67	1.7	0.20
1407083-12	PET-03	15	1.47	-	-

[1] Sample reporting limit.
[2] Mean Method Detection Limit.
[3] Method Detection Limit.
[4] Field replicate sample 1407083-16 value after slash.

Results

Screening Survey (Water)

CLAM™ samplers using SPE discs were deployed and retrieved on December 3 and 4, 2013 for the fall survey and on April 8 and 9, 2014 for the spring survey at seven locations within the Burnt Bridge Creek basin. The CLAM™ systems sampled continuously over roughly a 24-hour period at four sites on Burnt Bridge Creek and three tributaries just prior to discharge. Pumping rates decreased from the initial rates over the sampling period to generally 10% or less. Tributaries included Cold Creek, Burton Channel, and Peterson Channel. Figure A-1 in Appendix A shows sample site locations and descriptions for the screening survey.

The areas upstream of the sites determined to be a concern were evaluated for targeted sediment sampling during the source assessment. Areas with low concentrations of target parameters were eliminated from further study.

Table 5 provides summary results for total PCBs, dieldrin, total organic carbon (TOC) and total suspended solids (TSS). TOC and TSS are averages based on the start and ending period samples collected during CLAM™ deployment. Table 5 also includes the NTR and Aquatic Life Standards for total PCBs and dieldrin in water. Tables C-1 and C-4 in Appendix C show results for the entire PCB congener data sets. The TOC and TSS starting and ending deployment results, including flow rates and volume, are in Tables C-3 and C-6. Sample-specific homolog group totals, including PCB sample totals are in Tables C-2 and C-5.

Table 5. Total PCB, Dieldrin, TOC, and TSS Results for Water, Fall and Spring.

Lab ID (1312033-) Fall Field ID	09 BBC-04	11 BBC-03	12 BBC-02	14 BBC-01	13 COL-01	10 BUR-01	08 PET-01
Total PCBs (pg/L)	34.3	154	89.3	87.8	126	63.3	139
Dieldrin (pg/L)	**347**	**819**	**407**	**187**	16	**184**	47.9
TOC[1] (mg/L)	1.6	3.8	4.7	4.1	1.7	3.2	1.5
TSS[1] (mg/L)	4.5	11	6.5	7	13	1.5	3
Lab ID (1404033-) Spring Field ID	12 BBC-04	14 BBC-03	15 BBC-02	17 BBC-01	16 COL-01	13 BUR-01	11 PET-01
Total PCBs (pg/L)	**176 J[2]**	97.1 J	131 J	**352**	**726 J**	53 J	**207**
Dieldrin (pg/L)	**674**	**982**	**531**	**424**	43	**339**	38
TOC (mg/L)	1.6	2.2	2.9	3.2	2.2	2.6	0.8
TSS (mg/L)	4.5	5	7.5	15	4.5	3	3

	National Toxics Rule	Aquatic Life Std.
Total PCBs (pg/L)	170	14,000
Dieldrin (pg/L)	140	56,000

Bold: Results that exceed a water quality criterion.
J: Compound positively identified, result is an estimate.
[1] Results are the mean of pre- and post-deployment grab samples.
[2] Result is the mean of a field replicate pair. See Table B-6 in Appendix B.

Source Assessment Survey (Sediment)

After reviewing screening survey results, Ecology conducted a more focused survey using sediment. Reaches with elevated water concentrations during the screening survey were prioritized for follow-up sampling to isolate sites or areas. Source area assessment sampling for Burnt Bridge Creek and tributaries was conducted on July 21, while the downstream wetland was sampled on October 8. See Figure A-2 in Appendix A for sediment sample locations on Burnt Bridge Creek including tributaries. See Figure A-3 for sediment collection locations in the downstream wetland.

Upstream areas of sites with elevated concentrations of target parameters were divided into reaches with similar land-use characteristics. Locations where the stream could be accessed within each of these reaches were then identified for collection of sediment.

The complete set of PCB Aroclors and dieldrin results from sediment are located in Appendix C, Table C-7. Table 6 below provides a summary of results for the source area assessment. Table 6 also includes the freshwater Sediment Management Standards (SMS), sediment cleanup objectives, for total PCBs and dieldrin. Companion results for TOC and grain size are located in Table C-8.

Table 6. Total PCBs and Dieldrin in Sediment for the Source Area Assessment, July and October, 2014 (ug/Kg).

Field ID	PCB 1248	PCB 1254	PCB 1260	Total PCBs	Dieldrin
WET-02	-	**9.6**	**3.6 J**	**13.2 J**	NS
WET-03[1]	**10.5 J**	**17.5 J**	**6.5J**	**34 J**	NS
WET-04	**15 J**	**22 J**	-	**37 J**	**0.99 J**
BBC-11	-	**2.3**	-	**2.3**	0.38 U
BBC-02	-	**2.8 J**	-	**2.8 J**	**0.54**
BBC-03	-	**6.5 J**	-	**6.5 J**	1.2 U
BBC-04	-	-	-	16 U	**4.9**
BBC-05	-	-	-	19 U	**5.1**
BBC-06	-	-	-	42 UJ	**2.6**
COL-02	-	**6.0 J**	-	**6.0 J**	NS
COL-03	-	-	-	3.4 U	NS
COL-04	-	-	-	7.6 U	NS
BUR-01	-	-	-	12 UJ	1.2 U
BUR-02	-	-	-	7.1 U	**0.87**
PET-01	-	**5.0 J**	-	**5.0 J**	NS
PET-02	**14 J**	**9.6 J**	-	**23.6 J**	NS
PET-03	**15 J**	**15 J**	-	**30 J**	NS
	SMS Criteria[2] (ug/Kg, dw)			110	4.9

Bold: A detected compound.
- Not detected.
J: Compound positively identified; result is an estimate.
NS: Not sampled.
U: Not detected at the detection limit shown.
UJ: Not detected at the estimated detection limit shown.
[1] Mean of field replicates.
[2] Sediment Management Standards – sediment cleanup objective.

Discussion

Precipitation

During portions of the 2014 study period, precipitation followed historical trends. Overall, precipitation during the study period was about 7.7 inches below the historical rainfall average. From November through March of the study, monthly rainfall totals moved in the opposite direction of the historical record. There was less precipitation in late fall and into winter than was reported for historical records. During January through March 2014, monthly rainfall totals more than doubled, while historical data show drier patterns from January through July. March had the highest monthly rainfall total in 2014, while historical data show that December is likely to have the greatest total for precipitation. During April to May 2014, rainfall was very close to historical norms. August 2014 was especially dry, with only 0.03 inch of precipitation.

Figure 2 shows long-term precipitation data from a weather station located at the Portland International Airport (NOAA, 2015) compared to 2014 study period precipitation from a weather station adjacent to the study area. The study period data are considered provisional. The Portland airport station is located about 3 miles south of the study area, just across the Columbia River, and has reported precipitation for almost 70 years (1941-2010). The study period data were collected at the Salmon Creek Wastewater Treatment Plant (WWTP), located on Salmon Creek at about one-half mile to the east of Lake River.

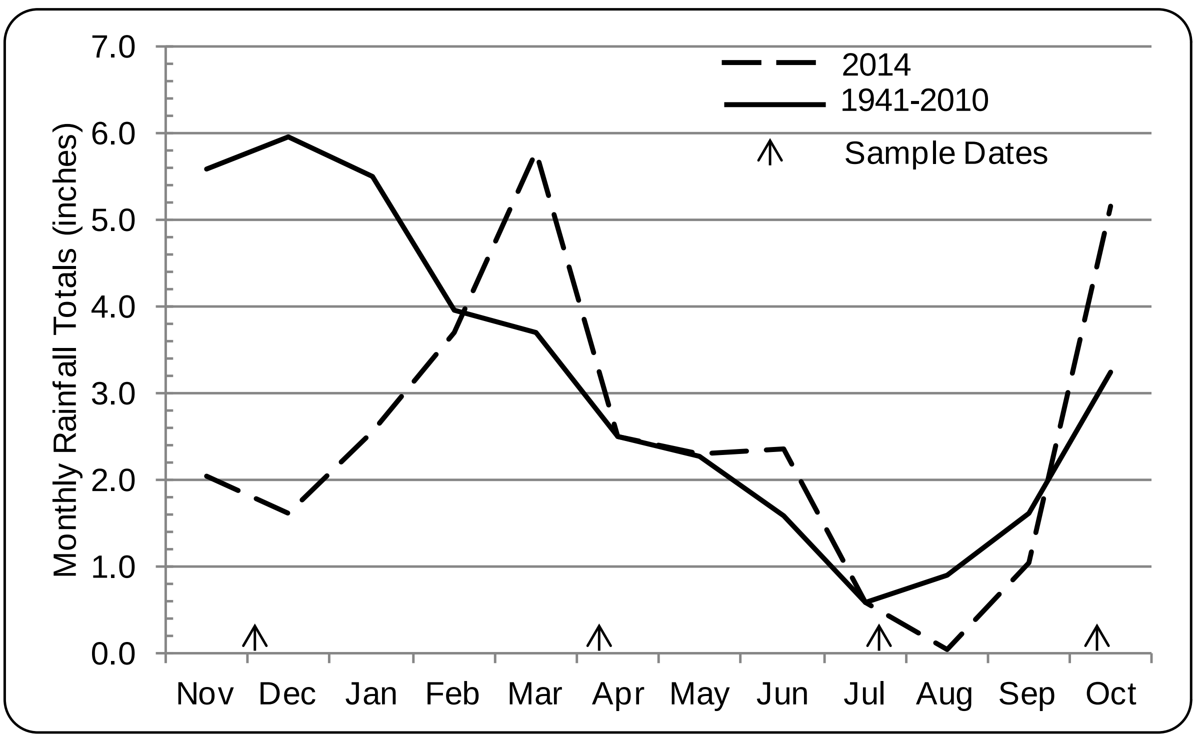

Figure 2. Study Period and Historical Monthly Rainfall Totals (Inches).

Screening Survey (Water)

Precipitation

Nonpoint sources of toxics like PCBs and dieldrin are often driven by wash-off from storm events (USGS, 2015). Stream concentrations can be affected by, and may be a function of, the amount and duration of rainfall preceding sampling events. For the fall survey, the 48-hour antecedent precipitation for the sample event was 0.07 inch. The rainfall total for the month preceding the fall survey was below the 70-year rainfall average by about 2.5 inches.

During the spring, the 48-hour antecedent precipitation for the sample event was 0.37 inch. The rainfall total for the month preceding the spring survey was about 0.7 inches above the historical rainfall average.

PCBs

During fall sampling, PCB concentrations from water were moderate and had no exceedance of the NTR Human Health (170 pg/L) or Aquatic Life (14,000 pg/L) standards. The three highest total PCB concentrations were from the Burnt Bridge Creek site at the confluence of Burton Channel (BBC-03), Peterson Channel (PET-01), and then Cold Creek (COL-01), at 154, 139, and 126 pg/L, respectively (see Figure A-1 for locations).

During spring sampling, total PCB concentrations were higher at five of seven sites. Four sites exceeded the NTR criterion for total PCBs: Cold Creek (COL-01), Burnt Bridge Creek downstream (BBC-01), Peterson Channel (PET-01), and Burnt Bridge Creek at Peterson Channel (BBC-04). The total PCB level in Cold Creek was 726 pg/L, and the downstream site on Burnt Bridge Creek was 352 pg/L, over four times and two times the NTR criterion, respectively. The Peterson Channel and Burnt Bridge Creek site at Peterson Channel were only slightly above the NTR. No PCB results for the screening survey approached the Aquatic Life standard.

Total PCB concentrations measured at the two Burnt Bridge Creek sites, BBC-01 and BBC-04, were likely impacted by tributaries just upstream. PCBs measured in Cold Creek were likely responsible for concentrations measured at BBC-01, which is about 100 meters downstream of Cold Creek. PCBs measured in Peterson Channel likely augmented concentrations measured at the BBC-04 site, which is only about 20 to 30 feet downstream of the discharge from Peterson Channel.

Only 182 of the 209 possible PCB congeners were reported per sample due to co-elution. The number of detected individual congeners per sample ranged from 38 at Burton Channel (BUR-01) to 71 at Cold Creek (COL-01). All sites had more congeners detected in the spring survey, ranging from 50 at BBC-03 to a high of 91 at Cold Creek.

PCB results for the screening survey suggested that additional PCB study should focus on Cold Creek and Peterson Channel sub-basins and, to a lesser extent, above BBC-04 on the mainstem Burnt Bridge Creek at Peterson Channel. Burnt Bridge Creek PCB results were mixed for the mainstem samples.

Figure 3 presents the screening survey results for total PCBs reported for both fall and spring surveys. Data are arranged left to right to coincide with flow from upstream to downstream. The results for the three Burnt Bridge Creek tributaries included in the study are plotted on the right (see Figure A-1 in Appendix A).

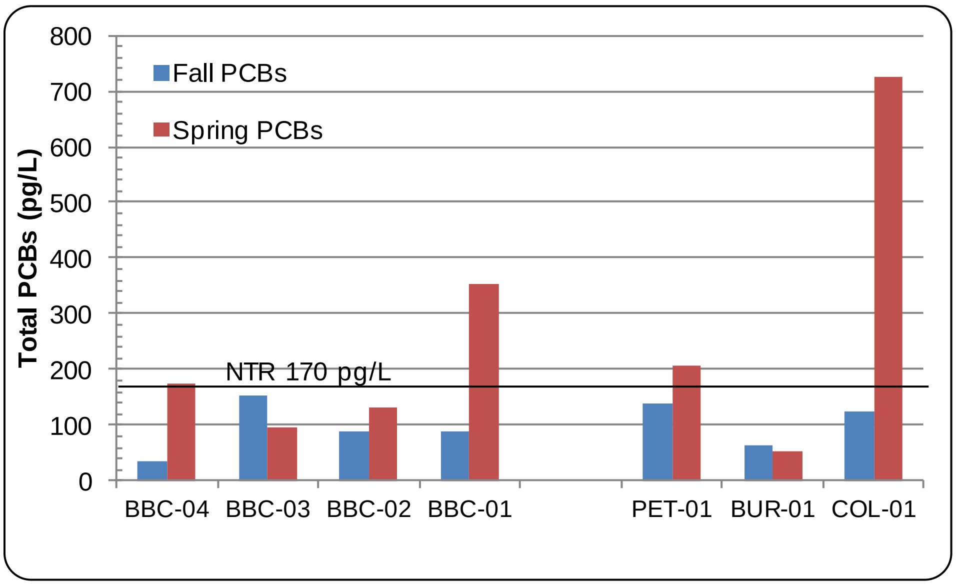

Figure 3. Total PCBs Measured in the Burnt Bridge Creek Basin, Fall and Spring (pg/L).

Congeners and Aroclors

Most PCBs sold in the United States were mixtures of individual congeners based on application needs. Identifying Aroclor patterns from congeners is complicated due to weathering, PCB inputs from other sources such as atmospheric deposition, and mixed sources of PCB contaminants entering the environment in products like organic dyes. In addition, once in the environment, microbial dechlorination can change the Aroclor signal.

Some congeners that were never intentionally included in Aroclors when detected, such as PCB-04 and PCB-19, are considered indicators of dechlorination (Rodenburg et al., 2010). These two congeners are thought to be dechlorination products. Sources other than Aroclors may also be indicated by specific congeners.

Organic pigments are also a source of PCB congeners to the environment. PCB-11 is a contaminant in yellow dye and is often detected in congener analysis. It is used in printing on paper, plastic, and fabric, and as pigments in plastic. During fall, water from the PET-01 site reported the total PCBs included more than 5% PCB-11. During spring, three sites had PCB-11 detected (BBC-04, 4.2%; PET-01, 3.99%; and COL-01, 1.29%). Some PCB contaminants are also inadvertently made during production of white pigment. During the making of titanium tetrachloride, the highly chlorinated congeners PCB-206, PCB-208, and PCB-209 are produced. Most titanium tetrachloride is used to make titanium dioxide, white pigment.

Homolog Distributions

Differences in PCB sources can at times be seen between the PCB signatures at sites by looking at the homolog distributions (i.e., degree of chlorination). Figures A-4 and A-5 in Appendix A show homolog distribution patterns for congener analysis from the Burnt Bridge Creek sites and the three tributaries during fall and spring surveys for PCBs in water.

Fall PCB congener patterns in Burnt Bridge Creek and the three tributaries were generally lower in concentration than spring results and skewed toward the less chlorinated PCB homologs (i.e., di- and tri-). The spring PCB homolog make-up in Burnt Bridge Creek was much closer to a bell-shaped curve but still having slightly elevated di- and tri- homologs. During spring, the highest PCB inputs to Burnt Bridge Creek were from Cold Creek.

During the fall, homolog patterns for the three tributaries, Cold Creek, Burton Channel, and Peterson Channel, showed distributions skewed toward the lower chlorinated PCBs, similar to results for the mainstem Burnt Bridge Creek. During spring, Cold Creek had much higher concentrations than other sites, and homolog patterns were closer to a bell-shaped curve (Figure A-5), while Peterson Channel was skewed toward the more volatile PCBs. Seasonal patterns suggest different sources or different waste streams from the same source. Burton Channel does not really contribute PCBs to BBC-03 and appears to have a unique source in the fall.

Dieldrin

Dieldrin results were high, exceeding the NTR at all Burnt Bridge Creek sites and Burton Channel both the fall and spring. Dieldrin concentrations in Peterson Channel and Cold Creek were low. Dieldrin concentrations had the same spatial pattern at the Burnt Bridge Creek sites during fall and spring, suggesting a persistent source. The spring survey had higher dieldrin concentrations reported at all sites except Peterson Channel (PET-01). The Aquatic Life standard (56,000 pg/L) was not approached at any site.

Lower dieldrin concentrations were detected during the fall. The concentration at Burnt Bridge Creek at Peterson Channel (BBC-04) was high during both seasons, and levels more than doubled during the fall from BBC-04 to BBC-03, increasing from 347 to 819 pg/L. While spring dieldrin concentrations were generally higher, the increase was about one-third between BBC-04 to BBC-03, from 674 to 982 pg/L. Burnt Bridge Creek dieldrin concentrations peaked at BBC-03 both seasons, then attenuated downstream to BBC-01.

The high dieldrin concentrations at BBC-02 may be an artifact from contaminants at BBC-03 moving downstream as dilution and attenuation take effect; it also could be that inputs are occurring downstream of BBC-03. Results suggest there may be a persistent dieldrin source with the largest input between BBC-04 and BBC-03 and another somewhat smaller input above BBC-04.

Results from the screening survey suggested that additional dieldrin study should focus on the mainstem Burnt Bridge Creek, with the highest priority above BBC-03 and also Burton Channel, the smallest of the three monitored tributaries.

In Figure 4, the dieldrin results for Burnt Bridge Creek are arranged left to right to coincide with flow from upstream to downstream. Plotted on the right are the three Burnt Bridge Creek tributaries included in the study: Peterson Channel, Burton Channel, and Cold Creek (site locations on Figure A-1 in Appendix A).

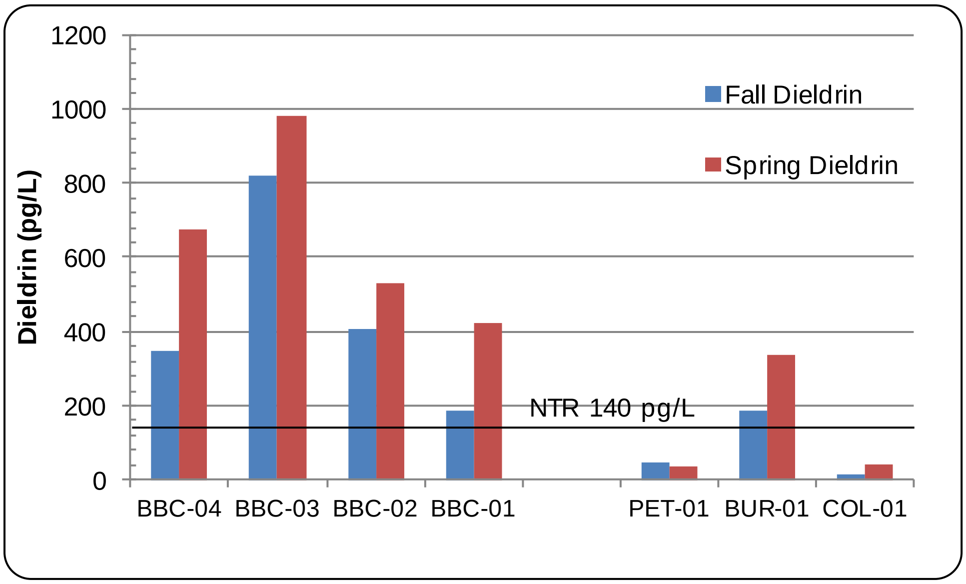

Figure 4. Dieldrin Measured in the Burnt Bridge Creek Basin, Fall and Spring (pg/L).

The study results for dieldrin in water were compared to statewide dieldrin data for samples collected from 1999 to 2014 by Ecology or others. These data are available from Ecology's Environmental Information Management (EIM) system. The database contains all data monitored by, or required by, Ecology or recipients of Ecology.

In Figure 5, the EIM data represent dieldrin in water from 10 studies over 15 years. Only dieldrin results reported above detection limits are presented.

Figure 5 presents a cumulative frequency plot displaying data as percentiles. Units on the Y axis are nanograms per liter (ng/L – parts per trillion) of dieldrin. Levels of dieldrin from Burnt Bridge Creek and tributaries are high compared to statewide data. The highest four of 14 dieldrin results for the basin fall between the 77th and the 89th percentile for all statewide dieldrin results. The four lowest dieldrin results for the study were from Cold Creek and Peterson Channel. These four samples were the lowest detections of dieldrin reported for Washington State in EIM. The NTR dieldrin criterion value in water is about the 27th percentile.

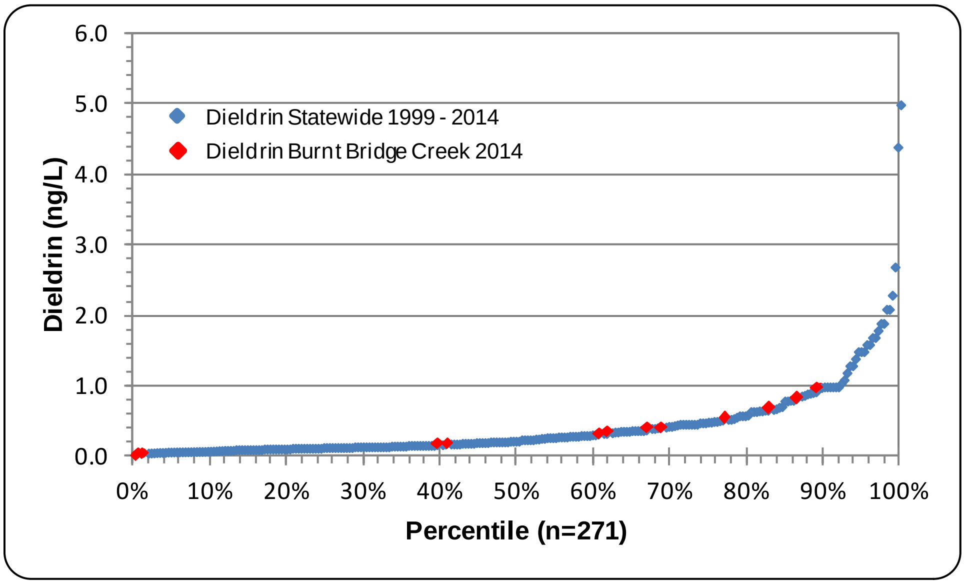

Figure 5. Cumulative Frequency Distribution of Dieldrin in Water from the Burnt Bridge Creek Basin Compared to Statewide Data Collected from 1999-2014.

Source Assessment Survey (Sediment)

Sediments were collected and analyzed for PCBs and dieldrin in the areas identified during water sampling. Sediment samples were collected on July 21, 2014 from Burnt Bridge Creek and three tributaries and on October 8, 2014 from the downstream wetland. Additional background information on PCBs and dieldrin is available in the Appendix D Glossary.

PCBs

Overall, sediment PCB concentrations were moderate, with no exceedances reported or even approaching the SMS criteria of 110 ug/Kg, dw. Areas with the highest concentrations were reported from the downstream wetland and the two upstream sites on Peterson Channel.

Peterson Channel

One significant source of water for Peterson Channel is pumped groundwater. The Shin Etsu company (SEH), a silicon wafer manufacturing facility on NE 112th Avenue, discharges non-contact cooling water, reverse osmosis filter water from the pumped groundwater, and stormwater from roofs and paved areas into a storm pipe where it becomes the major contributor to Peterson Channel. The SEH discharge water flows along NE 39th Street in pipes running below an ivy-covered ditch. The flow continues west in the storm sewer and turns south at NE 109th Avenue. It then travels about one-half block to cross under the street at Stonebrooke Townhomes (see Appendix A, Figure A-2).

Behind Stonebrooke Townhomes on NE 109th Avenue, Peterson Channel first daylights to a roughly 300-meter open ditch that enters a wider portion of the stream just before I-205. Sediment was collected for the upstream site (PET-03) within the open ditch behind the townhouses. Peterson Channel resurfaces from the culvert on the west side of I-205 southbound lanes. The next site, PET-02, was located within a wider section of the channel on the west side of I-205. Like the wider section on the east side, this portion of the channel allows for some slowing and ponding. The PET-02 and PET-03 sites are divided by I-205 at a distance of about 250 meters. The two wider sections of channel that bracket I-205 on Peterson Channel likely sequester PCBs in the sediment. Results for the two sites were similar with no apparent PCB enrichment from the freeway. From PET-02, the channel flows a distance of about 1000 meters to PET-01 through small wetlands and riparian vegetation. Between PET-02 and the downstream site at PET-01 total PCB levels dropped considerably, from an estimated 23.6 to 5.0 ug/Kg, respectively.

Burnt Bridge Creek Wetland

While still moderate, the study's highest total PCB concentrations in sediment were from three transect samples collected within the downstream wetland (see Figure A-3). Total PCB concentrations increased from WET-02 (east) to WET-04 (west) for the three wetland sites. The WET-02 site was located where Burnt Bridge Creek discharges to the wetland, reporting 13.2 ug/Kg total PCBs. This sample was collected from Burnt Bridge Creek's alluvial fan within the wetland. At the WET-03 site (wetland center), total PCBs measured 32 ug/Kg. Near the wetland's outlet to Vancouver Lake, WET-04 measured 37 ug/Kg total PCBs.

The highest wetland PCB concentration was at WET-04 near the outlet, and the lowest was at WET-02 at the discharge of Burnt Bridge Creek. This may suggest that other PCB sources are entering the wetland, or that finer PCB-laden solids from Burnt Bridge Creek are remaining suspended and crossing the wetland before settling. In the 2010 study (Coots and Friese, 2011), PCBs discharged from the wetland measured by semipermeable membrane devices (SPMDs) had seasonal dissolved PCB concentrations in excess of the NTR criterion (NTR=170 pg/L). These estimated concentrations were reported as an average over a roughly one-month deployment. The sediment total PCB concentrations measured in this study do not reflect the impacts expected from the dissolved total PCB concentrations measured by SPMDs in 2010. PCB sediment concentrations do not appear to be high enough to act as the source of the dissolved PCBs.

Cold Creek was responsible for the highest PCB input to Burnt Bridge Creek for the study. Impacts from COL-01 were also measured at BBC-01. Some PCBs settle out moving downstream, and some would bind to sediment in the downstream wetland. High dissolved PCBs have been measured leaving the wetland, either traveling through the wetland or from desorbing from sediment.

Possible PCB Sources and Follow-up

In the fall, the Cold Creek PCB concentration in water was not remarkable, but the spring concentration was the highest reported for the study. The PCBs coming from Cold Creek appear to be a separate source to BBC-01, unrelated to sediment PCBs, but may be contaminating sediments further downstream in the wetland. There are three stormwater discharges to the lower Burnt Bridge Creek and wetland area:

- One is located at the southwest corner of the wetland. It drains overland from the road elevation through vegetation and leaf litter.
- One is an outfall to the surface water, located between the BNSF Railroad tracks and the NW Fruit Valley Road. It has a large sediment removal vault along the roadway.
- One is an outfall located about 825 meters upstream in Burnt Bridge Creek (Figure A-3).

The City of Vancouver's sanitary sewer also has part of its collection system along the southern extent of the wetland. Future work with PCBs in the basin should consider storm-event sampling or wet-season passive sampling by use of SPMDs or another concentrating technique to verify past dissolved PCB results.

The results for this 2014 study suggest that sediment flux or resuspension of PCBs was not the source of the PCBs measured in the 2010 study. PCB sediment concentrations do not appear to be high enough to act as the source of the dissolved PCBs. The sediment total PCB results from this study appear to contradict previous results of dissolved total PCBs for the discharge from Burnt Bridge Creek and the wetland into Vancouver Lake.

PCB concentrations are expected to be higher in urban centers than rural environments. The highest current major use of PCBs is electrical fluids, followed by sealants. The use of electrical fluids containing PCBs is well known, but PCBs have also been added to joint sealant materials for improved flexibility, resistance to mechanical erosion, and adherence (Diamond et al., 2010). Buildings and their materials can be a source of PCBs, along with city streets that also act as part of the conveyance system to the surface waters. Rain events mobilize contaminants deposited onto impervious surfaces and streets.

The stormwater collection system for the neighborhood to the south of the wetland discharges runoff from the streets during rain events that likely mobilize dissolved contaminants. The pollutants in solution move through the system quickly, while much of the associated sediment is settled and removed by sediment traps within the stormwater system.

Contaminants deposited to streets during dry periods are washed off during storm events. Peak PCB concentrations from the stormwater system would not be detected using routine sampling. PCB inputs to the wetland from the stormwater system would need to be sampled during a storm event.

Information on the sediment grabs for the wetland samples was written and maintained in field books. During sample collection, descriptions of the smell of sample mud were included in field notes. Both the WET-02 sample located at the discharge of Burnt Bridge Creek and the WET-04 sample at the wetland discharge to Vancouver Lake had mud with similar musty organic smells with a slight odor of hydrogen sulfide. The WET-03 sample collected at roughly the center of the wetland had more of a septic smell (Figure A-3).

Dieldrin

Upper Burnt Bridge Creek between BBC-04 and BBC-06 had the highest dieldrin concentrations in sediment reported for this study. The SMS criterion for dieldrin (SMS dieldrin = 4.9 ug/kg) was exceeded at one site and equaled at another. Figure 6 presents sediment dieldrin results from Burnt Bridge Creek and Burton Channel.

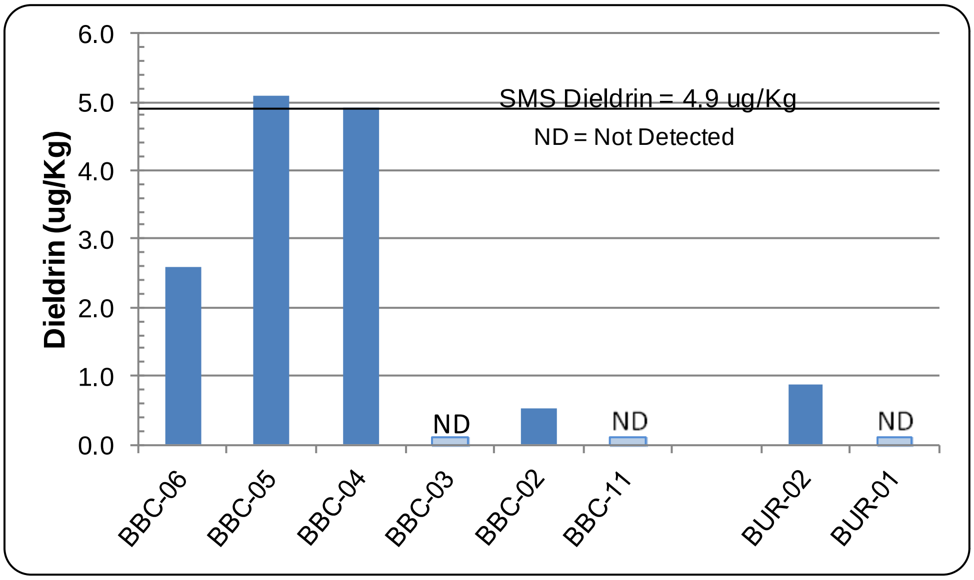

Figure 6. Dieldrin Measured in Burnt Bridge Creek and Burton Channel, July 2014.

The upstream site at BBC-06 was found to have a dieldrin concentration at roughly one-half the SMS criterion. Downstream of BBC-06, dieldrin enrichment roughly doubled the concentration at BBC-05, slightly above the SMS criterion at 5.1 ug/Kg. The next downstream site at BBC-04 reported dieldrin equal to the SMS criterion of 4.9 ug/Kg (Figure A-2).

Downstream of BBC-04, sediment dieldrin concentrations quickly dropped to non-detect by BBC-03. Below BBC-03, dieldrin was low to non-detected at BBC-02 and BBC-11. During the screening survey (water), dieldrin was also detected in Burton Channel. The sediment dieldrin results for Burton Channel were low at both sites. Cold Creek and Peterson Channel were not sampled for dieldrin during the source assessment (sediment) portion of the study (Figure A-2).

Land-use above BBC-06 has the largest amount of open areas in the basin with some farming and hobby farms. Concentrated single family residential housing begins to the south of the site. Between BBC-06 and BBC-05, land use begins to change from more open areas to a mix of concentrated housing and light commercial development. Down the basin from BBC-05, Burnt Bridge Creek passes through small open spaces, then crosses under I-205 and on through a natural forested area. Finally just before the BBC-04 sample site, Burnt Bridge Creek crosses through the southern half of an 18-hole golf course. The BBC-04 site is just south of the golf course boundary.

Dieldrin is a persistent, bioaccumulative, and toxic (PBT) organochlorine insecticide historically used for the control of soil insects for crops such as corn and cotton. Dieldrin is also a byproduct of the pesticide aldrin. Aldrin rapidly breaks down to dieldrin in the environment, so it is usually found as dieldrin. The possible damage to aquatic ecosystems and the potential carcinogenic properties to humans are a concern. Dieldrin has the ability to resist breakdown, and it bioaccumulates. As dieldrin moves up the food chain, it also bioconcentrates. Species highest on the food chain are most at risk.

In 1985, all uses of dieldrin were banned except for very limited applications like termite control, dipping of nonfood roots and tops, and moth-proofing closed manufacturing systems (USEPA, 2010). It is possible there was recent application of old insecticides that include dieldrin or aldrin from one of the many commercial brand names. Disturbance of land that was historically used in agriculture is another possible source of dieldrin, along with improper use or disposal.

To help locate possible sources of dieldrin, a survey of land managers who apply insecticides or pesticides along adjacent streams should be conducted. The survey should target agricultural lands, open or forested spaces, the Washington State Department of Transportation (DOT) for highway corridors, and the golf course. Within the Appendix D Glossary is a list of brand names of insecticides and pesticides that historically included dieldrin or aldrin.

Water versus Sediment Surveys

Water concentrations above the NTR criteria were reported for 14 water samples collected during the screening survey including four PCB and 10 dieldrin samples. As discussed previously, the estimated water concentrations from the CLAM^{TM}-SPE can be considered conservative or low-end estimates. For the source area assessment, only one sediment result exceeded the SMS criteria: a dieldrin sample reported just above the criterion at BBC-05.

Study results suggest water appears to be the best matrix to evaluate impacts from PCBs or dieldrin in the Burnt Bridge Creek basin. Stormwater may be a significant source of PCBs, but stormwater sediments containing PCBs may be moderated by settling and removal within the collection system (USEPA, 1999; City of Spokane, 2014).

Wash-off from rain events can result in higher contaminant concentrations in a stormwater system. Storm-event sampling or wet-season passive sampling should be conducted to average inputs over a longer period of time. Water concentrations will need to be quantified during wash-off to better reflect the potential impacts from PCBs and dieldrin to waterbodies by untreated stormwater runoff.

Table 7 presents both the screening survey (water) and the source assessment survey (sediment) results for total PCBs and dieldrin.

Table 7. Comparison of PCBs and Dieldrin from Water and Sediment.

Site	Fall Total PCBs Water (pg/L)	Spring Total PCBs Water (pg/L)	Total PCBs Sediment (ug/Kg)	Fall Dieldrin Water (pg/L)	Spring Dieldrin Water (pg/L)	Dieldrin Sediment (ug/Kg)
WET-02	NS	NS	13.2 J	NS	NS	NS
WET-03	NS	NS	32 J	NS	NS	NS
WET-04	NS	NS	37 J	NS	NS	0.99 J
BBC-01/11	88 J	**352**	2.3	**187**	**424**	0.38 U
BBC-02	89.3 J	131 J	2.8 J	**407**	**531**	0.54
BBC-03	154 J	97.1 J	6.5 J	**819**	**982**	1.2 U
BBC-04	34.3 J	**176 J**	16 U	**347**	**674**	4.9
BBC-05	NS	NS	19 U	NS	NS	**5.1**
BBC-06	NS	NS	42 UJ	NS	NS	2.6
COL-01	126 J	**726 J**	NS	16	43	NS
COL-02	NS	NS	6.0 J	NS	NS	NS
COL-03	NS	NS	3.4 U	NS	NS	NS
COL-04	NS	NS	7.6 U	NS	NS	NS
BUR-01	63.3 J	53 J	12 UJ	**184**	**339**	1.2 U
BUR-02	NS	NS	7.1 U	NS	NS	0.87
PET-01	139 J	**207 J**	5.0 J	47.9	38	NS
PET-02	NS	NS	23.6 J	NS	NS	NS
PET-03	NS	NS	30 J	NS	NS	NS
NTR Criteria	170 pg/L[1]			140 pg/L		
SMS Criteria			110 ug/Kg[2]			4.9 ug/Kg

Bold: Exceeds criterion.
NS: Not sampled.
J: Estimated concentration (positively identified).
U: Not detected at the detection limit shown.
UJ: Not detected at the estimated detection limit shown.
[1] Picograms per liter or parts per quadrillion.
[2] Micrograms per liter or parts per billion.

Conclusions

Results of this 2014 study support the following conclusions:

Screening survey (water)

- Estimated PCB concentrations in water generally met water quality criteria except for in Cold Creek, Peterson Channel, and Burnt Bridge Creek at sampling sites BBC-1 and BBC-04 during the spring. The PCB concentrations detected in the two Burnt Bridge Creek sites likely resulted from Cold Creek and Peterson Channel inputs just upstream. Future sampling in the Burnt Bridge Creek basin for PCBs in water should include the Cold Creek and Peterson Channel sub-basins.
- Homolog distributions for PCBs in water during the fall were generally skewed toward the lower chlorinated PCB homologs, which may infer dechlorination or recent discharge prior to volatilization.
- Dieldrin in water was high in both the fall and spring, exceeding the National Toxics Rule (NTR) at all Burnt Bridge Creek sites and Burton Channel. Higher dieldrin concentrations during spring than during fall were reported at all sites except Peterson Channel.
- Compared to other areas in Washington State, the highest four dieldrin results for this study were between the 77^{th} and 89^{th} percentile.
- Dieldrin concentrations at the Burnt Bridge Creek sites showed the same spatial pattern during fall and spring, suggesting there may be a persistent source of dieldrin.
- The discharge from an adjacent neighborhood stormwater collection system to the downstream reach of Burnt Bridge Creek, the wetland, and an outlet channel could play a role in the high detected PCBs measured in the 2010 study.

Source assessment survey (sediment)

- The sediment sample collected at the wetland center (WET-03) had a septic smell. Other wetland samples had a more typical odor of sediment.
- In the Burnt Bridge Creek basin, water appears to be a better sample matrix than sediment for measuring the presence of PCBs and dieldrin. Sediment concentrations were not as informative in locating hot spots.
- The sources for PCBs and dieldrin do not appear to be the same:
    - PCBs were detected with only four results exceeding the water quality criterion. Discharges from Cold Creek and Peterson Channel were responsible for PCB concentrations detected at the next downstream sites on Burnt Bridge Creek.
    - Dieldrin was elevated in water throughout the mainstem Burnt Bridge Creek and Burton Channel and also high in sediment in upper Burnt Bridge Creek above I-205.

Recommendations

Results of this 2014 study support the following recommendations:

- Any future work with PCBs or dieldrin in the Burnt Bridge Creek basin should consider storm-event sampling, long-term passive sampling, or another concentrating technique to measure dissolved concentrations. PCB concentrations in sediment measured during this study were not as informative as dissolved PCB concentrations in water.
- The stormwater collection system draining to Burnt Bridge Creek and the downstream wetland should be evaluated during rain events to measure peak PCB concentrations.
- To help locate possible sources of dieldrin, a survey of land managers who apply insecticides or pesticides adjacent to Burnt Bridge Creek should be conducted. The survey should target owners of agricultural lands, city or county land managers for open or forested spaces, Washington DOT for highway corridors, and the golf course.

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References

ATSDR, 2000. Agency for Toxic Substances and Disease Registry. Public Health Statement for Polychlorinated Biphenyls (PCBs), CAS# 1336-36-3. November 2000. www.atsdr.cdc.gov/PHS/PHS.asp?id=139&tid=26

ATSDR, 2001. Agency for Toxic Substances and Disease Registry. ToxFAQs for Polychlorinated Biphenyls (PCBs), CAS# 1336-36-3. February 2001. www.atsdr.cdc.gov/toxfaqs/tf.asp?id=140&tid=26

ATSDR, 2002. Agency for Toxic Substances and Disease Registry. ToxFAQs for Dieldrin, CAS# 60-57-1. September 2002. www.atsdr.cdc.gov/toxfaqs/tf.asp?id=316&tid=56

City of Spokane, 2014. 2014 Annual Report, Adaptive Management Plan for Reducing PCBs in Stormwater Discharges. City of Spokane, Wastewater Management Department, Spokane, WA. 23 pages plus Appendices.
http://www.spokanewastewater.org/(X(1)S(nydam0madsifdxvgjyziyurl))/Docs/Stormwater/PCB_Annual_Report_2014.pdf

Coots, R., 2007. Vancouver Lake PCBs, Chlorinated Pesticides, and Dioxins Fish Tissue Investigation. Washington State Department of Ecology, Olympia, WA. Publication No. 07-03-017. https://fortress.wa.gov/ecy/publications/SummaryPages/0703017.html

Coots, R. and M. Friese, 2011. PCB, Dioxin, and Chlorinated Pesticide Sources to Vancouver Lake. Washington State Department of Ecology, Olympia, WA. Publication No. 11-03-063. https://fortress.wa.gov/ecy/publications/SummaryPages/1103063.html

Coots, R., 2014. Quality Assurance Project Plan: Burnt Bridge Creek PCB and Dieldrin Screening Study. Washington State Department of Ecology, Olympia, WA. Publication No. 14-03-101. https://fortress.wa.gov/ecy/publications/SummaryPages/1403101.html

Diamond, M., L. Melymuk, S. Csiszar, and M. Robson, 2010. Estimation of PCB Stocks, Emissions, and Fate: Will our Policies Reduce Concentrations and Exposure? Environmental Science and Technology, 44:2777-2783.

Ecology, 2015. Water Quality Assessment and 303(d) List. Washington State Department of Ecology web site. Water Quality Program. http://www.ecy.wa.gov/programs/Wq/303d/index.html

Ecology and Environment, Inc., 2010. Vancouver Lake and Flushing Channel Site Inspection, Vancouver, Washington. Technical Direction Document Number: 08060010. May 2010. Prepared for the U.S. Environmental Protection Agency. 513 pages.

ExtoxNet, 1997. Extension Toxicology Network. PCB Contamination of Food. A Pesticide Information Project of Cooperative Extension Offices of Cornell University, Michigan State University, Oregon State University, and University of California at Davis. ExtoxNet FAQs for Polychlorinated Biphenyls (PCBs). December 1997. http://extoxnet.orst.edu/faqs/foodcon/pcb.htm

Herrera, 2013. 2012 Monitoring Report, Burnt Bridge Creek Ambient Water Quality Monitoring Program. Herrera Environmental Consultants, Inc., Portland, Oregon. Prepared for City of Vancouver Surface Water Management, Vancouver, WA. 58 pages.

National Oceanic and Atmospheric Administration (NOAA), 2015. Local climate data from Portland, Oregon Airport. Historical rainfall records October 1940-December 2012. http://www.wrh.noaa.gov/pqr/pdxclimate/index.php

Rodenburg, L., S. Du, D. Fennell, and G. Cavallo, 2010. Evidence for Widespread Dechlorination of Polychlorinated Biphenyls in Groundwater, Landfills, and Wastewater Collection Systems. Environmental Science & Technology, 44, 7534-7540. http://pubs.acs.org/doi/full/10.1021/es1019564

USEPA, 1999. EPA Storm Water O&M Fact Sheet, Handling and Disposal of Residuals. United States Environmental Protection Agency, EPA 832-F-99-015, September 1999. http://water.epa.gov/scitech/wastetech/upload/2002_06_28_mtb_handdisp.pdf

USEPA, 2010. Persistent Bioaccumulative and Toxic (PBT) Chemical Program. Aldrin and Dieldrin. United States Environmental Protection Agency. www.epa.gov/pbt/pubs/aldrin.htm

USFWS, 2002. Contaminants Investigation of Western Portion of Caddo Lake National Wildlife Refuge, Texas 2002 by Craig Giggleman and Jacob Lewis. United States Fish and Wildlife Service Region 2. Project ID No. 94420-02-Y037, December 2002. www.fws.gov/southwest/es/arlingtontexas/pdf/CLNWR%20Report.pdf

USGS, 2015. USGS Water Science Glossary of Terms. A glossary of terms used in water science. United States Geological Survey. https://water.usgs.gov/edu/dictionary.html

Appendices

Appendix A. Figures

Figure A-1. CLAM™ Sampler Locations for PCBs and Dieldrin, Fall 2013 and Spring 2014.

Sample site coordinates and location descriptions:

Site	Longitude	Latitude	Description
BBC-01	-122 40.160	45 39.682	Burnt Bridge Creek at 2nd Avenue gage station.
BBC-02	-122 37.913	45 38.472	Burnt Bridge Creek at Rossiter Street Apartments.
BBC-03	-122 35.086	45 38.123	Burnt Bridge Creek at discharge of Burton Channel.
BBC-04	-122 34.702	45 38.681	Burnt Bridge Creek at discharge of Peterson Channel.
COL-01	-122 40.080	45 39.710	Cold Creek before discharge to Burnt Bridge Creek.
BUR-01	-122 35.044	45 38.135	Burton Channel before discharge to Burnt Bridge Creek.
PET-01	-122 34.651	45 38.674	Peterson Channel before discharge to Burnt Bridge Creek.

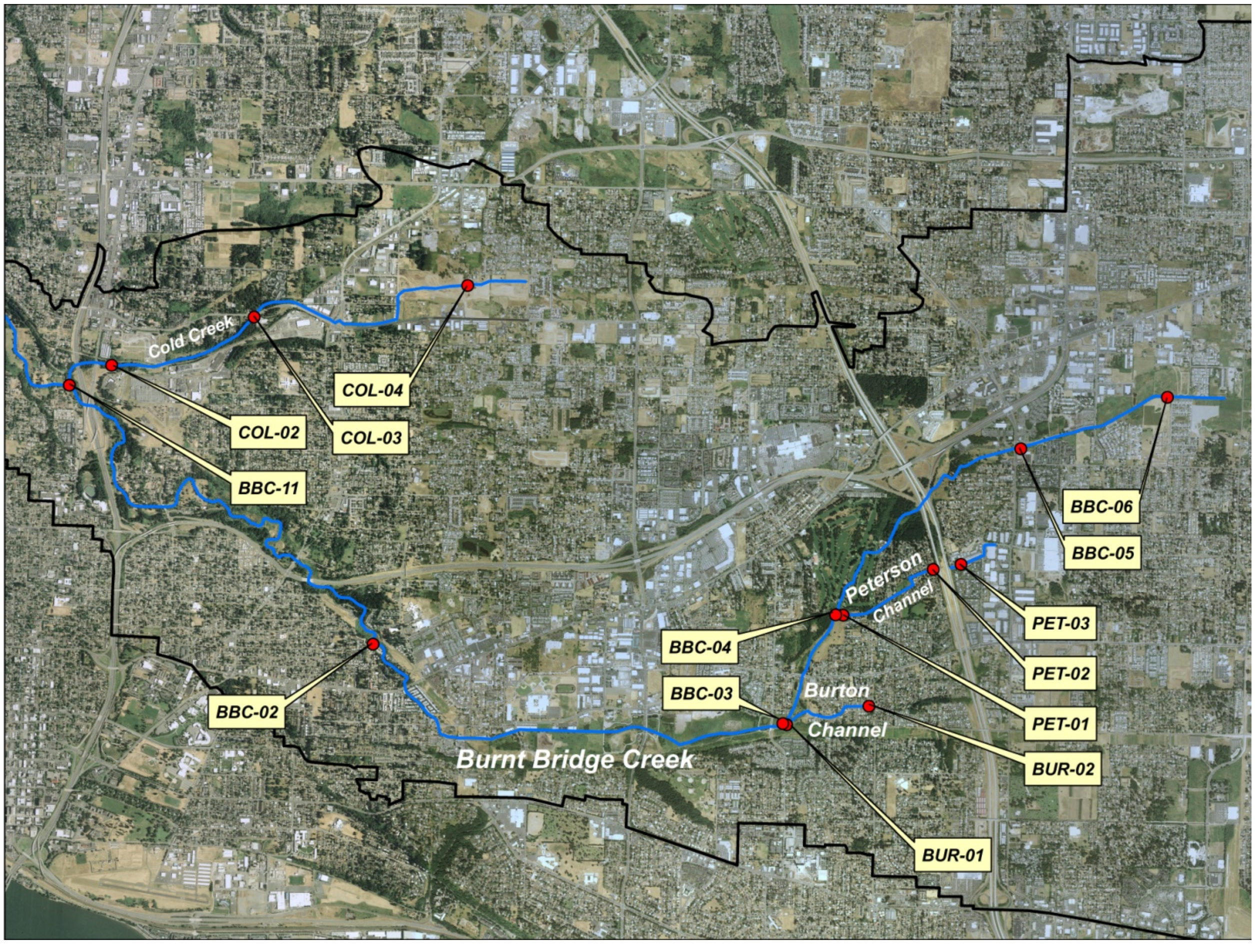


Figure A-2. Burnt Bridge Creek and Tributaries Sediment Sample Locations for PCBs and Dieldrin, July 2014.

Sample site coordinates and location descriptions:

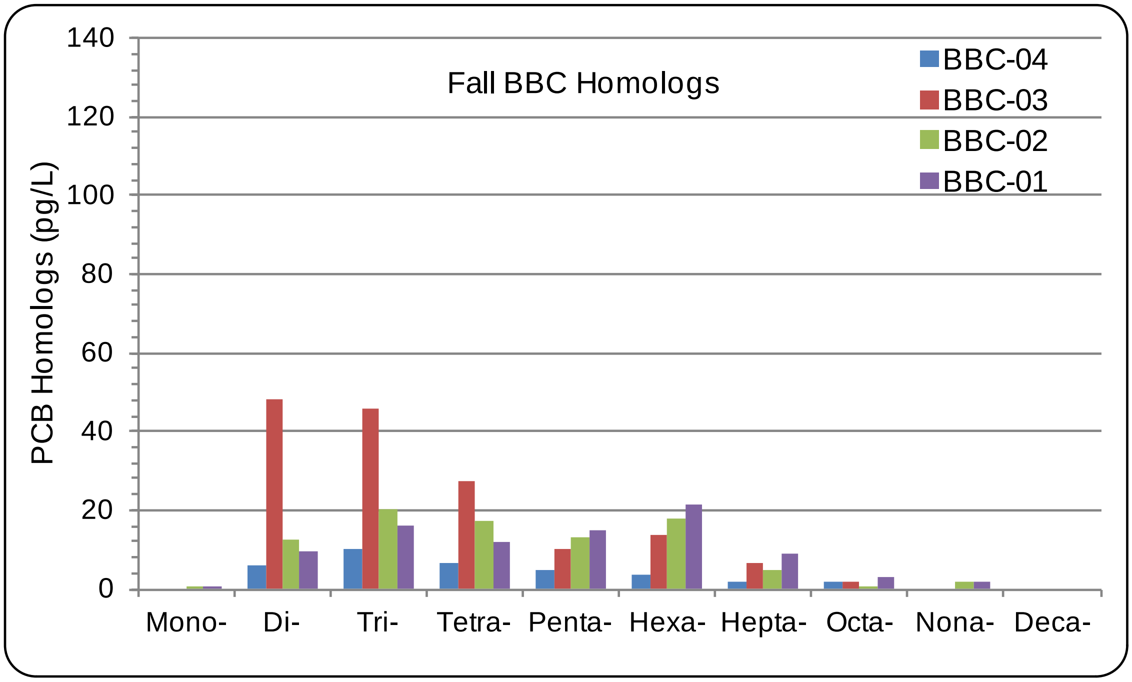
Site	Longitude	Latitude	Description
BBC-11	-122 40.080	45 39.682	Burnt Bridge Creek just above Cold Creek confluence.
BBC-02	-122 37.913	45 38.472	Burnt Bridge Creek at Rossiter Street Apartments.
BBC-03	-122 35.086	45 38.123	Burnt Bridge Creek at Burton Channel confluence.
BBC-04	-122 34.702	45 38.681	Burnt Bridge Creek at Peterson Channel confluence.
BBC-05	-122 33.446	45 39.509	Burnt Bridge Creek off 112th Street next to gas station.
BBC-06	-122 32.435	45 39.778	Burnt Bridge Creek upstream at NE 49th Street.
COL-02	-122 38.776	45 40.062	Cold Creek at Ross Complex just before subsurface.
COL-03	-122 37.322	45 40.233	Cold Creek at Ross Complex Construct. Services Bldg.
COL-04	-122 39.783	45 39.797	Cold Creek at construction site off 47th Street.
BUR-01	-122 35.044	45 38.135	Burton Channel at Burnt Bridge Creek confluence.
BUR-02	-122 34.454	45 38.234	Burton upstream at NE 96th Court and NE 21st Street.
PET-01	-122 34.651	45 38.674	Peterson Channel near confluence with Burnt Bridge Cr.
PET-02	-122 34.032	45 38.909	Peterson Channel at the settling pond at I-205.
PET-03	-122 33.840	45 38.937	Peterson Channel behind 4000 NE 109th Apartments.

Figure A-3. Burnt Bridge Creek Wetland Sediment Sample Locations, October 2014.

(Aerial photograph 2009. During 2014 sampling, outlined area was grass covered.)

Sample site coordinates and location descriptions:

Site	Longitude	Latitude	Description
WET-02	-122 41.290	45 40.437	Sample collected near discharge of Burnt Bridge Creek.
WET-03	-122 41.372	45 40.476	Wetland center at the deepest area.
WET-04	-122 41.451	45 40.518	Near the outlet tunnel to Vancouver Lake.



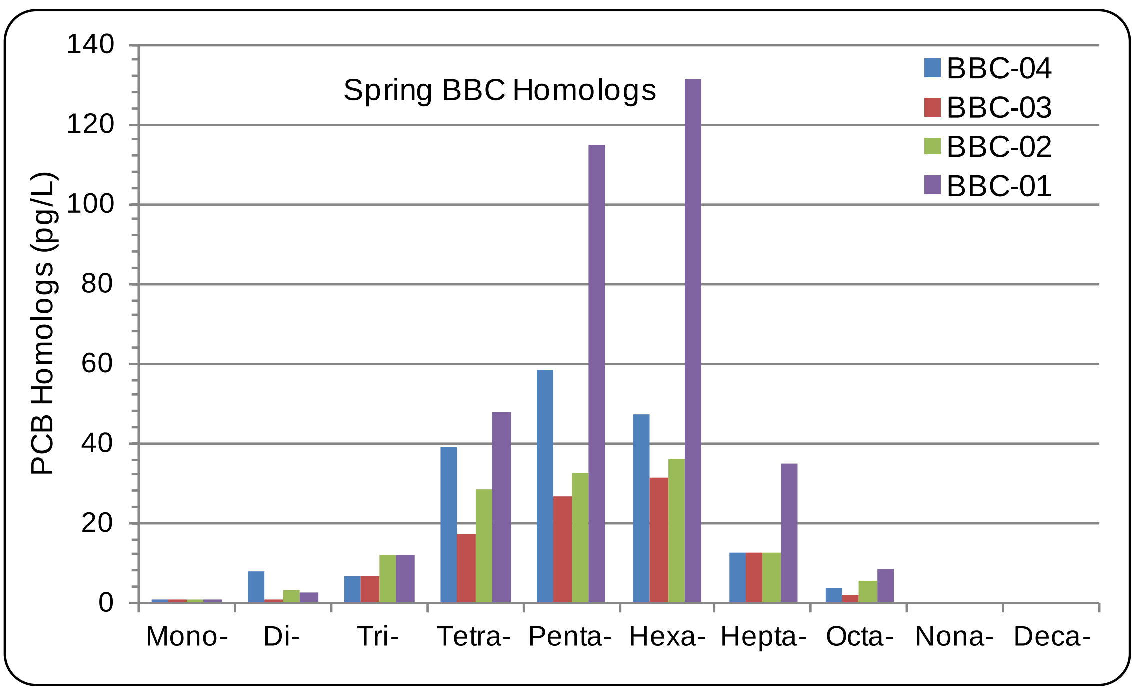
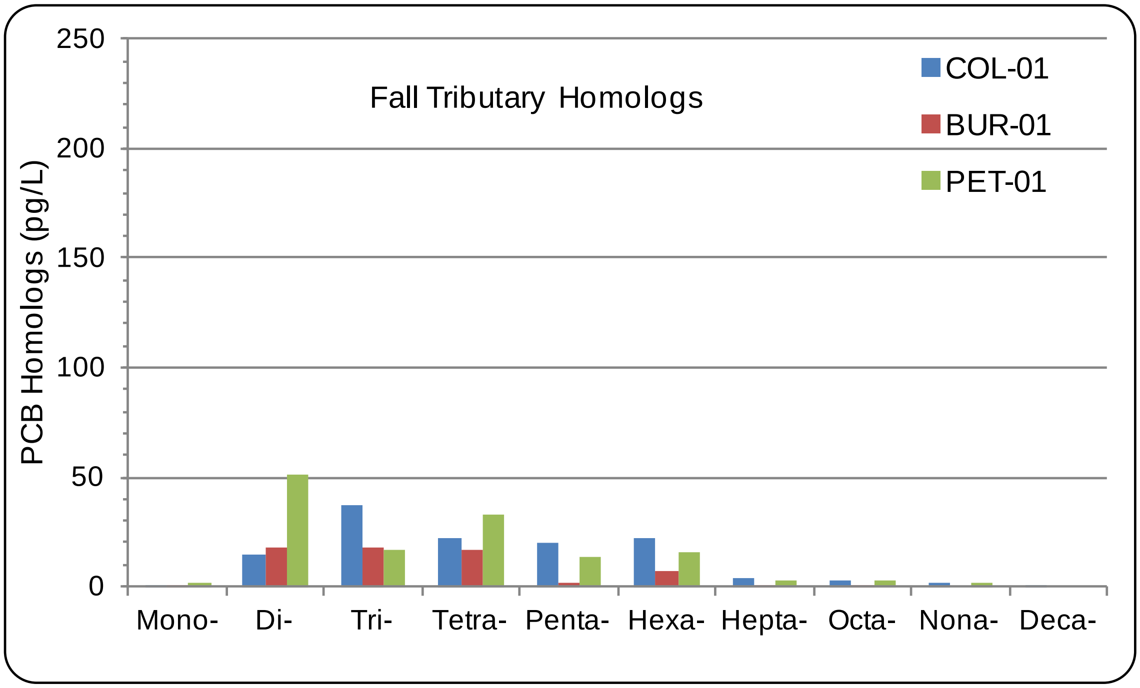


Figure A-4. PCB Homolog Distribution for Burnt Bridge Creek, Fall and Spring.



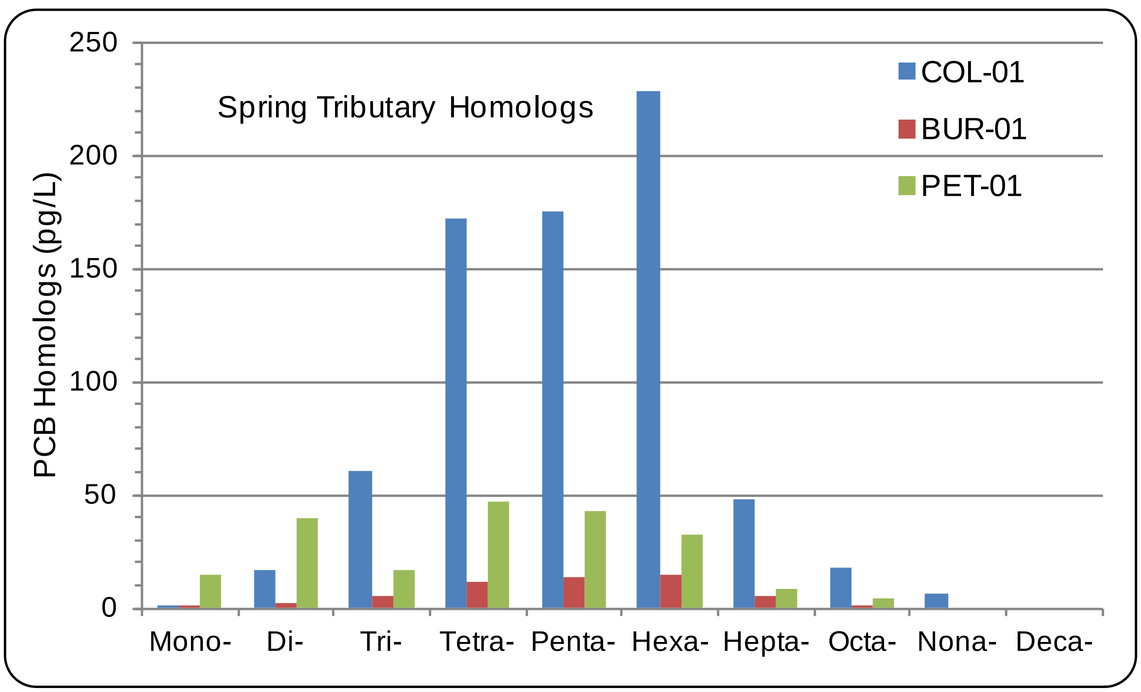


Figure A-5. PCB Homolog Distribution for Cold Creek, Burton Channel, and Peterson Channel, Fall and Spring.

Appendix B. Quality Assurance Results

Table B-1. Quality Assurance Laboratory Spike Results for Labeled PCB Congeners, Fall and Spring.

MEL ID	Site ID	PCB Name	Result		MEL ID	Site ID	PCB Name	Result	
1312033-14	BBC-01	PCB-1L	56	%	1404033-17	BBC-01	PCB-1L	74	%
1312033-14	BBC-01	PCB-3L	50	%	1404033-17	BBC-01	PCB-3L	60	%
1312033-14	BBC-01	PCB-4L	54	%	1404033-17	BBC-01	PCB-4L	76	%
1312033-14	BBC-01	PCB-15L	50	%	1404033-17	BBC-01	PCB-15L	68	%
1312033-14	BBC-01	PCB-19L	54	%	1404033-17	BBC-01	PCB-19L	88	%
1312033-14	BBC-01	PCB-37L	58	%	1404033-17	BBC-01	PCB-37L	74	%
1312033-14	BBC-01	PCB-54L	54	%	1404033-17	BBC-01	PCB-54L	92	%
1312033-14	BBC-01	PCB-81L	64	%	1404033-17	BBC-01	PCB-81L	84	%
1312033-14	BBC-01	PCB-77L	62	%	1404033-17	BBC-01	PCB-77L	86	%
1312033-14	BBC-01	PCB-104L	50	%	1404033-17	BBC-01	PCB-104L	88	%
1312033-14	BBC-01	PCB-123L	62	%	1404033-17	BBC-01	PCB-123L	88	%
1312033-14	BBC-01	PCB-118L	60	%	1404033-17	BBC-01	PCB-118L	88	%
1312033-14	BBC-01	PCB-114L	60	%	1404033-17	BBC-01	PCB-114L	86	%
1312033-14	BBC-01	PCB-105L	60	%	1404033-17	BBC-01	PCB-105L	86	%
1312033-14	BBC-01	PCB-126L	60	%	1404033-17	BBC-01	PCB-126L	80	%
1312033-14	BBC-01	PCB-155L	56	%	1404033-17	BBC-01	PCB-155L	96	%
1312033-14	BBC-01	PCB-167L	56	%	1404033-17	BBC-01	PCB-167L	86	%
1312033-14	BBC-01	PCB-156L	54	%	1404033-17	BBC-01	PCB-156L	76	%
1312033-14	BBC-01	PCB-157L	56	%	1404033-17	BBC-01	PCB-157L	80	%
1312033-14	BBC-01	PCB-169L	52	%	1404033-17	BBC-01	PCB-169L	72	%
1312033-14	BBC-01	PCB-188L	58	%	1404033-17	BBC-01	PCB-188L	99	%
1312033-14	BBC-01	PCB-189L	68	%	1404033-17	BBC-01	PCB-189L	92	%
1312033-14	BBC-01	PCB-202L	52	%	1404033-17	BBC-01	PCB-202L	92	%
1312033-14	BBC-01	PCB-205L	62	%	1404033-17	BBC-01	PCB-205L	88	%
1312033-14	BBC-01	PCB-208L	60	%	1404033-17	BBC-01	PCB-208L	102	%
1312033-14	BBC-01	PCB-206L	58	%	1404033-17	BBC-01	PCB-206L	96	%
1312033-14	BBC-01	PCB-209L	58	%	1404033-17	BBC-01	PCB-209L	96	%
1312033-12	BBC-02	PCB-1L	48	%	1404033-15	BBC-02	PCB-1L	64	%
1312033-12	BBC-02	PCB-3L	44	%	1404033-15	BBC-02	PCB-3L	58	%
1312033-12	BBC-02	PCB-4L	46	%	1404033-15	BBC-02	PCB-4L	64	%
1312033-12	BBC-02	PCB-15L	40	%	1404033-15	BBC-02	PCB-15L	66	%
1312033-12	BBC-02	PCB-19L	46	%	1404033-15	BBC-02	PCB-19L	82	%
1312033-12	BBC-02	PCB-37L	48	%	1404033-15	BBC-02	PCB-37L	74	%
1312033-12	BBC-02	PCB-54L	46	%	1404033-15	BBC-02	PCB-54L	80	%
1312033-12	BBC-02	PCB-81L	56	%	1404033-15	BBC-02	PCB-81L	80	%
1312033-12	BBC-02	PCB-77L	56	%	1404033-15	BBC-02	PCB-77L	82	%
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1312033-12	BBC-02	PCB-123L	56	%	1404033-15	BBC-02	PCB-123L	84	%
1312033-12	BBC-02	PCB-118L	54	%	1404033-15	BBC-02	PCB-118L	82	%
1312033-12	BBC-02	PCB-114L	52	%	1404033-15	BBC-02	PCB-114L	78	%

MEL ID	Site ID	PCB Name	Result		MEL ID	Site ID	PCB Name	Result	
1312033-12	BBC-02	PCB-105L	54	%	1404033-15	BBC-02	PCB-105L	78	%
1312033-12	BBC-02	PCB-126L	50	%	1404033-15	BBC-02	PCB-126L	76	%
1312033-12	BBC-02	PCB-155L	50	%	1404033-15	BBC-02	PCB-155L	80	%
1312033-12	BBC-02	PCB-167L	52	%	1404033-15	BBC-02	PCB-167L	74	%
1312033-12	BBC-02	PCB-156L	48	%	1404033-15	BBC-02	PCB-156L	70	%
1312033-12	BBC-02	PCB-157L	50	%	1404033-15	BBC-02	PCB-157L	72	%
1312033-12	BBC-02	PCB-169L	46	%	1404033-15	BBC-02	PCB-169L	64	%
1312033-12	BBC-02	PCB-188L	52	%	1404033-15	BBC-02	PCB-188L	90	%
1312033-12	BBC-02	PCB-189L	58	%	1404033-15	BBC-02	PCB-189L	84	%
1312033-12	BBC-02	PCB-202L	46	%	1404033-15	BBC-02	PCB-202L	84	%
1312033-12	BBC-02	PCB-205L	56	%	1404033-15	BBC-02	PCB-205L	80	%
1312033-12	BBC-02	PCB-208L	52	%	1404033-15	BBC-02	PCB-208L	94	%
1312033-12	BBC-02	PCB-206L	54	%	1404033-15	BBC-02	PCB-206L	88	%
1312033-12	BBC-02	PCB-209L	52	%	1404033-15	BBC-02	PCB-209L	92	%
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1312033-11	BBC-03	PCB-3L	44	%	1404033-14	BBC-03	PCB-3L	64	%
1312033-11	BBC-03	PCB-4L	56	%	1404033-14	BBC-03	PCB-4L	68	%
1312033-11	BBC-03	PCB-15L	54	%	1404033-14	BBC-03	PCB-15L	70	%
1312033-11	BBC-03	PCB-19L	64	%	1404033-14	BBC-03	PCB-19L	86	%
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1312033-11	BBC-03	PCB-126L	64	%	1404033-14	BBC-03	PCB-126L	76	%
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1312033-15	COL-01	PCB-104L	68	%	1404033-18	BBC-04REP	PCB-104L	76	%
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1312033-15	COL-01	PCB-114L	78	%	1404033-18	BBC-04REP	PCB-114L	76	%
1312033-15	COL-01	PCB-105L	78	%	1404033-18	BBC-04REP	PCB-105L	76	%
1312033-15	COL-01	PCB-126L	70	%	1404033-18	BBC-04REP	PCB-126L	70	%
1312033-15	COL-01	PCB-155L	68	%	1404033-18	BBC-04REP	PCB-155L	80	%

MEL ID	Site ID	PCB Name	Result		MEL ID	Site ID	PCB Name	Result	
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1312033-15	COL-01	PCB-156L	58	%	1404033-18	BBC-04REP	PCB-156L	68	%
1312033-15	COL-01	PCB-157L	60	%	1404033-18	BBC-04REP	PCB-157L	72	%
1312033-15	COL-01	PCB-169L	58	%	1404033-18	BBC-04REP	PCB-169L	62	%
1312033-15	COL-01	PCB-188L	76	%	1404033-18	BBC-04REP	PCB-188L	84	%
1312033-15	COL-01	PCB-189L	80	%	1404033-18	BBC-04REP	PCB-189L	84	%
1312033-15	COL-01	PCB-202L	60	%	1404033-18	BBC-04REP	PCB-202L	82	%
1312033-15	COL-01	PCB-205L	74	%	1404033-18	BBC-04REP	PCB-205L	76	%
1312033-15	COL-01	PCB-208L	70	%	1404033-18	BBC-04REP	PCB-208L	88	%
1312033-15	COL-01	PCB-206L	64	%	1404033-18	BBC-04REP	PCB-206L	84	%
1312033-15	COL-01	PCB-209L	64	%	1404033-18	BBC-04REP	PCB-209L	94	%
1312033-10	BUR-01	PCB-1L	56	%	1404033-16	COL-01	PCB-1L	76	%
1312033-10	BUR-01	PCB-3L	46	%	1404033-16	COL-01	PCB-3L	82	%
1312033-10	BUR-01	PCB-4L	54	%	1404033-16	COL-01	PCB-4L	92	%
1312033-10	BUR-01	PCB-15L	48	%	1404033-16	COL-01	PCB-15L	82	%
1312033-10	BUR-01	PCB-19L	56	%	1404033-16	COL-01	PCB-19L	60	%
1312033-10	BUR-01	PCB-37L	52	%	1404033-16	COL-01	PCB-37L	132	%
1312033-10	BUR-01	PCB-54L	56	%	1404033-16	COL-01	PCB-54L	72	%
1312033-10	BUR-01	PCB-81L	60	%	1404033-16	COL-01	PCB-81L	78	%
1312033-10	BUR-01	PCB-77L	56	%	1404033-16	COL-01	PCB-77L	94	%
1312033-10	BUR-01	PCB-104L	54	%	1404033-16	COL-01	PCB-104L	96	%
1312033-10	BUR-01	PCB-123L	62	%	1404033-16	COL-01	PCB-123L	134	%
1312033-10	BUR-01	PCB-118L	58	%	1404033-16	COL-01	PCB-118L	122	%
1312033-10	BUR-01	PCB-114L	58	%	1404033-16	COL-01	PCB-114L	118	%
1312033-10	BUR-01	PCB-105L	58	%	1404033-16	COL-01	PCB-105L	104	%
1312033-10	BUR-01	PCB-126L	58	%	1404033-16	COL-01	PCB-126L	108	%
1312033-10	BUR-01	PCB-155L	54	%	1404033-16	COL-01	PCB-155L	78	%
1312033-10	BUR-01	PCB-167L	56	%	1404033-16	COL-01	PCB-167L	82	%
1312033-10	BUR-01	PCB-156L	54	%	1404033-16	COL-01	PCB-156L	80	%
1312033-10	BUR-01	PCB-157L	56	%	1404033-16	COL-01	PCB-157L	82	%
1312033-10	BUR-01	PCB-169L	48	%	1404033-16	COL-01	PCB-169L	72	%
1312033-10	BUR-01	PCB-188L	60	%	1404033-16	COL-01	PCB-188L	78	%
1312033-10	BUR-01	PCB-189L	68	%	1404033-16	COL-01	PCB-189L	110	%
1312033-10	BUR-01	PCB-202L	52	%	1404033-16	COL-01	PCB-202L	52	%
1312033-10	BUR-01	PCB-205L	64	%	1404033-16	COL-01	PCB-205L	80	%
1312033-10	BUR-01	PCB-208L	62	%	1404033-16	COL-01	PCB-208L	70	%
1312033-10	BUR-01	PCB-206L	58	%	1404033-16	COL-01	PCB-206L	70	%
1312033-10	BUR-01	PCB-209L	60	%	1404033-16	COL-01	PCB-209L	60	%
1312033-08	PET-01	PCB-1L	62	%	1404033-13	BUR-01	PCB-1L	68	%
1312033-08	PET-01	PCB-3L	72	%	1404033-13	BUR-01	PCB-3L	64	%
1312033-08	PET-01	PCB-4L	68	%	1404033-13	BUR-01	PCB-4L	68	%
1312033-08	PET-01	PCB-15L	60	%	1404033-13	BUR-01	PCB-15L	72	%

MEL ID	Site ID	PCB Name	Result		MEL ID	Site ID	PCB Name	Result	
1312033-08	PET-01	PCB-19L	70	%	1404033-13	BUR-01	PCB-19L	86	%
1312033-08	PET-01	PCB-37L	72	%	1404033-13	BUR-01	PCB-37L	76	%
1312033-08	PET-01	PCB-54L	74	%	1404033-13	BUR-01	PCB-54L	84	%
1312033-08	PET-01	PCB-81L	78	%	1404033-13	BUR-01	PCB-81L	84	%
1312033-08	PET-01	PCB-77L	76	%	1404033-13	BUR-01	PCB-77L	84	%
1312033-08	PET-01	PCB-104L	66	%	1404033-13	BUR-01	PCB-104L	80	%
1312033-08	PET-01	PCB-123L	78	%	1404033-13	BUR-01	PCB-123L	80	%
1312033-08	PET-01	PCB-118L	74	%	1404033-13	BUR-01	PCB-118L	78	%
1312033-08	PET-01	PCB-114L	74	%	1404033-13	BUR-01	PCB-114L	74	%
1312033-08	PET-01	PCB-105L	76	%	1404033-13	BUR-01	PCB-105L	76	%
1312033-08	PET-01	PCB-126L	76	%	1404033-13	BUR-01	PCB-126L	72	%
1312033-08	PET-01	PCB-155L	66	%	1404033-13	BUR-01	PCB-155L	82	%
1312033-08	PET-01	PCB-167L	68	%	1404033-13	BUR-01	PCB-167L	70	%
1312033-08	PET-01	PCB-156L	68	%	1404033-13	BUR-01	PCB-156L	70	%
1312033-08	PET-01	PCB-157L	64	%	1404033-13	BUR-01	PCB-157L	70	%
1312033-08	PET-01	PCB-169L	64	%	1404033-13	BUR-01	PCB-169L	62	%
1312033-08	PET-01	PCB-188L	70	%	1404033-13	BUR-01	PCB-188L	84	%
1312033-08	PET-01	PCB-189L	76	%	1404033-13	BUR-01	PCB-189L	82	%
1312033-08	PET-01	PCB-202L	62	%	1404033-13	BUR-01	PCB-202L	78	%
1312033-08	PET-01	PCB-205L	70	%	1404033-13	BUR-01	PCB-205L	80	%
1312033-08	PET-01	PCB-208L	70	%	1404033-13	BUR-01	PCB-208L	92	%
1312033-08	PET-01	PCB-206L	66	%	1404033-13	BUR-01	PCB-206L	84	%
1312033-08	PET-01	PCB-209L	68	%	1404033-13	BUR-01	PCB-209L	90	%
1312033-16	FIELD BLANK	PCB-1L	72	%	1404033-11	PET-01	PCB-1L	70	%
1312033-16	FIELD BLANK	PCB-3L	66	%	1404033-11	PET-01	PCB-3L	58	%
1312033-16	FIELD BLANK	PCB-4L	70	%	1404033-11	PET-01	PCB-4L	72	%
1312033-16	FIELD BLANK	PCB-15L	52	%	1404033-11	PET-01	PCB-15L	68	%
1312033-16	FIELD BLANK	PCB-19L	80	%	1404033-11	PET-01	PCB-19L	90	%
1312033-16	FIELD BLANK	PCB-37L	50	%	1404033-11	PET-01	PCB-37L	74	%
1312033-16	FIELD BLANK	PCB-54L	76	%	1404033-11	PET-01	PCB-54L	86	%
1312033-16	FIELD BLANK	PCB-81L	42	%	1404033-11	PET-01	PCB-81L	80	%
1312033-16	FIELD BLANK	PCB-77L	42	%	1404033-11	PET-01	PCB-77L	78	%
1312033-16	FIELD BLANK	PCB-104L	86	%	1404033-11	PET-01	PCB-104L	80	%
1312033-16	FIELD BLANK	PCB-123L	76	%	1404033-11	PET-01	PCB-123L	80	%
1312033-16	FIELD BLANK	PCB-118L	72	%	1404033-11	PET-01	PCB-118L	82	%
1312033-16	FIELD BLANK	PCB-114L	68	%	1404033-11	PET-01	PCB-114L	78	%
1312033-16	FIELD BLANK	PCB-105L	62	%	1404033-11	PET-01	PCB-105L	78	%
1312033-16	FIELD BLANK	PCB-126L	46	%	1404033-11	PET-01	PCB-126L	74	%
1312033-16	FIELD BLANK	PCB-155L	86	%	1404033-11	PET-01	PCB-155L	80	%
1312033-16	FIELD BLANK	PCB-167L	60	%	1404033-11	PET-01	PCB-167L	76	%
1312033-16	FIELD BLANK	PCB-156L	50	%	1404033-11	PET-01	PCB-156L	70	%
1312033-16	FIELD BLANK	PCB-157L	54	%	1404033-11	PET-01	PCB-157L	72	%

MEL ID	Site ID	PCB Name	Result	MEL ID	Site ID	PCB Name	Result
1312033-16	FIELD BLANK	PCB-169L	**36 %**	1404033-11	PET-01	PCB-169L	62 %
1312033-16	FIELD BLANK	PCB-188L	110 %	1404033-11	PET-01	PCB-188L	88 %
1312033-16	FIELD BLANK	PCB-189L	72 %	1404033-11	PET-01	PCB-189L	84 %
1312033-16	FIELD BLANK	PCB-202L	94 %	1404033-11	PET-01	PCB-202L	82 %
1312033-16	FIELD BLANK	PCB-205L	76 %	1404033-11	PET-01	PCB-205L	76 %
1312033-16	FIELD BLANK	PCB-208L	114 %	1404033-11	PET-01	PCB-208L	92 %
1312033-16	FIELD BLANK	PCB-206L	72 %	1404033-11	PET-01	PCB-206L	82 %
1312033-16	FIELD BLANK	PCB-209L	88 %	1404033-11	PET-01	PCB-209L	90 %
1312033-17	TRANS.SPIKE	PCB-001	71 %	SPIKE BLANK		PCB-1L	82 %
1312033-17	TRANS.SPIKE	PCB-003	82 %	SPIKE BLANK		PCB-3L	72 %
1312033-17	TRANS.SPIKE	PCB-010	73 %	SPIKE BLANK		PCB-4L	78 %
1312033-17	TRANS.SPIKE	PCB-004	95 %	SPIKE BLANK		PCB-15L	58 %
1312033-17	TRANS.SPIKE	PCB-005/008	103 %	SPIKE BLANK		PCB-19L	86 %
1312033-17	TRANS.SPIKE	PCB-015	99 %	SPIKE BLANK		PCB-37L	54 %
1312033-17	TRANS.SPIKE	PCB-019	81 %	SPIKE BLANK		PCB-54L	84 %
1312033-17	TRANS.SPIKE	PCB-018	115 %	SPIKE BLANK		PCB-81L	50 %
1312033-17	TRANS.SPIKE	PCB-028	76 %	SPIKE BLANK		PCB-77L	50 %
1312033-17	TRANS.SPIKE	PCB-020/033	76 %	SPIKE BLANK		PCB-104L	96 %
1312033-17	TRANS.SPIKE	PCB-022	85 %	SPIKE BLANK		PCB-123L	86 %
1312033-17	TRANS.SPIKE	PCB-037	89 %	SPIKE BLANK		PCB-118L	86 %
1312033-17	TRANS.SPIKE	PCB-054	78 %	SPIKE BLANK		PCB-114L	78 %
1312033-17	TRANS.SPIKE	PCB-052/069	89 %	SPIKE BLANK		PCB-105L	72 %
1312033-17	TRANS.SPIKE	PCB-043/049	97 %	SPIKE BLANK		PCB-126L	66 %
1312033-17	TRANS.SPIKE	PCB-044	117 %	SPIKE BLANK		PCB-155L	98 %
1312033-17	TRANS.SPIKE	PCB-041	73 %	SPIKE BLANK		PCB-167L	72 %
1312033-17	TRANS.SPIKE	PCB-040	64 %	SPIKE BLANK		PCB-156L	60 %
1312033-17	TRANS.SPIKE	PCB-074	81 %	SPIKE BLANK		PCB-157L	54 %
1312033-17	TRANS.SPIKE	PCB-070	95 %	SPIKE BLANK		PCB-169L	44 %
1312033-17	TRANS.SPIKE	PCB-066	72 %	SPIKE BLANK		PCB-188L	120 %
1312033-17	TRANS.SPIKE	PCB-060	92 %	SPIKE BLANK		PCB-189L	90 %
1312033-17	TRANS.SPIKE	PCB-081	72 %	SPIKE BLANK		PCB-202L	104 %
1312033-17	TRANS.SPIKE	PCB-077	78 %	SPIKE BLANK		PCB-205L	82 %
1312033-17	TRANS.SPIKE	PCB-104	80 %	SPIKE BLANK		PCB-208L	116 %
1312033-17	TRANS.SPIKE	PCB-095	114 %	SPIKE BLANK		PCB-206L	90 %
1312033-17	TRANS.SPIKE	PCB-090	118 %	SPIKE BLANK		PCB-209L	90 %
1312033-17	TRANS.SPIKE	PCB-101	107 %	SPIKE (LCS)		PCB-001	71 %
1312033-17	TRANS.SPIKE	PCB-099	120 %	SPIKE (LCS)		PCB-003	62 %
1312033-17	TRANS.SPIKE	PCB-119	111 %	SPIKE (LCS)		PCB-010	73 %
1312033-17	TRANS.SPIKE	PCB-087/115	112 %	SPIKE (LCS)		PCB-004	84 %
1312033-17	TRANS.SPIKE	PCB-110	119 %	SPIKE (LCS)		PCB-005/008	94 %
1312033-17	TRANS.SPIKE	PCB-123	99 %	SPIKE (LCS)		PCB-015	92 %
1312033-17	TRANS.SPIKE	PCB-118	102 %	SPIKE (LCS)		PCB-019	71 %

MEL ID	Site ID	PCB Name	Result		MEL ID	Site ID	PCB Name	Result	
1312033-17	TRANS.SPIKE	PCB-114	98	%	SPIKE (LCS)		PCB-018	92	%
1312033-17	TRANS.SPIKE	PCB-105	90	%	SPIKE (LCS)		PCB-028	62	%
1312033-17	TRANS.SPIKE	PCB-126	109	%	SPIKE (LCS)		PCB-020/033	69	%
1312033-17	TRANS.SPIKE	PCB-155	76	%	SPIKE (LCS)		PCB-022	85	%
1312033-17	TRANS.SPIKE	PCB-151	**161**	**%**	SPIKE (LCS)		PCB-037	78	%
1312033-17	TRANS.SPIKE	PCB-139/149	**202**	**%**	SPIKE (LCS)		PCB-054	79	%
1312033-17	TRANS.SPIKE	PCB-153	112	%	SPIKE (LCS)		PCB-052/069	81	%
1312033-17	TRANS.SPIKE	PCB-168	118	%	SPIKE (LCS)		PCB-043/049	94	%
1312033-17	TRANS.SPIKE	PCB-141	116	%	SPIKE (LCS)		PCB-044	106	%
1312033-17	TRANS.SPIKE	PCB-137	107	%	SPIKE (LCS)		PCB-041	77	%
1312033-17	TRANS.SPIKE	PCB-138	87	%	SPIKE (LCS)		PCB-040	78	%
1312033-17	TRANS.SPIKE	PCB-158	93	%	SPIKE (LCS)		PCB-074	80	%
1312033-17	TRANS.SPIKE	PCB-129	71	%	SPIKE (LCS)		PCB-070	93	%
1312033-17	TRANS.SPIKE	PCB-128	64	%	SPIKE (LCS)		PCB-066	78	%
1312033-17	TRANS.SPIKE	PCB-167	77	%	SPIKE (LCS)		PCB-060	86	%
1312033-17	TRANS.SPIKE	PCB-156	76	%	SPIKE (LCS)		PCB-081	86	%
1312033-17	TRANS.SPIKE	PCB-157	76	%	SPIKE (LCS)		PCB-077	79	%
1312033-17	TRANS.SPIKE	PCB-169	92	%	SPIKE (LCS)		PCB-104	80	%
1312033-17	TRANS.SPIKE	PCB-188	73	%	SPIKE (LCS)		PCB-095	115	%
1312033-17	TRANS.SPIKE	PCB-178	87	%	SPIKE (LCS)		PCB-090	141	%
1312033-17	TRANS.SPIKE	PCB-182/187	89	%	SPIKE (LCS)		PCB-101	115	%
1312033-17	TRANS.SPIKE	PCB-183	70	%	SPIKE (LCS)		PCB-099	126	%
1312033-17	TRANS.SPIKE	PCB-177	71	%	SPIKE (LCS)		PCB-119	122	%
1312033-17	TRANS.SPIKE	PCB-171	61	%	SPIKE (LCS)		PCB-087/115	107	%
1312033-17	TRANS.SPIKE	PCB-180	56	%	SPIKE (LCS)		PCB-110	127	%
1312033-17	TRANS.SPIKE	PCB-193	63	%	SPIKE (LCS)		PCB-123	100	%
1312033-17	TRANS.SPIKE	PCB-191	57	%	SPIKE (LCS)		PCB-118	93	%
1312033-17	TRANS.SPIKE	PCB-170	46	%	SPIKE (LCS)		PCB-114	81	%
1312033-17	TRANS.SPIKE	PCB-189	90	%	SPIKE (LCS)		PCB-105	91	%
1312033-17	TRANS.SPIKE	PCB-202	83	%	SPIKE (LCS)		PCB-126	88	%
1312033-17	TRANS.SPIKE	PCB-201	90	%	SPIKE (LCS)		PCB-155	82	%
1312033-17	TRANS.SPIKE	PCB-199	80	%	SPIKE (LCS)		PCB-151	**171**	**%**
1312033-17	TRANS.SPIKE	PCB-203	74	%	SPIKE (LCS)		PCB-139/149	**196**	**%**
1312033-17	TRANS.SPIKE	PCB-194	47	%	SPIKE (LCS)		PCB-153	100	%
1312033-17	TRANS.SPIKE	PCB-205	79	%	SPIKE (LCS)		PCB-168	114	%
1312033-17	TRANS.SPIKE	PCB-208	93	%	SPIKE (LCS)		PCB-141	106	%
1312033-17	TRANS.SPIKE	PCB-206	80	%	SPIKE (LCS)		PCB-137	96	%
1312033-17	TRANS.SPIKE	PCB-209	68	%	SPIKE (LCS)		PCB-138	82	%
1312033-17	TRANS.SPIKE	PCB-1L	72	%	SPIKE (LCS)		PCB-158	86	%
1312033-17	TRANS.SPIKE	PCB-3L	68	%	SPIKE (LCS)		PCB-129	78	%
1312033-17	TRANS.SPIKE	PCB-4L	70	%	SPIKE (LCS)		PCB-128	62	%
1312033-17	TRANS.SPIKE	PCB-15L	50	%	SPIKE (LCS)		PCB-167	80	%

MEL ID	Site ID	PCB Name	Result		MEL ID	Site ID	PCB Name	Result	
1312033-17	TRANS.SPIKE	PCB-19L	80	%	SPIKE (LCS)		PCB-156	74	%
1312033-17	TRANS.SPIKE	PCB-37L	58	%	SPIKE (LCS)		PCB-157	75	%
1312033-17	TRANS.SPIKE	PCB-54L	88	%	SPIKE (LCS)		PCB-169	88	%
1312033-17	TRANS.SPIKE	PCB-81L	52	%	SPIKE (LCS)		PCB-188	75	%
1312033-17	TRANS.SPIKE	PCB-77L	48	%	SPIKE (LCS)		PCB-178	92	%
1312033-17	TRANS.SPIKE	PCB-104L	104	%	SPIKE (LCS)		PCB-182/187	78	%
1312033-17	TRANS.SPIKE	PCB-123L	88	%	SPIKE (LCS)		PCB-183	75	%
1312033-17	TRANS.SPIKE	PCB-118L	80	%	SPIKE (LCS)		PCB-177	67	%
1312033-17	TRANS.SPIKE	PCB-114L	78	%	SPIKE (LCS)		PCB-171	56	%
1312033-17	TRANS.SPIKE	PCB-105L	76	%	SPIKE (LCS)		PCB-180	57	%
1312033-17	TRANS.SPIKE	PCB-126L	56	%	SPIKE (LCS)		PCB-193	47	%
1312033-17	TRANS.SPIKE	PCB-155L	100	%	SPIKE (LCS)		PCB-191	55	%
1312033-17	TRANS.SPIKE	PCB-167L	66	%	SPIKE (LCS)		PCB-170	**39**	**%**
1312033-17	TRANS.SPIKE	PCB-156L	56	%	SPIKE (LCS)		PCB-189	73	%
1312033-17	TRANS.SPIKE	PCB-157L	60	%	SPIKE (LCS)		PCB-202	82	%
1312033-17	TRANS.SPIKE	PCB-169L	42	%	SPIKE (LCS)		PCB-201	106	%
1312033-17	TRANS.SPIKE	PCB-188L	124	%	SPIKE (LCS)		PCB-199	67	%
1312033-17	TRANS.SPIKE	PCB-189L	82	%	SPIKE (LCS)		PCB-203	77	%
1312033-17	TRANS.SPIKE	PCB-202L	102	%	SPIKE (LCS)		PCB-194	49	%
1312033-17	TRANS.SPIKE	PCB-205L	92	%	SPIKE (LCS)		PCB-205	89	%
1312033-17	TRANS.SPIKE	PCB-208L	112	%	SPIKE (LCS)		PCB-208	101	%
1312033-17	TRANS.SPIKE	PCB-206L	100	%	SPIKE (LCS)		PCB-206	97	%
1312033-17	TRANS.SPIKE	PCB-209L	102	%	SPIKE (LCS)		PCB-209	80	%
SPIKE (LCS)		PCB-1L	76	%	SPIKE (LCS)		PCB-1L	84	%
SPIKE (LCS)		PCB-3L	82	%	SPIKE (LCS)		PCB-3L	54	%
SPIKE (LCS)		PCB-4L	74	%	SPIKE (LCS)		PCB-4L	76	%
SPIKE (LCS)		PCB-15L	64	%	SPIKE (LCS)		PCB-15L	56	%
SPIKE (LCS)		PCB-19L	80	%	SPIKE (LCS)		PCB-19L	90	%
SPIKE (LCS)		PCB-37L	70	%	SPIKE (LCS)		PCB-37L	64	%
SPIKE (LCS)		PCB-54L	82	%	SPIKE (LCS)		PCB-54L	90	%
SPIKE (LCS)		PCB-81L	88	%	SPIKE (LCS)		PCB-81L	58	%
SPIKE (LCS)		PCB-77L	74	%	SPIKE (LCS)		PCB-77L	54	%
SPIKE (LCS)		PCB-104L	78	%	SPIKE (LCS)		PCB-104L	94	%
SPIKE (LCS)		PCB-123L	86	%	SPIKE (LCS)		PCB-123L	92	%
SPIKE (LCS)		PCB-118L	82	%	SPIKE (LCS)		PCB-118L	94	%
SPIKE (LCS)		PCB-114L	78	%	SPIKE (LCS)		PCB-114L	84	%
SPIKE (LCS)		PCB-105L	82	%	SPIKE (LCS)		PCB-105L	74	%
SPIKE (LCS)		PCB-126L	86	%	SPIKE (LCS)		PCB-126L	58	%
SPIKE (LCS)		PCB-155L	74	%	SPIKE (LCS)		PCB-155L	98	%
SPIKE (LCS)		PCB-167L	82	%	SPIKE (LCS)		PCB-167L	74	%
SPIKE (LCS)		PCB-156L	80	%	SPIKE (LCS)		PCB-156L	58	%
SPIKE (LCS)		PCB-157L	78	%	SPIKE (LCS)		PCB-157L	56	%

MEL ID	Site ID	PCB Name	Result
SPIKE (LCS)		PCB-169L	72 %
SPIKE (LCS)		PCB-188L	86 %
SPIKE (LCS)		PCB-189L	94 %
SPIKE (LCS)		PCB-202L	74 %
SPIKE (LCS)		PCB-205L	84 %
SPIKE (LCS)		PCB-208L	78 %
SPIKE (LCS)		PCB-206L	82 %
SPIKE (LCS)		PCB-209L	82 %
SPIKE (LCS)		PCB-001	77 %
SPIKE (LCS)		PCB-003	**33 %**
SPIKE (LCS)		PCB-010	83 %
SPIKE (LCS)		PCB-004	81 %
SPIKE (LCS)		PCB-005/008	88 %
SPIKE (LCS)		PCB-015	102 %
SPIKE (LCS)		PCB-019	78 %
SPIKE (LCS)		PCB-018	84 %
SPIKE (LCS)		PCB-028	61 %
SPIKE (LCS)		PCB-020/033	71 %
SPIKE (LCS)		PCB-022	81 %
SPIKE (LCS)		PCB-037	86 %
SPIKE (LCS)		PCB-054	77 %
SPIKE (LCS)		PCB-052/069	68 %
SPIKE (LCS)		PCB-043/049	74 %
SPIKE (LCS)		PCB-044	90 %
SPIKE (LCS)		PCB-041	64 %
SPIKE (LCS)		PCB-040	54 %
SPIKE (LCS)		PCB-074	75 %
SPIKE (LCS)		PCB-070	85 %
SPIKE (LCS)		PCB-066	70 %
SPIKE (LCS)		PCB-060	86 %
SPIKE (LCS)		PCB-081	78 %
SPIKE (LCS)		PCB-077	81 %
SPIKE (LCS)		PCB-104	84 %
SPIKE (LCS)		PCB-095	79 %
SPIKE (LCS)		PCB-090	93 %
SPIKE (LCS)		PCB-101	93 %
SPIKE (LCS)		PCB-099	102 %
SPIKE (LCS)		PCB-119	92 %
SPIKE (LCS)		PCB-087/115	83 %
SPIKE (LCS)		PCB-110	120 %
SPIKE (LCS)		PCB-123	77 %
SPIKE (LCS)		PCB-118	89 %

MEL ID	Site ID	PCB Name	Result
SPIKE (LCS)		PCB-169L	42 %
SPIKE (LCS)		PCB-188L	124 %
SPIKE (LCS)		PCB-189L	100 %
SPIKE (LCS)		PCB-202L	90 %
SPIKE (LCS)		PCB-205L	92 %
SPIKE (LCS)		PCB-208L	136 %
SPIKE (LCS)		PCB-206L	100 %
SPIKE (LCS)		PCB-209L	100 %

MEL ID	Site ID	PCB Name	Result		MEL ID	Site ID	PCB Name	Result
SPIKE (LCS)		PCB-114	88	%				
SPIKE (LCS)		PCB-105	82	%				
SPIKE (LCS)		PCB-126	86	%				
SPIKE (LCS)		PCB-155	81	%				
SPIKE (LCS)		PCB-151	88	%				
SPIKE (LCS)		PCB-139/149	125	%				
SPIKE (LCS)		PCB-153	95	%				
SPIKE (LCS)		PCB-168	110	%				
SPIKE (LCS)		PCB-141	89	%				
SPIKE (LCS)		PCB-137	89	%				
SPIKE (LCS)		PCB-138	77	%				
SPIKE (LCS)		PCB-158	83	%				
SPIKE (LCS)		PCB-129	74	%				
SPIKE (LCS)		PCB-128	66	%				
SPIKE (LCS)		PCB-167	81	%				
SPIKE (LCS)		PCB-156	82	%				
SPIKE (LCS)		PCB-157	85	%				
SPIKE (LCS)		PCB-169	91	%				
SPIKE (LCS)		PCB-188	84	%				
SPIKE (LCS)		PCB-178	76	%				
SPIKE (LCS)		PCB-182/187	74	%				
SPIKE (LCS)		PCB-183	68	%				
SPIKE (LCS)		PCB-177	69	%				
SPIKE (LCS)		PCB-171	66	%				
SPIKE (LCS)		PCB-180	69	%				
SPIKE (LCS)		PCB-193	67	%				
SPIKE (LCS)		PCB-191	65	%				
SPIKE (LCS)		PCB-170	60	%				
SPIKE (LCS)		PCB-189	82	%				
SPIKE (LCS)		PCB-202	89	%				
SPIKE (LCS)		PCB-201	73	%				
SPIKE (LCS)		PCB-199	80	%				
SPIKE (LCS)		PCB-203	78	%				
SPIKE (LCS)		PCB-194	74	%				
SPIKE (LCS)		PCB-205	85	%				
SPIKE (LCS)		PCB-208	79	%				
SPIKE (LCS)		PCB-206	98	%				
SPIKE (LCS)		PCB-209	73	%				
SPIKE (LCS)		PCB-1L	78	%				
SPIKE (LCS)		PCB-3L	42	%				
SPIKE (LCS)		PCB-4L	80	%				
SPIKE (LCS)		PCB-15L	60	%				

MEL ID	Site ID	PCB Name	Result	MEL ID	Site ID	PCB Name	Result
SPIKE (LCS)		PCB-19L	84 %				
SPIKE (LCS)		PCB-37L	70 %				
SPIKE (LCS)		PCB-54L	86 %				
SPIKE (LCS)		PCB-81L	90 %				
SPIKE (LCS)		PCB-77L	72 %				
SPIKE (LCS)		PCB-104L	80 %				
SPIKE (LCS)		PCB-123L	86 %				
SPIKE (LCS)		PCB-118L	82 %				
SPIKE (LCS)		PCB-114L	76 %				
SPIKE (LCS)		PCB-105L	84 %				
SPIKE (LCS)		PCB-126L	78 %				
SPIKE (LCS)		PCB-155L	82 %				
SPIKE (LCS)		PCB-167L	84 %				
SPIKE (LCS)		PCB-156L	84 %				
SPIKE (LCS)		PCB-157L	80 %				
SPIKE (LCS)		PCB-169L	78 %				
SPIKE (LCS)		PCB-188L	92 %				
SPIKE (LCS)		PCB-189L	96 %				
SPIKE (LCS)		PCB-202L	82 %				
SPIKE (LCS)		PCB-205L	90 %				
SPIKE (LCS)		PCB-208L	86 %				
SPIKE (LCS)		PCB-206L	84 %				
SPIKE (LCS)		PCB-209L	92 %				

Bold: Beyond control limits.
See Figure A-1 for sample site descriptions.
1: Field Blank is an unspiked SPE disc taken into the field during sampling and analyzed as a sample.
2: Transport Spike is an SPE disc spiked with PCB congeners at a known concentration taken into the field during sampling and analyzed as a sample.
3: Spike Blank is a laboratory blank spiked with labeled PCB congeners at a known concentration.
4: Spike (LCS) is a field sample spiked with labeled PCB congeners at known concentrations.

Table B-2. Quality Assurance Results for Labeled PCB Pre-Deployment Spikes, Fall and Spring.

MEL ID	Site ID	PCB Name	Recovery	MEL ID	Site ID	PCB Name	Recovery
1312033-14	BBC-01	PCB-28L	44 %	1404033-17	BBC-01	PCB-28L	54 %
1312033-14	BBC-01	PCB-111L	46 %	1404033-17	BBC-01	PCB-111L	60 %
1312033-14	BBC-01	PCB-178L	42 %	1404033-17	BBC-01	PCB-178L	66 %
1312033-12	BBC-02	PCB-28L	**34 %**	1404033-15	BBC-02	PCB-28L	**36 %**
1312033-12	BBC-02	PCB-111L	**34 %**	1404033-15	BBC-02	PCB-111L	**34 %**
1312033-12	BBC-02	PCB-178L	**32 %**	1404033-15	BBC-02	PCB-178L	**34 %**
1312033-11	BBC-03	PCB-28L	50 %	1404033-14	BBC-03	PCB-28L	60 %
1312033-11	BBC-03	PCB-111L	**34 %**	1404033-14	BBC-03	PCB-111L	60 %
1312033-11	BBC-03	PCB-178L	**32 %**	1404033-14	BBC-03	PCB-178L	64 %
1312033-09	BBC-04	PCB-28L	48 %	1404033-12	BBC-04	PCB-28L	70 %
1312033-09	BBC-04	PCB-111L	46 %	1404033-12	BBC-04	PCB-111L	76 %
1312033-09	BBC-04	PCB-178L	46 %	1404033-12	BBC-04	PCB-178L	78 %
1312033-15	COL-01	PCB-28L	58 %	1404033-18	BBC-04REP	PCB-28L	60 %
1312033-15	COL-01	PCB-111L	54 %	1404033-18	BBC-04REP	PCB-111L	58 %
1312033-15	COL-01	PCB-178L	54 %	1404033-18	BBC-04REP	PCB-178L	58 %
1312033-10	BUR-01	PCB-28L	40 %	1404033-16	COL-01	PCB-28L	52 %
1312033-10	BUR-01	PCB-111L	**36 %**	1404033-16	COL-01	PCB-111L	56 %
1312033-10	BUR-01	PCB-178L	**32 %**	1404033-16	COL-01	PCB-178L	**36 %**
1312033-08	PET-01	PCB-28L	**36 %**	1404033-13	BUR-01	PCB-28L	52 %
1312033-08	PET-01	PCB-111L	**28 %**	1404033-13	BUR-01	PCB-111L	56 %
1312033-08	PET-01	PCB-178L	**24 %**	1404033-13	BUR-01	PCB-178L	60 %
1312033-16	FIELDBLANK	PCB-28L	**26 %**	1404033-11	PET-01	PCB-28L	54 %
1312033-16	FIELDBLANK	PCB-111L	**28 %**	1404033-11	PET-01	PCB-111L	56 %
1312033-16	FIELDBLANK	PCB-178L	**30 %**	1404033-11	PET-01	PCB-178L	62 %
1312033-17	TRANS.SPIKE	PCB-28L	68 %	SPIKE (LCS)		PCB-28L	76 %
1312033-17	TRANS.SPIKE	PCB-111L	62 %	SPIKE (LCS)		PCB-111L	68 %
1312033-17	TRANS.SPIKE	PCB-178L	84 %	SPIKE (LCS)		PCB-178L	88 %

Bold: Beyond control limits of 40-150%.
See Figure A-1 in Appendix A for sample site descriptions.

Table B-2. PCB Congener Laboratory and Field Blank Results, Fall 2013 and Spring 2014.

Sample Type	PCB Name	Result		Sample Type	PCB Name	Result	
LAB BLANK-Fall	PCB-001	0.053	NJ	LAB BLANK-Spring	PCB-001	0.037	UJ
LAB BLANK-Fall	PCB-002	0.2	NJ	LAB BLANK-Spring	PCB-002	0.046	UJ
LAB BLANK-Fall	PCB-003	0.038	UJ	LAB BLANK-Spring	PCB-003	0.072	UJ
LAB BLANK-Fall	PCB-010	0.067	UJ	LAB BLANK-Spring	PCB-010	0.164	UJ
LAB BLANK-Fall	PCB-004	0.083	UJ	LAB BLANK-Spring	PCB-004	0.171	UJ
LAB BLANK-Fall	PCB-009	0.066	UJ	LAB BLANK-Spring	PCB-009	0.161	UJ
LAB BLANK-Fall	PCB-007	0.068	UJ	LAB BLANK-Spring	PCB-007	**1.42**	
LAB BLANK-Fall	PCB-006	0.066	UJ	LAB BLANK-Spring	PCB-006	0.16	UJ
LAB BLANK-Fall	PCB-005/008	0.07	UJ	LAB BLANK-Spring	PCB-005/008	**1.1**	
LAB BLANK-Fall	PCB-014	0.066	UJ	LAB BLANK-Spring	PCB-014	0.161	UJ
LAB BLANK-Fall	PCB-011	**1.17**		LAB BLANK-Spring	PCB-011	**1.32**	
LAB BLANK-Fall	PCB-012/013	0.075	UJ	LAB BLANK-Spring	PCB-012/013	0.183	UJ
LAB BLANK-Fall	PCB-015	0.105	UJ	LAB BLANK-Spring	PCB-015	0.327	UJ
LAB BLANK-Fall	PCB-019	0.13	NJ	LAB BLANK-Spring	PCB-019	0.03	UJ
LAB BLANK-Fall	PCB-030	0.016	UJ	LAB BLANK-Spring	PCB-030	0.032	UJ
LAB BLANK-Fall	PCB-018	**0.404**		LAB BLANK-Spring	PCB-018	**1.38**	
LAB BLANK-Fall	PCB-017	0.15	NJ	LAB BLANK-Spring	PCB-017	**0.666**	**J**
LAB BLANK-Fall	PCB-024	0.018	UJ	LAB BLANK-Spring	PCB-024	0.037	UJ
LAB BLANK-Fall	PCB-027	0.013	UJ	LAB BLANK-Spring	PCB-027	0.03	UJ
LAB BLANK-Fall	PCB-032	0.088	NJ	LAB BLANK-Spring	PCB-032	0.219	NJ
LAB BLANK-Fall	PCB-016	0.017	UJ	LAB BLANK-Spring	PCB-016	**0.439**	**J**
LAB BLANK-Fall	PCB-023	0.015	UJ	LAB BLANK-Spring	PCB-023	0.036	UJ
LAB BLANK-Fall	PCB-034	0.017	UJ	LAB BLANK-Spring	PCB-034	0.034	UJ
LAB BLANK-Fall	PCB-029	0.074	NJ	LAB BLANK-Spring	PCB-029	0.033	UJ
LAB BLANK-Fall	PCB-026	0.074	NJ	LAB BLANK-Spring	PCB-026	0.123	NJ
LAB BLANK-Fall	PCB-025	0.016	UJ	LAB BLANK-Spring	PCB-025	0.037	UJ
LAB BLANK-Fall	PCB-031	0.23	NJ	LAB BLANK-Spring	PCB-031	0.691	NJ
LAB BLANK-Fall	PCB-028	**0.294**		LAB BLANK-Spring	PCB-028	**0.889**	
LAB BLANK-Fall	PCB-021	0.02	UJ	LAB BLANK-Spring	PCB-021	0.041	UJ
LAB BLANK-Fall	PCB-020/033	0.266	NJ	LAB BLANK-Spring	PCB-020/033	0.279	NJ
LAB BLANK-Fall	PCB-022	**0.158**	**J**	LAB BLANK-Spring	PCB-022	0.041	UJ
LAB BLANK-Fall	PCB-036	0.017	UJ	LAB BLANK-Spring	PCB-036	0.035	UJ
LAB BLANK-Fall	PCB-039	0.019	UJ	LAB BLANK-Spring	PCB-039	0.039	UJ
LAB BLANK-Fall	PCB-038	0.02	UJ	LAB BLANK-Spring	PCB-038	0.126	NJ
LAB BLANK-Fall	PCB-035	0.02	UJ	LAB BLANK-Spring	PCB-035	0.041	UJ
LAB BLANK-Fall	PCB-037	0.255	NJ	LAB BLANK-Spring	PCB-037	0.14	UJ
LAB BLANK-Fall	PCB-054	0.007	UJ	LAB BLANK-Spring	PCB-054	0.02	UJ
LAB BLANK-Fall	PCB-050	0.013	UJ	LAB BLANK-Spring	PCB-050	0.046	UJ
LAB BLANK-Fall	PCB-053	0.023	NJ	LAB BLANK-Spring	PCB-053	0.051	UJ
LAB BLANK-Fall	PCB-051	0.014	UJ	LAB BLANK-Spring	PCB-051	0.346	NJ
LAB BLANK-Fall	PCB-045	0.046	NJ	LAB BLANK-Spring	PCB-045	0.052	UJ
LAB BLANK-Fall	PCB-046	0.017	UJ	LAB BLANK-Spring	PCB-046	0.06	UJ
LAB BLANK-Fall	PCB-052/069	**0.214**		LAB BLANK-Spring	PCB-052/069	0.272	NJ

Sample Type	PCB Name	Result		Sample Type	PCB Name	Result	
LAB BLANK-Fall	PCB-073	0.011	UJ	LAB BLANK-Spring	PCB-073	0.04	UJ
LAB BLANK-Fall	PCB-043/049	0.015	UJ	LAB BLANK-Spring	PCB-043/049	0.053	UJ
LAB BLANK-Fall	PCB-065/075	0.011	UJ	LAB BLANK-Spring	PCB-065/075	0.037	UJ
LAB BLANK-Fall	PCB-047/048	0.099	NJ	LAB BLANK-Spring	PCB-047/048	1.44	NJ
LAB BLANK-Fall	PCB-062	0.013	UJ	LAB BLANK-Spring	PCB-062	0.044	UJ
LAB BLANK-Fall	PCB-044	**0.301**		LAB BLANK-Spring	PCB-044	**0.538**	**J**
LAB BLANK-Fall	PCB-059	0.012	UJ	LAB BLANK-Spring	PCB-059	0.041	UJ
LAB BLANK-Fall	PCB-042	0.035	NJ	LAB BLANK-Spring	PCB-042	0.06	UJ
LAB BLANK-Fall	PCB-064/072	0.072	NJ	LAB BLANK-Spring	PCB-064/072	0.041	UJ
LAB BLANK-Fall	PCB-071	0.037	NJ	LAB BLANK-Spring	PCB-071	0.037	UJ
LAB BLANK-Fall	PCB-041	0.018	UJ	LAB BLANK-Spring	PCB-041	0.062	UJ
LAB BLANK-Fall	PCB-068	0.011	UJ	LAB BLANK-Spring	PCB-068	0.039	UJ
LAB BLANK-Fall	PCB-040/057	1.24	NJ	LAB BLANK-Spring	PCB-040/057	0.051	UJ
LAB BLANK-Fall	PCB-067	0.012	UJ	LAB BLANK-Spring	PCB-067	0.043	UJ
LAB BLANK-Fall	PCB-063	0.012	UJ	LAB BLANK-Spring	PCB-063	0.041	UJ
LAB BLANK-Fall	PCB-058	0.012	UJ	LAB BLANK-Spring	PCB-058	0.041	UJ
LAB BLANK-Fall	PCB-061	0.013	UJ	LAB BLANK-Spring	PCB-061	0.047	UJ
LAB BLANK-Fall	PCB-074	0.012	UJ	LAB BLANK-Spring	PCB-074	0.043	UJ
LAB BLANK-Fall	PCB-070	0.089	NJ	LAB BLANK-Spring	PCB-070	0.048	UJ
LAB BLANK-Fall	PCB-055/080	0.012	UJ	LAB BLANK-Spring	PCB-055/080	0.148	NJ
LAB BLANK-Fall	PCB-066	0.012	UJ	LAB BLANK-Spring	PCB-066	0.041	UJ
LAB BLANK-Fall	PCB-076	0.013	UJ	LAB BLANK-Spring	PCB-076	0.045	UJ
LAB BLANK-Fall	PCB-060	0.014	UJ	LAB BLANK-Spring	PCB-060	0.049	UJ
LAB BLANK-Fall	PCB-056	0.09	NJ	LAB BLANK-Spring	PCB-056	0.049	UJ
LAB BLANK-Fall	PCB-079	0.013	UJ	LAB BLANK-Spring	PCB-079	0.045	UJ
LAB BLANK-Fall	PCB-078	0.014	UJ	LAB BLANK-Spring	PCB-078	0.049	UJ
LAB BLANK-Fall	PCB-081	0.316	NJ	LAB BLANK-Spring	PCB-081	0.122	UJ
LAB BLANK-Fall	PCB-077	0.346	NJ	LAB BLANK-Spring	PCB-077	0.15	UJ
LAB BLANK-Fall	PCB-104	0.056	UJ	LAB BLANK-Spring	PCB-104	0.125	UJ
LAB BLANK-Fall	PCB-096	0.091	UJ	LAB BLANK-Spring	PCB-096	0.291	UJ
LAB BLANK-Fall	PCB-103	0.11	UJ	LAB BLANK-Spring	PCB-103	0.354	UJ
LAB BLANK-Fall	PCB-100	0.124	UJ	LAB BLANK-Spring	PCB-100	0.398	UJ
LAB BLANK-Fall	PCB-094	0.145	UJ	LAB BLANK-Spring	PCB-094	0.465	UJ
LAB BLANK-Fall	PCB-093/098/102	0.143	UJ	LAB BLANK-Spring	PCB-093/098/102	0.46	UJ
LAB BLANK-Fall	PCB-095	0.12	UJ	LAB BLANK-Spring	PCB-095	0.385	UJ
LAB BLANK-Fall	PCB-088	0.133	UJ	LAB BLANK-Spring	PCB-088	0.429	UJ
LAB BLANK-Fall	PCB-091/121	0.116	UJ	LAB BLANK-Spring	PCB-091/121	0.373	UJ
LAB BLANK-Fall	PCB-084	0.136	UJ	LAB BLANK-Spring	PCB-084	0.437	UJ
LAB BLANK-Fall	PCB-092	0.149	UJ	LAB BLANK-Spring	PCB-092	0.478	UJ
LAB BLANK-Fall	PCB-089	0.136	UJ	LAB BLANK-Spring	PCB-089	0.438	UJ
LAB BLANK-Fall	PCB-090	0.157	UJ	LAB BLANK-Spring	PCB-090	0.504	UJ
LAB BLANK-Fall	PCB-101	0.126	UJ	LAB BLANK-Spring	PCB-101	0.406	UJ
LAB BLANK-Fall	PCB-113	0.112	UJ	LAB BLANK-Spring	PCB-113	0.358	UJ
LAB BLANK-Fall	PCB-099	0.183	NJ	LAB BLANK-Spring	PCB-099	0.415	UJ

Sample Type	PCB Name	Result		Sample Type	PCB Name	Result	
LAB BLANK-Fall	PCB-112/119	0.108	UJ	LAB BLANK-Spring	PCB-112/119	0.348	UJ
LAB BLANK-Fall	PCB-083/109	0.343	NJ	LAB BLANK-Spring	PCB-083/109	0.451	UJ
LAB BLANK-Fall	PCB-086/117	0.202	NJ	LAB BLANK-Spring	PCB-086/117	0.444	UJ
LAB BLANK-Fall	PCB-097/116	0.141	UJ	LAB BLANK-Spring	PCB-097/116	0.452	UJ
LAB BLANK-Fall	PCB-125	0.117	UJ	LAB BLANK-Spring	PCB-125	0.375	UJ
LAB BLANK-Fall	PCB-087/115	0.136	UJ	LAB BLANK-Spring	PCB-087/115	0.436	UJ
LAB BLANK-Fall	PCB-111	0.111	UJ	LAB BLANK-Spring	PCB-111	0.358	UJ
LAB BLANK-Fall	PCB-085	0.144	UJ	LAB BLANK-Spring	PCB-085	0.463	UJ
LAB BLANK-Fall	PCB-120	0.112	UJ	LAB BLANK-Spring	PCB-120	0.361	UJ
LAB BLANK-Fall	PCB-110	0.3	NJ	LAB BLANK-Spring	PCB-110	0.329	UJ
LAB BLANK-Fall	PCB-082	0.172	UJ	LAB BLANK-Spring	PCB-082	0.552	UJ
LAB BLANK-Fall	PCB-124	0.122	UJ	LAB BLANK-Spring	PCB-124	0.53	UJ
LAB BLANK-Fall	PCB-107/108	0.124	UJ	LAB BLANK-Spring	PCB-107/108	0.398	UJ
LAB BLANK-Fall	PCB-123	**0.64**		LAB BLANK-Spring	PCB-123	0.607	UJ
LAB BLANK-Fall	PCB-106	0.12	UJ	LAB BLANK-Spring	PCB-106	0.385	UJ
LAB BLANK-Fall	PCB-118	**0.825**		LAB BLANK-Spring	PCB-118	0.673	UJ
LAB BLANK-Fall	PCB-114	**0.562**		LAB BLANK-Spring	PCB-114	0.67	UJ
LAB BLANK-Fall	PCB-122	0.091	UJ	LAB BLANK-Spring	PCB-122	0.294	UJ
LAB BLANK-Fall	PCB-105/127	0.126	UJ	LAB BLANK-Spring	PCB-105/127	0.611	UJ
LAB BLANK-Fall	PCB-126	0.105	UJ	LAB BLANK-Spring	PCB-126	0.817	UJ
LAB BLANK-Fall	PCB-155	0.183	NJ	LAB BLANK-Spring	PCB-155	0.005	UJ
LAB BLANK-Fall	PCB-150	0.009	UJ	LAB BLANK-Spring	PCB-150	0.016	UJ
LAB BLANK-Fall	PCB-152	0.009	UJ	LAB BLANK-Spring	PCB-152	0.015	UJ
LAB BLANK-Fall	PCB-145	0.01	UJ	LAB BLANK-Spring	PCB-145	0.017	UJ
LAB BLANK-Fall	PCB-136/148	0.011	UJ	LAB BLANK-Spring	PCB-136/148	0.018	UJ
LAB BLANK-Fall	PCB-154	0.011	UJ	LAB BLANK-Spring	PCB-154	0.019	UJ
LAB BLANK-Fall	PCB-151	0.012	UJ	LAB BLANK-Spring	PCB-151	0.021	UJ
LAB BLANK-Fall	PCB-135	0.014	UJ	LAB BLANK-Spring	PCB-135	0.023	UJ
LAB BLANK-Fall	PCB-144	0.012	UJ	LAB BLANK-Spring	PCB-144	0.02	UJ
LAB BLANK-Fall	PCB-147	0.014	UJ	LAB BLANK-Spring	PCB-147	0.023	UJ
LAB BLANK-Fall	PCB-139/149	0.013	UJ	LAB BLANK-Spring	PCB-139/149	0.021	UJ
LAB BLANK-Fall	PCB-140	0.012	UJ	LAB BLANK-Spring	PCB-140	0.021	UJ
LAB BLANK-Fall	PCB-143	0.012	UJ	LAB BLANK-Spring	PCB-143	0.02	UJ
LAB BLANK-Fall	PCB-134	0.016	UJ	LAB BLANK-Spring	PCB-134	0.026	UJ
LAB BLANK-Fall	PCB-142	0.013	UJ	LAB BLANK-Spring	PCB-142	0.022	UJ
LAB BLANK-Fall	PCB-131	0.014	UJ	LAB BLANK-Spring	PCB-131	0.024	UJ
LAB BLANK-Fall	PCB-133	0.013	UJ	LAB BLANK-Spring	PCB-133	0.021	UJ
LAB BLANK-Fall	PCB-165	0.011	UJ	LAB BLANK-Spring	PCB-165	0.018	UJ
LAB BLANK-Fall	PCB-146	0.011	UJ	LAB BLANK-Spring	PCB-146	0.018	UJ
LAB BLANK-Fall	PCB-132/161	0.016	NJ	LAB BLANK-Spring	PCB-132/161	0.018	UJ
LAB BLANK-Fall	PCB-153	**0.178**	**J**	LAB BLANK-Spring	PCB-153	0.015	UJ
LAB BLANK-Fall	PCB-168	0.008	UJ	LAB BLANK-Spring	PCB-168	0.014	UJ
LAB BLANK-Fall	PCB-141	0.011	UJ	LAB BLANK-Spring	PCB-141	0.018	UJ
LAB BLANK-Fall	PCB-137	0.011	UJ	LAB BLANK-Spring	PCB-137	0.018	UJ

Sample Type	PCB Name	Result		Sample Type	PCB Name	Result	
LAB BLANK-Fall	PCB-130	0.011	UJ	LAB BLANK-Spring	PCB-130	0.019	UJ
LAB BLANK-Fall	PCB-163/164	0.008	UJ	LAB BLANK-Spring	PCB-163/164	0.017	NJ
LAB BLANK-Fall	PCB-138/160	0.009	UJ	LAB BLANK-Spring	PCB-138/160	0.015	UJ
LAB BLANK-Fall	PCB-158	0.02	NJ	LAB BLANK-Spring	PCB-158	0.012	UJ
LAB BLANK-Fall	PCB-129	0.011	UJ	LAB BLANK-Spring	PCB-129	0.018	UJ
LAB BLANK-Fall	PCB-166	0.008	UJ	LAB BLANK-Spring	PCB-166	0.013	UJ
LAB BLANK-Fall	PCB-159	0.007	UJ	LAB BLANK-Spring	PCB-159	0.011	UJ
LAB BLANK-Fall	PCB-128/162	0.008	UJ	LAB BLANK-Spring	PCB-128/162	0.014	UJ
LAB BLANK-Fall	PCB-167	**0.447**		LAB BLANK-Spring	PCB-167	0.014	UJ
LAB BLANK-Fall	PCB-156	0.372	NJ	LAB BLANK-Spring	PCB-156	0.017	UJ
LAB BLANK-Fall	PCB-157	0.322	NJ	LAB BLANK-Spring	PCB-157	0.018	UJ
LAB BLANK-Fall	PCB-169	**0.291**		LAB BLANK-Spring	PCB-169	0.016	UJ
LAB BLANK-Fall	PCB-188	0.079	NJ	LAB BLANK-Spring	PCB-188	0.019	UJ
LAB BLANK-Fall	PCB-184	0.008	UJ	LAB BLANK-Spring	PCB-184	0.022	UJ
LAB BLANK-Fall	PCB-179	0.007	UJ	LAB BLANK-Spring	PCB-179	0.021	UJ
LAB BLANK-Fall	PCB-176	0.006	UJ	LAB BLANK-Spring	PCB-176	0.018	UJ
LAB BLANK-Fall	PCB-186	0.007	UJ	LAB BLANK-Spring	PCB-186	0.021	UJ
LAB BLANK-Fall	PCB-178	0.009	UJ	LAB BLANK-Spring	PCB-178	0.025	UJ
LAB BLANK-Fall	PCB-175	0.008	UJ	LAB BLANK-Spring	PCB-175	0.023	UJ
LAB BLANK-Fall	PCB-182/187	0.008	UJ	LAB BLANK-Spring	PCB-182/187	0.024	UJ
LAB BLANK-Fall	PCB-183	0.008	UJ	LAB BLANK-Spring	PCB-183	0.022	UJ
LAB BLANK-Fall	PCB-185	0.008	UJ	LAB BLANK-Spring	PCB-185	0.024	UJ
LAB BLANK-Fall	PCB-174	0.032	UJ	LAB BLANK-Spring	PCB-174	0.023	UJ
LAB BLANK-Fall	PCB-181	0.008	UJ	LAB BLANK-Spring	PCB-181	0.023	UJ
LAB BLANK-Fall	PCB-177	0.008	UJ	LAB BLANK-Spring	PCB-177	0.022	UJ
LAB BLANK-Fall	PCB-171	0.008	UJ	LAB BLANK-Spring	PCB-171	0.021	UJ
LAB BLANK-Fall	PCB-173	0.009	UJ	LAB BLANK-Spring	PCB-173	0.026	UJ
LAB BLANK-Fall	PCB-172	0.007	UJ	LAB BLANK-Spring	PCB-172	0.036	NJ
LAB BLANK-Fall	PCB-192	0.006	UJ	LAB BLANK-Spring	PCB-192	0.018	UJ
LAB BLANK-Fall	PCB-180	0.008	UJ	LAB BLANK-Spring	PCB-180	0.082	NJ
LAB BLANK-Fall	PCB-193	0.006	UJ	LAB BLANK-Spring	PCB-193	0.017	UJ
LAB BLANK-Fall	PCB-191	0.036	NJ	LAB BLANK-Spring	PCB-191	0.016	UJ
LAB BLANK-Fall	PCB-170	0.059	NJ	LAB BLANK-Spring	PCB-170	0.018	UJ
LAB BLANK-Fall	PCB-190	0.005	UJ	LAB BLANK-Spring	PCB-190	0.013	UJ
LAB BLANK-Fall	PCB-189	**0.402**		LAB BLANK-Spring	PCB-189	0.017	UJ
LAB BLANK-Fall	PCB-202	0.238	NJ	LAB BLANK-Spring	PCB-202	0.015	UJ
LAB BLANK-Fall	PCB-201	0.005	UJ	LAB BLANK-Spring	PCB-201	0.016	UJ
LAB BLANK-Fall	PCB-204	0.005	UJ	LAB BLANK-Spring	PCB-204	0.015	UJ
LAB BLANK-Fall	PCB-197	0.005	UJ	LAB BLANK-Spring	PCB-197	0.016	UJ
LAB BLANK-Fall	PCB-200	0.005	UJ	LAB BLANK-Spring	PCB-200	0.013	UJ
LAB BLANK-Fall	PCB-198	0.007	UJ	LAB BLANK-Spring	PCB-198	0.02	UJ
LAB BLANK-Fall	PCB-199	0.007	UJ	LAB BLANK-Spring	PCB-199	0.051	NJ
LAB BLANK-Fall	PCB-196	0.028	NJ	LAB BLANK-Spring	PCB-196	0.016	UJ
LAB BLANK-Fall	PCB-203	0.006	UJ	LAB BLANK-Spring	PCB-203	0.016	UJ

Sample Type	PCB Name	Result		Sample Type	PCB Name	Result	
LAB BLANK-Fall	PCB-195	0.006	UJ	LAB BLANK-Spring	PCB-195	0.016	UJ
LAB BLANK-Fall	PCB-194	0.202	NJ	LAB BLANK-Spring	PCB-194	0.015	UJ
LAB BLANK-Fall	PCB-205	0.136	NJ	LAB BLANK-Spring	PCB-205	0.014	UJ
LAB BLANK-Fall	PCB-208	0.742	NJ	LAB BLANK-Spring	PCB-208	0.256	UJ
LAB BLANK-Fall	PCB-207	0.078	UJ	LAB BLANK-Spring	PCB-207	0.258	UJ
LAB BLANK-Fall	PCB-206	0.09	UJ	LAB BLANK-Spring	PCB-206	0.354	UJ
LAB BLANK-Fall	PCB-209	0.473	NJ	LAB BLANK-Spring	PCB-209	0.088	UJ
LAB BLANK-Fall	Mono-PCBs		UJ	LAB BLANK-Spring	Mono-PCBs		UJ
LAB BLANK-Fall	Di-PCBs	**1.17**		LAB BLANK-Spring	Di-PCBs	**3.84**	
LAB BLANK-Fall	Tri-PCBs	**0.856**		LAB BLANK-Spring	Tri-PCBs	**3.37**	
LAB BLANK-Fall	Tetra-PCBs	**0.515**		LAB BLANK-Spring	Tetra-PCBs	**0.538**	**J**
LAB BLANK-Fall	Penta-PCBs	**2.03**		LAB BLANK-Spring	Penta-PCBs		UJ
LAB BLANK-Fall	Hexa-PCBs	**0.916**		LAB BLANK-Spring	Hexa-PCBs		UJ
LAB BLANK-Fall	Hepta-PCBs	**0.402**		LAB BLANK-Spring	Hepta-PCBs		UJ
LAB BLANK-Fall	Octa-PCBs		UJ	LAB BLANK-Spring	Octa-PCBs		UJ
LAB BLANK-Fall	Nona-PCBs		UJ	LAB BLANK-Spring	Nona-PCBs		UJ
LAB BLANK-Fall	Deca-PCBs		UJ	LAB BLANK-Spring	Deca-PCBs		UJ
LAB BLANK-Fall	Total PCB	**5.89**		LAB BLANK-Spring	Total PCB	**7.75**	

Bold: Identified compound

Field Blank

Sample Type	PCB Name	Result		Sample Type	PCB Name	Result	
FIELD BLANK-Fall	PCB-001	0.036	UJ	FIELD BLANK-Fall	PCB-110	0.347	UJ
FIELD BLANK-Fall	PCB-002	0.045	UJ	FIELD BLANK-Fall	PCB-082	0.582	UJ
FIELD BLANK-Fall	PCB-003	0.069	UJ	FIELD BLANK-Fall	PCB-124	0.545	UJ
FIELD BLANK-Fall	PCB-010	0.183	UJ	FIELD BLANK-Fall	PCB-107/108	0.419	UJ
FIELD BLANK-Fall	PCB-004	**1.44**		FIELD BLANK-Fall	PCB-123	0.69	UJ
FIELD BLANK-Fall	PCB-009	0.181	UJ	FIELD BLANK-Fall	PCB-106	0.406	UJ
FIELD BLANK-Fall	PCB-007	0.184	UJ	FIELD BLANK-Fall	PCB-118	0.734	UJ
FIELD BLANK-Fall	PCB-006	0.18	UJ	FIELD BLANK-Fall	PCB-114	0.709	UJ
FIELD BLANK-Fall	PCB-005/008	4.14	UJ	FIELD BLANK-Fall	PCB-122	0.309	UJ
FIELD BLANK-Fall	PCB-014	0.181	UJ	FIELD BLANK-Fall	PCB-105/127	0.699	UJ
FIELD BLANK-Fall	PCB-011	0.877	NJ	FIELD BLANK-Fall	PCB-126	0.91	UJ
FIELD BLANK-Fall	PCB-012/013	0.205	UJ	FIELD BLANK-Fall	PCB-155	0.005	UJ
FIELD BLANK-Fall	PCB-015	0.387	UJ	FIELD BLANK-Fall	PCB-150	0.014	UJ
FIELD BLANK-Fall	PCB-019	**0.575**	**J**	FIELD BLANK-Fall	PCB-152	0.013	UJ
FIELD BLANK-Fall	PCB-030	0.035	UJ	FIELD BLANK-Fall	PCB-145	0.015	UJ
FIELD BLANK-Fall	PCB-018	3.77	UJ	FIELD BLANK-Fall	PCB-136/148	0.016	UJ
FIELD BLANK-Fall	PCB-017	1.88	UJ	FIELD BLANK-Fall	PCB-154	0.017	UJ
FIELD BLANK-Fall	PCB-024	0.04	UJ	FIELD BLANK-Fall	PCB-151	0.018	UJ
FIELD BLANK-Fall	PCB-027	0.282	NJ	FIELD BLANK-Fall	PCB-135	0.021	UJ
FIELD BLANK-Fall	PCB-032	**2.22**		FIELD BLANK-Fall	PCB-144	0.017	UJ
FIELD BLANK-Fall	PCB-016	1.06	UJ	FIELD BLANK-Fall	PCB-147	0.021	UJ
FIELD BLANK-Fall	PCB-023	0.039	UJ	FIELD BLANK-Fall	PCB-139/149	0.019	UJ

Sample Type	PCB Name	Result		Sample Type	PCB Name	Result	
FIELD BLANK-Fall	PCB-034	0.037	UJ	FIELD BLANK-Fall	PCB-140	0.019	UJ
FIELD BLANK-Fall	PCB-029	0.035	UJ	FIELD BLANK-Fall	PCB-143	0.018	UJ
FIELD BLANK-Fall	PCB-026	**0.554**	**J**	FIELD BLANK-Fall	PCB-134	0.023	UJ
FIELD BLANK-Fall	PCB-025	0.04	UJ	FIELD BLANK-Fall	PCB-142	0.02	UJ
FIELD BLANK-Fall	PCB-031	**2.15**		FIELD BLANK-Fall	PCB-131	0.022	UJ
FIELD BLANK-Fall	PCB-028	2.96	UJ	FIELD BLANK-Fall	PCB-133	0.019	UJ
FIELD BLANK-Fall	PCB-021	0.044	UJ	FIELD BLANK-Fall	PCB-165	0.016	UJ
FIELD BLANK-Fall	PCB-020/033	**1.91**		FIELD BLANK-Fall	PCB-146	0.016	UJ
FIELD BLANK-Fall	PCB-022	**1.11**		FIELD BLANK-Fall	PCB-132/161	0.016	UJ
FIELD BLANK-Fall	PCB-036	0.038	UJ	FIELD BLANK-Fall	PCB-153	0.013	UJ
FIELD BLANK-Fall	PCB-039	0.042	UJ	FIELD BLANK-Fall	PCB-168	0.013	UJ
FIELD BLANK-Fall	PCB-038	0.044	UJ	FIELD BLANK-Fall	PCB-141	0.016	UJ
FIELD BLANK-Fall	PCB-035	0.045	UJ	FIELD BLANK-Fall	PCB-137	0.016	UJ
FIELD BLANK-Fall	PCB-037	0.154	UJ	FIELD BLANK-Fall	PCB-130	0.017	UJ
FIELD BLANK-Fall	PCB-054	0.069	NJ	FIELD BLANK-Fall	PCB-163/164	0.012	UJ
FIELD BLANK-Fall	PCB-050	0.055	UJ	FIELD BLANK-Fall	PCB-138/160	0.014	UJ
FIELD BLANK-Fall	PCB-053	0.059	UJ	FIELD BLANK-Fall	PCB-158	0.011	UJ
FIELD BLANK-Fall	PCB-051	**0.805**		FIELD BLANK-Fall	PCB-129	0.016	UJ
FIELD BLANK-Fall	PCB-045	**0.354**	**J**	FIELD BLANK-Fall	PCB-166	0.011	UJ
FIELD BLANK-Fall	PCB-046	0.071	UJ	FIELD BLANK-Fall	PCB-159	0.01	UJ
FIELD BLANK-Fall	PCB-052/069	0.959	UJ	FIELD BLANK-Fall	PCB-128/162	0.012	UJ
FIELD BLANK-Fall	PCB-073	0.047	UJ	FIELD BLANK-Fall	PCB-167	0.013	UJ
FIELD BLANK-Fall	PCB-043/049	**0.731**	**J**	FIELD BLANK-Fall	PCB-156	0.015	UJ
FIELD BLANK-Fall	PCB-065/075	0.044	UJ	FIELD BLANK-Fall	PCB-157	0.015	UJ
FIELD BLANK-Fall	PCB-047/048	**2.34**		FIELD BLANK-Fall	PCB-169	0.015	UJ
FIELD BLANK-Fall	PCB-062	0.052	UJ	FIELD BLANK-Fall	PCB-188	0.016	UJ
FIELD BLANK-Fall	PCB-044	0.389	NJ	FIELD BLANK-Fall	PCB-184	0.019	UJ
FIELD BLANK-Fall	PCB-059	0.048	UJ	FIELD BLANK-Fall	PCB-179	0.017	UJ
FIELD BLANK-Fall	PCB-042	0.259	NJ	FIELD BLANK-Fall	PCB-176	0.016	UJ
FIELD BLANK-Fall	PCB-064/072	0.048	UJ	FIELD BLANK-Fall	PCB-186	0.017	UJ
FIELD BLANK-Fall	PCB-071	0.044	UJ	FIELD BLANK-Fall	PCB-178	0.021	UJ
FIELD BLANK-Fall	PCB-041	0.073	UJ	FIELD BLANK-Fall	PCB-175	0.02	UJ
FIELD BLANK-Fall	PCB-068	0.046	UJ	FIELD BLANK-Fall	PCB-182/187	0.02	UJ
FIELD BLANK-Fall	PCB-040/057	0.06	UJ	FIELD BLANK-Fall	PCB-183	0.018	UJ
FIELD BLANK-Fall	PCB-067	0.05	UJ	FIELD BLANK-Fall	PCB-185	0.02	UJ
FIELD BLANK-Fall	PCB-063	0.077	NJ	FIELD BLANK-Fall	PCB-174	0.019	UJ
FIELD BLANK-Fall	PCB-058	0.048	UJ	FIELD BLANK-Fall	PCB-181	0.02	UJ
FIELD BLANK-Fall	PCB-061	0.055	UJ	FIELD BLANK-Fall	PCB-177	0.019	UJ
FIELD BLANK-Fall	PCB-074	0.05	UJ	FIELD BLANK-Fall	PCB-171	0.018	UJ
FIELD BLANK-Fall	PCB-070	0.057	UJ	FIELD BLANK-Fall	PCB-173	0.022	UJ
FIELD BLANK-Fall	PCB-055/080	0.05	UJ	FIELD BLANK-Fall	PCB-172	0.017	UJ
FIELD BLANK-Fall	PCB-066	0.049	UJ	FIELD BLANK-Fall	PCB-192	0.016	UJ
FIELD BLANK-Fall	PCB-076	0.052	UJ	FIELD BLANK-Fall	PCB-180	0.019	UJ
FIELD BLANK-Fall	PCB-060	0.058	UJ	FIELD BLANK-Fall	PCB-193	0.014	UJ

Sample Type	PCB Name	Result		Sample Type	PCB Name	Result	
FIELD BLANK-Fall	PCB-056	0.058	UJ	FIELD BLANK-Fall	PCB-191	0.014	UJ
FIELD BLANK-Fall	PCB-079	0.053	UJ	FIELD BLANK-Fall	PCB-170	0.015	UJ
FIELD BLANK-Fall	PCB-078	0.057	UJ	FIELD BLANK-Fall	PCB-190	0.12	NJ
FIELD BLANK-Fall	PCB-081	0.167	UJ	FIELD BLANK-Fall	PCB-189	0.015	UJ
FIELD BLANK-Fall	PCB-077	0.182	UJ	FIELD BLANK-Fall	PCB-202	0.013	UJ
FIELD BLANK-Fall	PCB-104	0.127	UJ	FIELD BLANK-Fall	PCB-201	0.014	UJ
FIELD BLANK-Fall	PCB-096	0.307	UJ	FIELD BLANK-Fall	PCB-204	0.013	UJ
FIELD BLANK-Fall	PCB-103	0.373	UJ	FIELD BLANK-Fall	PCB-197	0.014	UJ
FIELD BLANK-Fall	PCB-100	0.419	UJ	FIELD BLANK-Fall	PCB-200	0.012	UJ
FIELD BLANK-Fall	PCB-094	0.489	UJ	FIELD BLANK-Fall	PCB-198	0.017	UJ
FIELD BLANK-Fall	PCB-093/098/102	0.484	UJ	FIELD BLANK-Fall	PCB-199	0.018	UJ
FIELD BLANK-Fall	PCB-095	0.406	UJ	FIELD BLANK-Fall	PCB-196	0.014	UJ
FIELD BLANK-Fall	PCB-088	0.451	UJ	FIELD BLANK-Fall	PCB-203	0.014	UJ
FIELD BLANK-Fall	PCB-091/121	0.393	UJ	FIELD BLANK-Fall	PCB-195	0.014	UJ
FIELD BLANK-Fall	PCB-084	0.46	UJ	FIELD BLANK-Fall	PCB-194	0.037	NJ
FIELD BLANK-Fall	PCB-092	0.503	UJ	FIELD BLANK-Fall	PCB-205	0.013	UJ
FIELD BLANK-Fall	PCB-089	0.461	UJ	FIELD BLANK-Fall	PCB-208	0.232	UJ
FIELD BLANK-Fall	PCB-090	0.531	UJ	FIELD BLANK-Fall	PCB-207	0.248	UJ
FIELD BLANK-Fall	PCB-101	0.427	UJ	FIELD BLANK-Fall	PCB-206	0.373	UJ
FIELD BLANK-Fall	PCB-113	0.377	UJ	FIELD BLANK-Fall	PCB-209	0.083	UJ
FIELD BLANK-Fall	PCB-099	0.437	UJ	FIELD BLANK-Fall	Mono-PCBs		UJ
FIELD BLANK-Fall	PCB-112/119	0.366	UJ	FIELD BLANK-Fall	Di-PCBs	**1.44**	**J**
FIELD BLANK-Fall	PCB-083/109	0.475	UJ	FIELD BLANK-Fall	Tri-PCBs	**8.52**	**J**
FIELD BLANK-Fall	PCB-086/117	0.468	UJ	FIELD BLANK-Fall	Tetra-PCBs	**4.23**	**J**
FIELD BLANK-Fall	PCB-097/116	0.476	UJ	FIELD BLANK-Fall	Penta-PCBs		UJ
FIELD BLANK-Fall	PCB-125	0.395	UJ	FIELD BLANK-Fall	Hexa-PCBs		UJ
FIELD BLANK-Fall	PCB-087/115	0.459	UJ	FIELD BLANK-Fall	Hepta-PCBs		UJ
FIELD BLANK-Fall	PCB-111	0.377	UJ	FIELD BLANK-Fall	Octa-PCBs		UJ
FIELD BLANK-Fall	PCB-085	0.488	UJ	FIELD BLANK-Fall	Nona-PCBs		UJ
FIELD BLANK-Fall	PCB-120	0.381	UJ	FIELD BLANK-Fall	Deca-PCBs		UJ
				FIELD BLANK-Fall	Total PCB	**14.2**	**J**

Table B-4. PCB Congener Estimated Detection Limits (EDL), Fall 2013 and Spring 2014 (pg/L).

MEL ID	Site ID	PCB-001	PCB-002	PCB-003	PCB-010	PCB-004	PCB-009	PCB-007	PCB-006	PCB-005/008	PCB-014	PCB-011	PCB-012/013
1312033 Fall													
-14	BBC-01	0.025	0.033	0.056	0.084	0.105	0.083	0.085	0.083	0.087	0.083	0.088	0.094
-12	BBC-02	0.036	0.046	0.072	0.126	0.153	0.124	0.127	0.124	0.13	0.124	0.131	0.141
-11	BBC-03	0.04	0.054	0.099	0.127	0.16	0.125	0.127	0.124	0.131	0.125	0.132	0.142
-09	BBC-04	0.017	0.021	0.033	0.061	0.071	0.06	0.061	0.06	0.063	0.06	0.063	0.068
-15	COL-01	0.021	0.028	0.049	0.085	0.104	0.084	0.085	0.083	0.088	0.084	0.088	0.095
-10	BUR-01	0.045	0.06	0.107	0.13	0.153	0.128	0.13	0.127	0.134	0.128	0.135	0.145
-08	PET-01	0.023	0.028	0.045	0.073	0.089	0.072	0.073	0.071	0.075	0.072	0.076	0.081
1404033 Spring													
-17	BBC-01	0.029	0.034	0.05	0.114	0.132	0.113	0.115	0.112	0.118	0.113	0.119	0.128
-15	BBC-02	0.023	0.027	0.038	0.086	0.111	0.085	0.086	0.084	0.089	0.085	0.089	0.096
-14	BBC-03	0.022	0.026	0.036	0.082	0.107	0.081	0.082	0.08	0.084	0.081	0.085	0.091
-12	BBC-04	0.035	0.043	0.066	0.152	0.169	0.15	0.153	0.149	0.158	0.15	0.159	0.17
-16	COL-01	0.028	0.029	0.035	0.067	0.084	0.066	0.067	0.066	0.069	0.066	0.07	0.075
-13	BUR-01	0.016	0.018	0.025	0.052	0.069	0.051	0.052	0.051	0.054	0.051	0.054	0.058
-11	PET-01	0.021	0.025	0.037	0.089	0.108	0.088	0.09	0.088	0.092	0.088	0.093	0.1

Table B-4 con't. PCB Congener Estimated Detection Limits (EDL), Fall 2013 and Spring 2014 (pg/L).

Site ID	PCB-015	PCB-019	PCB-030	PCB-018	PCB-017	PCB-024	PCB-027	PCB-032	PCB-016	PCB-023	PCB-034	PCB-029	PCB-026	PCB-025	PCB-031
1312033 Fall															
BBC-01	0.13	0.036	0.031	0.04	0.045	0.036	0.026	0.036	0.033	0.03	0.033	0.027	0.026	0.031	0.026
BBC-02	0.201	0.055	0.049	0.06	0.072	0.056	0.039	0.057	0.053	0.046	0.052	0.042	0.04	0.048	0.04
BBC-03	0.193	0.048	0.043	0.055	0.063	0.049	0.035	0.05	0.046	0.042	0.046	0.038	0.036	0.043	0.036
BBC-04	0.102	0.024	0.022	0.027	0.032	0.025	0.017	0.025	0.023	0.021	0.023	0.019	0.018	0.021	0.018
COL-01	0.134	0.028	0.025	0.032	0.036	0.028	0.021	0.029	0.027	0.024	0.026	0.022	0.021	0.025	0.021
BUR-01	0.214	0.047	0.043	0.057	0.063	0.049	0.037	0.049	0.046	0.043	0.046	0.039	0.037	0.045	0.037
PET-01	0.115	0.03	0.027	0.033	0.04	0.031	0.022	0.031	0.029	0.026	0.029	0.023	0.022	0.027	0.022
1404033 Spring															
BBC-01	0.0196	0.028	0.027	0.039	0.039	0.03	0.025	0.031	0.029	0.03	0.028	0.027	0.026	0.031	0.026
BBC-02	0.127	0.026	0.023	0.033	0.034	0.027	0.021	0.027	0.025	0.025	0.025	0.023	0.022	0.026	0.022
BBC-03	0.119	0.023	0.021	0.03	0.031	0.024	0.02	0.024	0.023	0.023	0.022	0.021	0.02	0.024	0.02
BBC-04	0.277	0.035	0.034	0.05	0.05	0.039	0.032	0.039	0.036	0.038	0.036	0.035	0.033	0.04	0.033
COL-01	0.104	0.066	0.041	0.051	0.059	0.046	0.033	0.047	0.044	0.039	0.043	0.035	0.034	0.041	0.034
BUR-01	0.074	0.019	0.017	0.024	0.024	0.019	0.016	0.019	0.018	0.019	0.018	0.017	0.016	0.019	0.016
PET-01	0.144	0.022	0.021	0.029	0.03	0.024	0.019	0.024	0.022	0.023	0.022	0.02	0.019	0.023	0.019

Table B-4 con't. PCB Congener Estimated Detection Limits (EDL), Fall 2013 and Spring 2014 (pg/L).

Site ID	PCB-028	PCB-021	PCB-020/033	PCB-022	PCB-036	PCB-039	PCB-038	PCB-035	PCB-037	PCB-054	PCB-050	PCB-053	PCB-051	PCB-045	PCB-046
1312033 Fall															
BBC-01	0.033	0.039	0.035	0.039	0.034	0.038	0.039	0.04	0.075	0.019	0.034	0.037	0.036	0.038	0.044
BBC-02	0.052	0.062	0.055	0.062	0.053	0.059	0.062	0.063	0.129	0.03	0.052	0.057	0.055	0.059	0.068
BBC-03	0.046	0.055	0.048	0.055	0.047	0.052	0.054	0.055	0.116	0.03	0.059	0.065	0.063	0.067	0.077
BBC-04	0.023	0.028	0.024	0.028	0.024	0.027	0.028	0.028	0.061	0.012	0.024	0.026	0.025	0.027	0.031
COL-01	0.026	0.031	0.028	0.031	0.027	0.03	0.031	0.032	0.064	0.021	0.04	0.043	0.042	0.045	0.051
BUR-01	0.045	0.054	0.048	0.054	0.046	0.052	0.054	0.055	0.119	0.024	0.046	0.051	0.049	0.052	0.06
PET-01	0.029	0.034	0.03	0.034	0.029	0.033	0.034	0.035	0.074	0.02	0.037	0.04	0.039	0.042	0.048
1404033 Spring															
BBC-01	0.028	0.034	0.03	0.034	0.029	0.032	0.034	0.034	0.082	0.027	0.055	0.06	0.058	0.062	0.071
BBC-02	0.025	0.03	0.026	0.03	0.025	0.028	0.029	0.03	0.063	0.023	0.045	0.049	0.048	0.051	0.058
BBC-03	0.022	0.027	0.023	0.027	0.023	0.026	0.027	0.027	0.06	0.019	0.038	0.041	0.04	0.043	0.049
BBC-04	0.036	0.043	0.038	0.043	0.037	0.041	0.043	0.044	0.111	0.03	0.061	0.066	0.064	0.068	0.078
COL-01	0.043	0.051	0.045	0.051	0.044	0.049	0.051	0.052	0.064	0.078	0.131	0.142	0.138	0.147	0.169
BUR-01	0.018	0.021	0.019	0.021	0.018	0.02	0.021	0.021	0.044	0.016	0.03	0.033	0.032	0.034	0.039
PET-01	0.022	0.026	0.023	0.026	0.022	0.025	0.026	0.026	0.062	0.021	0.043	0.047	0.045	0.048	0.055

Table B-4 con't. PCB Congener Estimated Detection Limits (EDL), Fall 2013 and Spring 2014 (pg/L).

Site ID	PCB-052/069	PCB-073	PCB-043/049	PCB-065/075	PCB-047/048	PCB-062	PCB-044	PCB-059	PCB-042	PCB-064/072	PCB-071	PCB-041	PCB-068	PCB-040/057	PCB-067
1312033 Fall															
BBC-01	0.033	0.029	0.038	0.027	0.037	0.032	0.047	0.03	0.044	0.029	0.027	0.045	0.028	0.037	0.031
BBC-02	0.052	0.045	0.059	0.042	0.058	0.05	0.074	0.046	0.068	0.046	0.042	0.071	0.044	0.057	0.048
BBC-03	0.058	0.051	0.067	0.048	0.066	0.056	0.083	0.052	0.077	0.052	0.048	0.08	0.05	0.065	0.055
BBC-04	0.024	0.021	0.027	0.019	0.027	0.023	0.034	0.021	0.031	0.021	0.019	0.032	0.02	0.026	0.022
COL-01	0.039	0.034	0.045	0.032	0.044	0.038	0.056	0.035	0.051	0.035	0.032	0.053	0.033	0.043	0.037
BUR-01	0.046	0.04	0.053	0.037	0.052	0.044	0.065	0.041	0.06	0.041	0.037	0.062	0.039	0.051	0.043
PET-01	0.036	0.032	0.042	0.03	0.041	0.035	0.052	0.033	0.048	0.032	0.029	0.049	0.031	0.04	0.034
1404033 Spring															
BBC-01	0.054	0.047	0.062	0.044	0.061	0.052	0.077	0.048	0.071	0.048	0.044	0.074	0.046	0.06	0.051
BBC-02	0.044	0.039	0.051	0.036	0.05	0.043	0.063	0.04	0.059	0.039	0.036	0.061	0.038	0.049	0.042
BBC-03	0.037	0.032	0.043	0.03	0.042	0.036	0.053	0.033	0.049	0.033	0.03	0.051	0.032	0.041	0.035
BBC-04	0.06	0.052	0.069	0.049	0.067	0.058	0.085	0.054	0.078	0.053	0.049	0.082	0.051	0.066	0.056
COL-01	0.128	0.112	0.148	0.105	0.145	0.124	0.183	0.115	0.169	0.114	0.105	0.176	0.11	0.143	0.12
BUR-01	0.03	0.026	0.034	0.024	0.034	0.029	0.043	0.027	0.039	0.026	0.024	0.041	0.025	0.033	0.028
PET-01	0.042	0.037	0.048	0.034	0.047	0.041	0.06	0.038	0.055	0.037	0.034	0.058	0.036	0.047	0.039

Table B-4 con't. PCB Congener Estimated Detection Limits (EDL), Fall 2013 and Spring 2014 (pg/L).

Site ID	PCB-063	PCB-058	PCB-061	PCB-074	PCB-070	PCB-055/080	PCB-066	PCB-076	PCB-060	PCB-056	PCB-079	PCB-078	PCB-081	PCB-077	PCB-104
1312033 Fall															
BBC-01	0.03	0.03	0.034	0.031	0.035	0.031	0.03	0.032	0.036	0.036	0.033	0.035	0.049	0.058	0.07
BBC-02	0.047	0.046	0.053	0.049	0.055	0.048	0.047	0.05	0.056	0.056	0.051	0.055	0.076	0.086	0.104
BBC-03	0.053	0.052	0.06	0.055	0.062	0.054	0.053	0.057	0.063	0.063	0.058	0.062	0.103	0.124	0.1
BBC-04	0.021	0.021	0.024	0.022	0.025	0.022	0.021	0.023	0.026	0.025	0.023	0.025	0.041	0.05	0.045
COL-01	0.036	0.035	0.04	0.037	0.041	0.036	0.035	0.038	0.042	0.042	0.039	0.042	0.065	0.079	0.061
BUR-01	0.042	0.041	0.047	0.043	0.049	0.042	0.041	0.045	0.049	0.049	0.045	0.049	0.075	0.095	0.105
PET-01	0.033	0.032	0.037	0.034	0.038	0.033	0.033	0.035	0.039	0.039	0.036	0.039	0.06	0.071	0.06
1404033 Spring															
BBC-01	0.049	0.048	0.055	0.051	0.057	0.05	0.049	0.053	0.058	0.058	0.053	0.057	0.102	0.118	0.073
BBC-02	0.04	0.04	0.046	0.042	0.047	0.041	0.04	0.043	0.048	0.048	0.044	0.047	0.079	0.088	0.051
BBC-03	0.034	0.033	0.038	0.035	0.04	0.034	0.034	0.036	0.04	0.04	0.037	0.04	0.069	0.077	0.057
BBC-04	0.054	0.053	0.061	0.056	0.063	0.055	0.054	0.058	0.065	0.064	0.059	0.063	0.113	0.136	0.099
COL-01	0.117	0.114	0.131	0.121	0.136	0.119	0.116	0.126	0.139	0.139	0.127	0.137	0.208	0.179	0.126
BUR-01	0.027	0.027	0.031	0.028	0.032	0.028	0.027	0.029	0.032	0.032	0.029	0.032	0.05	0.058	0.036
PET-01	0.038	0.038	0.043	0.04	0.045	0.039	0.038	0.041	0.046	0.045	0.042	0.045	0.077	0.097	0.066

Table B-4 con't. PCB Congener Estimated Detection Limits (EDL), Fall 2013 and Spring 2014 (pg/L).

Site ID	PCB-096	PCB-103	PCB-100	PCB-094	PCB-093/098/102	PCB-095	PCB-088	PCB-091/121	PCB-084	PCB-092	PCB-089	PCB-090	PCB-101	PCB-113	PCB-099
1312033 Fall															
BBC-01	0.097	0.118	0.132	0.154	0.153	0.128	0.142	0.124	0.145	0.158	0.145	0.167	0.135	0.119	0.138
BBC-02	0.147	0.179	0.201	0.235	0.232	0.195	0.217	0.189	0.221	0.241	0.221	0.255	0.205	0.181	0.21
BBC-03	0.151	0.184	0.206	0.241	0.239	0.2	0.222	0.194	0.227	0.248	0.227	0.262	0.211	0.186	0.215
BBC-04	0.071	0.086	0.096	0.113	0.111	0.093	0.104	0.091	0.106	0.116	0.106	0.122	0.098	0.087	0.101
COL-01	0.09	0.109	0.123	0.143	0.142	0.119	0.132	0.115	0.135	0.147	0.135	0.156	0.125	0.111	0.128
BUR-01	0.159	0.193	0.217	0.253	0.25	0.21	0.234	0.204	0.238	0.26	0.239	0.275	0.221	0.195	0.226
PET-01	0.09	0.11	0.123	0.144	0.143	0.12	0.133	0.116	0.136	0.148	0.136	0.156	0.126	0.111	0.129
1404033 Spring															
BBC-01	0.134	0.162	0.182	0.213	0.211	0.177	0.197	0.171	0.2	0.219	0.201	0.231	0.186	0.164	0.19
BBC-02	0.09	0.11	0.123	0.144	0.143	0.12	0.133	0.116	0.136	0.148	0.136	0.156	0.126	0.111	0.129
BBC-03	0.103	0.125	0.14	0.164	0.162	0.136	0.151	0.131	0.154	0.168	0.154	0.177	0.143	0.126	0.146
BBC-04	0.182	0.222	0.249	0.291	0.287	0.241	0.268	0.234	0.273	0.299	0.274	0.315	0.254	0.224	0.26
COL-01	0.13	0.158	0.177	0.207	0.204	0.171	0.191	0.166	0.194	0.212	0.195	0.224	0.181	0.159	0.185
BUR-01	0.064	0.077	0.087	0.101	0.1	0.084	0.094	0.082	0.095	0.104	0.096	0.11	0.089	0.078	0.091
PET-01	0.119	0.144	0.162	0.189	0.187	0.157	0.175	0.152	0.178	0.195	0.178	0.205	0.165	0.146	0.169

Table B-4 con't. PCB Congener Estimated Detection Limits (EDL), Fall 2013 and Spring 2014 (pg/L).

Site ID	PCB-112/119	PCB-083/109	PCB-086/117	PCB-097/116	PCB-125	PCB-087/115	PCB-111	PCB-085	PCB-120	PCB-110	PCB-082	PCB-124	PCB-107/108	PCB-123	PCB-106
1312033 Fall															
BBC-01	0.115	0.15	0.148	0.15	0.125	0.145	0.119	0.154	0.12	0.109	0.183	0.12	0.132	0.146	0.128
BBC-02	0.176	0.228	0.225	0.228	0.19	0.22	0.181	0.234	0.183	0.166	0.279	0.186	0.201	0.224	0.195
BBC-03	0.181	0.234	0.231	0.234	0.195	0.226	0.186	0.241	0.188	0.171	0.287	0.212	0.207	0.247	0.2
BBC-04	0.084	0.109	0.108	0.11	0.091	0.106	0.087	0.112	0.088	0.08	0.134	0.094	0.096	0.114	0.093
COL-01	0.107	0.139	0.137	0.139	0.116	0.135	0.11	0.143	0.112	0.102	0.17	0.129	0.123	0.145	0.119
BUR-01	0.19	0.246	0.242	0.246	0.205	0.238	0.195	0.253	0.197	0.18	0.301	0.203	0.217	0.239	0.21
PET-01	0.108	0.14	0.138	0.14	0.116	0.135	0.111	0.144	0.112	0.102	0.171	0.124	0.123	0.146	0.12
1404033 Spring															
BBC-01	0.159	0.207	0.204	0.207	0.172	0.2	0.164	0.212	0.166	0.151	0.253	0.183	0.182	0.24	0.177
BBC-02	0.108	0.14	0.138	0.14	0.117	0.135	0.111	0.144	0.112	0.102	0.171	0.128	0.123	0.162	0.12
BBC-03	0.122	0.159	0.156	0.159	0.132	0.154	0.126	0.163	0.127	0.116	0.194	0.135	0.14	0.186	0.136
BBC-04	0.218	0.282	0.278	0.283	0.235	0.273	0.224	0.29	0.226	0.206	0.346	0.239	0.249	0.321	0.241
COL-01	0.155	0.201	0.198	0.201	0.167	0.194	0.159	0.206	0.161	0.147	0.246	0.205	0.177	0.164	0.171
BUR-01	0.076	0.099	0.097	0.099	0.082	0.095	0.078	0.101	0.079	0.072	0.121	0.089	0.087	0.111	0.084
PET-01	0.142	0.184	0.181	0.184	0.153	0.178	0.146	0.189	0.147	0.134	0.225	0.172	0.162	0.212	0.157

Table B-4 con't. PCB Congener Estimated Detection Limits (EDL), Fall 2013 and Spring 2014 (pg/L).

Site ID	PCB-118	PCB-114	PCB-122	PCB-105/127	PCB-126	PCB-155	PCB-150	PCB-152	PCB-145	PCB-136/148	PCB-154	PCB-151	PCB-135	PCB-144	PCB-147
1312033 Fall															
BBC-01	0.154	0.143	0.097	0.121	0.11	0.018	0.025	0.023	0.026	0.028	0.03	0.033	0.036	0.031	0.037
BBC-02	0.235	0.224	0.148	0.186	0.189	0.021	0.029	0.028	0.031	0.034	0.036	0.039	0.044	0.037	0.044
BBC-03	0.248	0.239	0.152	0.196	0.201	0.021	0.034	0.032	0.036	0.039	0.041	0.045	0.05	0.042	0.051
BBC-04	0.125	0.119	0.071	0.09	0.094	0.009	0.014	0.013	0.015	0.016	0.017	0.019	0.021	0.018	0.021
COL-01	0.153	0.143	0.091	0.108	0.123	0.013	0.021	0.02	0.023	0.024	0.026	0.028	0.031	0.027	0.032
BUR-01	0.265	0.262	0.16	0.21	0.196	0.019	0.028	0.026	0.03	0.032	0.034	0.037	0.041	0.035	0.042
PET-01	0.153	0.143	0.091	0.114	0.117	0.018	0.026	0.025	0.028	0.03	0.032	0.035	0.039	0.033	0.039
1404033 Spring															
BBC-01	0.24	0.249	0.135	0.202	0.22	0.016	0.032	0.03	0.034	0.036	0.038	0.042	0.047	0.04	0.048
BBC-02	0.156	0.157	0.091	0.139	0.136	0.012	0.021	0.02	0.023	0.024	0.026	0.028	0.031	0.027	0.032
BBC-03	0.187	0.18	0.103	0.151	0.158	0.011	0.02	0.019	0.021	0.023	0.024	0.027	0.03	0.025	0.03
BBC-04	0.336	0.342	0.184	0.273	0.307	0.014	0.026	0.025	0.028	0.03	0.032	0.035	0.039	0.033	0.04
COL-01	0.174	0.169	0.131	0.162	0.125	0.085	0.082	0.077	0.087	0.094	0.099	0.108	0.121	0.103	0.123
BUR-01	0.114	0.115	0.064	0.092	0.087	0.008	0.014	0.014	0.015	0.017	0.017	0.019	0.021	0.018	0.022
PET-01	0.222	0.205	0.12	0.177	0.184	0.01	0.019	0.018	0.02	0.022	0.023	0.025	0.028	0.024	0.028

Table B-4 con't. PCB Congener Estimated Detection Limits (EDL), Fall 2013 and Spring 2014 (pg/L).

Site ID	PCB-139/149	PCB-140	PCB-143	PCB-134	PCB-142	PCB-131	PCB-133	PCB-165	PCB-146	PCB-132/161	PCB-153	PCB-168	PCB-141	PCB-137	PCB-130
1312033 Fall															
BBC-01	0.033	0.033	0.032	0.042	0.035	0.038	0.033	0.028	0.029	0.028	0.024	0.022	0.028	0.029	0.03
BBC-02	0.04	0.04	0.039	0.05	0.042	0.046	0.04	0.034	0.035	0.034	0.029	0.027	0.034	0.035	0.036
BBC-03	0.046	0.045	0.044	0.057	0.048	0.053	0.046	0.039	0.039	0.039	0.033	0.031	0.039	0.04	0.041
BBC-04	0.019	0.019	0.018	0.024	0.02	0.022	0.019	0.016	0.016	0.016	0.014	0.013	0.016	0.017	0.017
COL-01	0.029	0.028	0.028	0.036	0.03	0.033	0.029	0.024	0.025	0.024	0.021	0.019	0.024	0.025	0.026
BUR-01	0.038	0.037	0.036	0.047	0.04	0.043	0.038	0.032	0.033	0.032	0.027	0.025	0.032	0.033	0.033
PET-01	0.036	0.035	0.034	0.044	0.038	0.041	0.036	0.03	0.031	0.03	0.026	0.024	0.03	0.031	0.032
1404033 Spring															
BBC-01	0.043	0.043	0.041	0.054	0.046	0.05	0.043	0.036	0.037	0.036	0.031	0.029	0.037	0.038	0.038
BBC-02	0.029	0.028	0.028	0.036	0.03	0.033	0.029	0.024	0.025	0.024	0.021	0.019	0.024	0.025	0.026
BBC-03	0.027	0.027	0.026	0.034	0.029	0.032	0.027	0.023	0.024	0.023	0.02	0.018	0.023	0.024	0.024
BBC-04	0.036	0.035	0.035	0.045	0.038	0.041	0.036	0.03	0.031	0.03	0.026	0.024	0.031	0.031	0.032
COL-01	0.111	0.11	0.107	0.138	0.118	0.128	0.112	0.094	0.096	0.094	0.08	0.075	0.095	0.097	0.099
BUR-01	0.02	0.019	0.019	0.024	0.021	0.022	0.02	0.016	0.017	0.016	0.014	0.013	0.017	0.017	0.017
PET-01	0.026	0.026	0.025	0.032	0.027	0.03	0.026	0.022	0.022	0.022	0.018	0.017	0.022	0.022	0.023

Table B-4 con't. PCB Congener Estimated Detection Limits (EDL), Fall 2013 and Spring 2014 (pg/L).

Site ID	PCB-163/164	PCB-138/160	PCB-158	PCB-129	PCB-166	PCB-159	PCB-128/162	PCB-167	PCB-156	PCB-157	PCB-169	PCB-188	PCB-184	PCB-179	PCB-176
1312033 Fall															
BBC-01	0.021	0.024	0.019	0.028	0.02	0.017	0.022	0.018	0.02	0.019	0.014	0.024	0.015	0.014	0.012
BBC-02	0.026	0.029	0.023	0.034	0.024	0.021	0.026	0.022	0.024	0.023	0.018	0.034	0.021	0.02	0.017
BBC-03	0.029	0.033	0.026	0.039	0.028	0.024	0.03	0.026	0.027	0.028	0.021	0.033	0.024	0.022	0.019
BBC-04	0.012	0.014	0.011	0.016	0.012	0.01	0.012	0.011	0.012	0.012	0.008	0.016	0.01	0.009	0.008
COL-01	0.018	0.021	0.016	0.024	0.017	0.015	0.019	0.016	0.018	0.018	0.013	0.016	0.011	0.01	0.009
BUR-01	0.024	0.027	0.022	0.032	0.023	0.02	0.024	0.021	0.022	0.022	0.017	0.031	0.019	0.018	0.016
PET-01	0.023	0.026	0.02	0.03	0.021	0.019	0.023	0.021	0.021	0.021	0.015	0.025	0.016	0.015	0.013
1404033 Spring															
BBC-01	0.028	0.031	0.025	0.036	0.026	0.022	0.028	0.025	0.028	0.027	0.022	0.024	0.019	0.017	0.015
BBC-02	0.018	0.021	0.017	0.024	0.017	0.015	0.019	0.017	0.018	0.018	0.014	0.018	0.013	0.012	0.011
BBC-03	0.017	0.02	0.016	0.023	0.016	0.014	0.018	0.016	0.017	0.017	0.013	0.022	0.016	0.014	0.013
BBC-04	0.023	0.026	0.021	0.03	0.022	0.019	0.023	0.02	0.023	0.023	0.018	0.026	0.021	0.02	0.017
COL-01	0.071	0.081	0.064	0.094	0.067	0.058	0.072	0.058	0.062	0.059	0.044	0.068	0.037	0.034	0.03
BUR-01	0.012	0.014	0.011	0.016	0.012	0.01	0.013	0.012	0.012	0.012	0.009	0.016	0.011	0.01	0.009
PET-01	0.016	0.019	0.015	0.022	0.016	0.013	0.017	0.015	0.016	0.015	0.014	0.018	0.015	0.013	0.012

Table B-4 con't. PCB Congener Estimated Detection Limits (EDL), Fall 2013 and Spring 2014 (pg/L).

Site ID	PCB-186	PCB-178	PCB-175	PCB-182/187	PCB-183	PCB-185	PCB-174	PCB-181	PCB-177	PCB-171	PCB-173	PCB-172	PCB-192	PCB-180	PCB-193
1312033 Fall															
BBC-01	0.014	0.017	0.016	0.016	0.015	0.016	0.015	0.016	0.015	0.015	0.018	0.014	0.012	0.016	0.011
BBC-02	0.02	0.024	0.022	0.023	0.021	0.022	0.022	0.022	0.021	0.02	0.025	0.019	0.017	0.022	0.016
BBC-03	0.022	0.026	0.025	0.025	0.023	0.025	0.024	0.025	0.023	0.023	0.027	0.021	0.019	0.024	0.017
BBC-04	0.009	0.011	0.01	0.011	0.01	0.011	0.01	0.01	0.01	0.01	0.011	0.009	0.008	0.01	0.007
COL-01	0.01	0.012	0.012	0.012	0.011	0.012	0.011	0.012	0.011	0.011	0.013	0.01	0.009	0.011	0.008
BUR-01	0.018	0.022	0.02	0.021	0.019	0.021	0.02	0.02	0.019	0.019	0.022	0.018	0.016	0.02	0.014
PET-01	0.015	0.018	0.017	0.017	0.016	0.017	0.016	0.017	0.016	0.015	0.018	0.015	0.013	0.016	0.012
1404033 Spring															
BBC-01	0.017	0.021	0.02	0.02	0.018	0.02	0.019	0.019	0.018	0.018	0.021	0.017	0.015	0.019	0.014
BBC-02	0.012	0.015	0.014	0.014	0.013	0.014	0.014	0.014	0.013	0.013	0.015	0.012	0.011	0.014	0.01
BBC-03	0.014	0.017	0.016	0.016	0.015	0.016	0.016	0.016	0.015	0.015	0.018	0.014	0.013	0.016	0.012
BBC-04	0.02	0.024	0.022	0.022	0.021	0.022	0.022	0.022	0.021	0.02	0.024	0.019	0.017	0.022	0.016
COL-01	0.034	0.041	0.038	0.038	0.035	0.038	0.037	0.038	0.036	0.035	0.042	0.033	0.03	0.037	0.027
BUR-01	0.01	0.013	0.012	0.012	0.011	0.012	0.011	0.012	0.011	0.011	0.013	0.01	0.009	0.012	0.008
PET-01	0.014	0.016	0.015	0.015	0.014	0.015	0.015	0.015	0.015	0.014	0.017	0.013	0.012	0.015	0.011

Table B-4 con't. PCB Congener Estimated Detection Limits (EDL), Fall 2013 and Spring 2014 (pg/L).

Site ID	PCB-191	PCB-170	PCB-190	PCB-189	PCB-202	PCB-201	PCB-204	PCB-197	PCB-200	PCB-198	PCB-199	PCB-196	PCB-203	PCB-195	PCB-194
1312033 Fall															
BBC-01	0.011	0.012	0.009	0.008	0.01	0.006	0.006	0.006	0.005	0.008	0.008	0.007	0.006	0.006	0.006
BBC-02	0.016	0.017	0.012	0.012	0.017	0.01	0.01	0.011	0.009	0.013	0.014	0.011	0.011	0.011	0.01
BBC-03	0.017	0.019	0.014	0.014	0.013	0.009	0.009	0.009	0.008	0.012	0.012	0.01	0.01	0.01	0.009
BBC-04	0.007	0.008	0.006	0.005	0.008	0.005	0.005	0.005	0.004	0.007	0.007	0.005	0.005	0.005	0.005
COL-01	0.008	0.009	0.006	0.006	0.008	0.005	0.005	0.005	0.004	0.006	0.006	0.005	0.005	0.005	0.005
BUR-01	0.014	0.016	0.011	0.011	0.023	0.015	0.014	0.015	0.013	0.019	0.019	0.016	0.015	0.015	0.014
PET-01	0.012	0.013	0.009	0.009	0.011	0.007	0.007	0.007	0.006	0.009	0.01	0.008	0.008	0.008	0.007
1404033 Spring															
BBC-01	0.014	0.015	0.011	0.011	0.014	0.01	0.01	0.01	0.009	0.013	0.013	0.011	0.011	0.011	0.01
BBC-02	0.01	0.011	0.008	0.008	0.013	0.01	0.009	0.01	0.008	0.012	0.013	0.01	0.01	0.01	0.009
BBC-03	0.011	0.013	0.009	0.009	0.017	0.012	0.012	0.012	0.011	0.016	0.016	0.013	0.013	0.013	0.012
BBC-04	0.016	0.017	0.012	0.013	0.016	0.013	0.012	0.013	0.011	0.016	0.017	0.014	0.013	0.013	0.012
COL-01	0.027	0.03	0.021	0.019	0.025	0.014	0.013	0.014	0.012	0.017	0.018	0.014	0.014	0.014	0.013
BUR-01	0.008	0.009	0.007	0.007	0.006	0.005	0.005	0.005	0.004	0.006	0.006	0.005	0.005	0.005	0.004
PET-01	0.011	0.012	0.008	0.009	0.011	0.009	0.009	0.009	0.008	0.011	0.012	0.009	0.009	0.009	0.008

Table B-4 con't. PCB Congener Estimated Detection Limits (EDL), Fall 2013 and Spring 2014 (pg/L).

Site ID	PCB-205	PCB-208	PCB-207	PCB-206	PCB-209
1312033	**Fall**				
BBC-01	0.004	0.079	0.073	0.089	0.02
BBC-02	0.007	0.124	0.107	0.123	0.034
BBC-03	0.007	0.137	0.118	0.135	0.03
BBC-04	0.003	0.065	0.058	0.068	0.017
COL-01	0.003	0.071	0.066	0.082	0.018
BUR-01	0.01	0.131	0.119	0.144	0.036
PET-01	0.005	0.08	0.073	0.087	0.024
1404033	**Spring**				
BBC-01	0.007	0.101	0.092	0.111	0.039
BBC-02	0.007	0.078	0.071	0.086	0.027
BBC-03	0.009	0.088	0.081	0.099	0.031
BBC-04	0.01	0.125	0.118	0.149	0.042
COL-01	0.009	0.136	0.115	0.128	0.025
BUR-01	0.003	0.053	0.049	0.06	0.014
PET-01	0.007	0.097	0.092	0.116	0.024

Table B-5. Quality Control Surrogate and Matrix Spike Compound Results for PCB Aroclors.

Site/Lab Sample ID	Lab ID	Surrogate or Matrix Spike Compound	Spike Amount	Spike Result	Percent Recovery	% Rec. Limit
Surrogates (ug/Kg)						
WET-02	1409081-02	Decachlorobiphenyl	13.0	9.61	74	50-150
WET-03	1409081-03	Decachlorobiphenyl	30.6	19.5	64	50-150
WET-04	1409081-04	Decachlorobiphenyl	28.0	18.3	65	50-150
WET-04REP	1409081-05	Decachlorobiphenyl	30.4	21.2	70	50-150
Method Blank	B14J111-BLK1	Decachlorobiphenyl	5.00	4.63	93	50-150
Lab Duplicate	B14J111-DUP1	Decachlorobiphenyl	30.6	20.8	68	50-150
LCS[1]	B14J111-BS1	Decachlorobiphenyl	5.00	4.87	97	50-150
LCS Dup[2]	B14J111-BSD1	Decachlorobiphenyl	5.00	4.43	89	50-150
MS[3]	B14J111-MS1	Decachlorobiphenyl	30.9	16.2	52	50-150
MSD[4]	B14J111-MSD1	Decachlorobiphenyl	31.1	19.0	61	50-150
BBC-11	1407083-04	Decachlorobiphenyl	7.63	6.07	80	50-150
BBC-11	1407083-04	Dibutylchlorendate	7.63	5.46	72	50-150
BBC-11	1407083-04	Tetrachloro-m-xylene	7.63	6.53	86	50-150
BBC-02	1407083-05	Decachlorobiphenyl	8.97	5.52	62	50-150
BBC-02	1407083-05	Dibutylchlorendate	8.97	6.21	69	50-150
BBC-02	1407083-05	Tetrachloro-m-xylene	8.97	6.84	76	50-150
BBC-03	1407083-06	Decachlorobiphenyl	24.8	15.7	63	50-150
BBC-03	1407083-06	Dibutylchlorendate	24.8	16.0	64	50-150
BBC-03	1407083-06	Tetrachloro-m-xylene	24.8	19.6	79	50-150
BBC-04	1407083-07	Decachlorobiphenyl	32.7	22.0	67	50-150
BBC-04	1407083-07	Dibutylchlorendate	32.7	22.8	70	50-150
BBC-04	1407083-07	Tetrachloro-m-xylene	32.7	26.1	80	50-150
BBC-05	1407083-08	Decachlorobiphenyl	38.6	27.2	71	50-150
BBC-05	1407083-08	Dibutylchlorendate	38.6	23.0	60	50-150
BBC-05	1407083-08	Tetrachloro-m-xylene	38.6	33.0	86	50-150
BBC-05REP	1407083-16	Decachlorobiphenyl	38.7	27.4	71	50-150
BBC-05REP	1407083-16	Dibutylchlorendate	38.7	26.2	68	50-150
BBC-05REP	1407083-16	Tetrachloro-m-xylene	38.7	31.1	80	50-150
BBC-06	1407083-09	Decachlorobiphenyl	42.3	33.8	80	50-150
BBC-06	1407083-09	Dibutylchlorendate	42.3	34.5	82	50-150
BBC-06	1407083-09	Tetrachloro-m-xylene	42.3	32.9	78	50-150
COL-02	1407083-17	Decachlorobiphenyl	8.04	4.92	61	50-150
COL-02	1407083-17	Tetrachloro-m-xylene	8.04	5.21	65	50-150
COL-03	1407083-02	Decachlorobiphenyl	6.72	4.92	73	50-150
COL-03	1407083-02	Tetrachloro-m-xylene	6.72	5.92	88	50-150
COL-04	1407083-03	Decachlorobiphenyl	15.2	10.7	70	50-150
COL-04	1407083-03	Tetrachloro-m-xylene	15.2	11.2	74	50-150
BUR-01	1407083-13	Decachlorobiphenyl	23.1	15.1	66	50-150
BUR-01	1407083-13	Dibutylchlorendate	23.1	16.4	71	50-150
BUR-01	1407083-13	Tetrachloro-m-xylene	23.1	18.0	78	50-150
BUR-02	1407083-14	Decachlorobiphenyl	14.3	7.64	54	50-150
BUR-02	1407083-14	Dibutylchlorendate	14.3	9.18	64	50-150
BUR-02	1407083-14	Tetrachloro-m-xylene	14.3	10.8	76	50-150
PET-01	1407083-10	Decachlorobiphenyl	17.4	11.3	65	50-150
PET-01	1407083-10	Tetrachloro-m-xylene	17.4	15.1	87	50-150

Site/Lab Sample ID	Lab ID	Surrogate or Matrix Spike Compound	Spike Amount	Spike Result	Percent Recovery	% Rec. Limit
PET-02	1407083-11	Decachlorobiphenyl	34.1	18.0	53	50-150
PET-02	1407083-11	Tetrachloro-m-xylene	34.1	25.6	75	50-150
PET-02REP	1407083-15	Decachlorobiphenyl	34.2	20.0	59	50-150
PET-02REP	1407083-15	Dibutylchlorendate	34.2	22.4	66	50-150
PET-02REP	1407083-15	Tetrachloro-m-xylene	34.2	25.9	76	50-150
Lab Duplicate	B14G181-DUP1	Decachlorobiphenyl	34.0	20.4	60	50-150
Lab Duplicate	B14G181-DUP1	Dibutylchlorendate	34.0	24.1	71	50-150
Lab Duplicate	B14G181-DUP1	Tetrachloro-m-xylene	34.0	26.7	79	50-150
PET-03	1407083-12	Decachlorobiphenyl	30.2	15.5	51	50-150
PET-03	1407083-12	Tetrachloro-m-xylene	30.2	24.2	80	50-150
Method Blank	B14G183-BLK1	Decachlorobiphenyl	5.00	5.07	101	50-150
Method Blank	B14G183-BLK1	Tetrachloro-m-xylene	5.00	4.12	82	50-150
LCS	B14G183-BS1	Decachlorobiphenyl	5.00	4.98	100	50-150
LCS	B14G183-BS1	Tetrachloro-m-xylene	5.00	4.1	82	50-150
LCS Dup	B14G183-BSD1	Decachlorobiphenyl	5.00	4.92	98	50-150
LCS Dup	B14G183-BSD1	Tetrachloro-m-xylene	5.00	3.97	79	50-150
Method Blank	B14G181-BLK1	Decachlorobiphenyl	5.00	5.07	101	50-150
Method Blank	B14G181-BLK1	Dibutylchlorendate	5.00	4.75	95	50-150
Method Blank	B14G181-BLK1	Tetrachloro-m-xylene	5.00	4.12	82	50-150
LCS	B14G181-BS1	Decachlorobiphenyl	5.00	4.98	100	50-150
LCS	B14G181-BS1	Dibutylchlorendate	5.00	6.96	139	50-150
LCS	B14G181-BS1	Tetrachloro-m-xylene	5.00	4.10	82	50-150
LCS Dup	B14G181-BSD1	Decachlorobiphenyl	5.00	4.92	98	50-150
LCS Dup	B14G181-BSD1	Dibutylchlorendate	5.00	6.95	139	50-150
LCS Dup	B14G181-BSD1	Tetrachloro-m-xylene	5.00	3.97	79	50-150
MS	B14G181-MS1	Decachlorobiphenyl	14.1	8.34	59	50-150
MS	B14G181-MS1	Dibutylchlorendate	14.1	20.8	147	50-150
MS	B14G181-MS1	Tetrachloro-m-xylene	14.1	11.6	82	50-150
MSD	B14G181-MSD1	Decachlorobiphenyl	14.1	8.02	57	50-150
MSD	B14G181-MSD1	Dibutylchlorendate	14.1	17.8	126	50-150
MSD	B14G181-MSD1	Tetrachloro-m-xylene	14.1	11.3	80	50-150
WET-04	1409081-04	Decachlorobiphenyl	28.6	7.35	**26**	50-150
WET-04	1409081-04	Dibutylchlorendate	28.6	17.3	61	50-150
WET-04	1409081-04	Tetrachloro-m-xylene	28.6	18.1	63	50-150
Method Blank	B14K021-BLK1	Decachlorobiphenyl	5.00	5.28	106	50-150
Method Blank	B14K021-BLK1	Dibutylchlorendate	5.00	6.01	120	50-150
Method Blank	B14K021-BLK1	Tetrachloro-m-xylene	5.00	3.91	78	50-150
LCS	B14K021-BS1	Decachlorobiphenyl	5.00	4.63	93	50-150
LCS	B14K021-BS1	Dibutylchlorendate	5.00	5.49	110	50-150
LCS	B14K021-BS1	Tetrachloro-m-xylene	5.00	3.54	71	50-150
LCS Dup	B14K021-BSD1	Decachlorobiphenyl	5.00	4.96	99	50-150
LCS Dup	B14K021-BSD1	Dibutylchlorendate	5.00	5.97	119	50-150
LCS Dup	B14K021-BSD1	Tetrachloro-m-xylene	5.00	3.64	73	50-150
LCS Dup	1409081-04	Decachlorobiphenyl	28.7	8.54	**30**	50-150
LCS Dup	1409081-04	Dibutylchlorendate	28.7	20.0	70	50-150
LCS Dup	1409081-04	Tetrachloro-m-xylene	28.7	16.4	57	50-150
MS	B14K021-MS1	Decachlorobiphenyl	83.8	25.4	**30**	50-150
MS	B14K021-MS1	Dibutylchlorendate	83.8	57.2	68	50-150

Site/Lab Sample ID	Lab ID	Surrogate or Matrix Spike Compound	Spike Amount	Spike Result	Percent Recovery	% Rec. Limit
Matrix Spikes						
MS	B14G181-MS1	Aroclor 1016	70.6	54.6	77	50-150
MS	B14G181-MS1	Aroclor 1260	70.6	34.4	**49**	50-150
MS	B14G181-MS1	Dieldrin	14.1	11.1	72	50-150
MSD	B14G181-MSD1	Aroclor 1016	70.7	53.8	76	50-150
MSD	B14G181-MSD1	Aroclor 1260	70.7	34.0	**48**	50-150
MSD	B14G181-MSD1	Dieldrin	14.1	9.84	63	50-150
LCS	B14G181-BS1	Aroclor 1016	25.0	22.2	89	50-150
LCS	B14G181-BS1	Aroclor 1260	25.0	23.4	94	50-150
LCS	B14G181-BS1	Dieldrin	5.00	4.42	88	50-150
LCS Dup	B14G181-BSD1	Aroclor 1016	25.0	21.3	85	50-150
LCS Dup	B14G181-BSD1	Aroclor 1260	25.0	23.5	94	50-150
LCS Dup	B14G181-BSD1	Dieldrin	5.00	4.50	90	50-150
LCS	B14G183-BS1	Aroclor 1016	25.0	22.2	89	50-150
LCS	B14G183-BS1	Aroclor 1260	25.0	23.4	94	50-150
LCS Dup	B14G183-BSD1	Aroclor 1016	25.0	21.3	85	50-150
LCS Dup	B14G183-BSD1	Aroclor 1260	25.0	23.5	94	50-150
LCS	B14K021-BS1	Dieldrin	5.00	3.97	79	50-150
LCS	B14K021-BSD1	Dieldrin	5.00	4.09	82	50-150
MS	B14K021-MS1	Dieldrin	83.8	60.3	71	50-150

1: Laboratory control sample.
2: Laboratory control sample duplicate.
3: Matrix spike.
4: Matrix spike duplicate.
Bold: Result outside criteria limits.

Table B-6. Field Replicates PCB Congener Results and Relative Percent Differences, Spring 2014.

Lab ID (1404033-) Field ID	12 BBC-04		18 Rep BBC-04		RPD[1]
PCB-001	0.192	J	0.202	J	5.1
PCB-002	0.043	UJ	0.0721	NJ	
PCB-003	0.066	UJ	0.444	NJ	
PCB-010	0.152	UJ	0.088	UJ	
PCB-004	0.169	UJ	0.11	UJ	
PCB-009	0.15	UJ	0.087	UJ	
PCB-007	4.77	UJ	1.66	UJ	
PCB-006	0.149	UJ	0.086	UJ	
PCB-005/008	2.12	UJ	0.8734	U	
PCB-014	0.15	UJ	0.087	UJ	
PCB-011	7.47		8.08		7.8
PCB-012/013	0.17	UJ	0.099	UJ	
PCB-015	0.277	UJ	0.136	UJ	
PCB-019	0.374	NJ	0.272	NJ	
PCB-030	0.034	UJ	0.019	UJ	
PCB-018	2.79	UJ	2.31	UJ	
PCB-017	1.11	UJ	0.8734	U	
PCB-024	0.039	UJ	0.022	UJ	
PCB-027	0.16	NJ	0.018	UJ	
PCB-032	1.29		0.713	J	57.6
PCB-016	0.8529	U	0.8734	U	
PCB-023	0.038	UJ	0.0696	NJ	
PCB-034	0.036	UJ	0.021	UJ	
PCB-029	0.035	UJ	0.02	UJ	
PCB-026	0.033	UJ	0.292	J	
PCB-025	0.04	UJ	0.023	UJ	
PCB-031	2.54		2.36		7.3
PCB-028	2.93	UJ	2.61	UJ	
PCB-021	0.043	UJ	0.025	UJ	
PCB-020/033	1.65		1.18		33.2
PCB-022	1.14		1.15		0.9
PCB-036	0.037	UJ	0.021	UJ	
PCB-039	0.041	UJ	0.023	UJ	
PCB-038	0.043	UJ	0.024	UJ	
PCB-035	0.044	UJ	0.025	UJ	
PCB-037	0.424	NJ	1.49		
PCB-054	0.03	UJ	0.0562	NJ	
PCB-050	0.061	UJ	0.043	UJ	
PCB-053	0.44	J	0.416	NJ	

Lab ID (1404033-) Field ID	12 BBC-04		18 Rep BBC-04		RPD[1]
PCB-051	1.22		0.542	NJ	
PCB-045	1.02		0.565	J	57.4
PCB-046	0.078	UJ	0.056	UJ	
PCB-052/069	6.03		7.4		20.4
PCB-073	0.052	UJ	0.037	UJ	
PCB-043/049	3.1		3.49		11.8
PCB-065/075	0.049	UJ	0.035	UJ	
PCB-047/048	5.59		3.45		47.3
PCB-062	0.058	UJ	0.041	UJ	
PCB-044	4.55		5.37		16.5
PCB-059	0.054	UJ	0.038	UJ	
PCB-042	0.809	J	1.36		50.8
PCB-064/072	2.21		1.96		12.0
PCB-071	0.822	J	0.934		12.8
PCB-041	0.47	J	0.058	UJ	
PCB-068	1.43	NJ	0.037	UJ	
PCB-040/057	0.066	UJ	0.048	UJ	
PCB-067	0.056	UJ	0.04	UJ	
PCB-063	0.0967	NJ	0.039	UJ	
PCB-058	0.053	UJ	0.038	UJ	
PCB-061	0.061	UJ	0.044	UJ	
PCB-074	2		2.15		7.2
PCB-070	5.83		6.17		5.7
PCB-055/080	0.055	UJ	0.039	UJ	
PCB-066	3.81		3.42		10.8
PCB-076	0.058	UJ	0.204	NJ	
PCB-060	0.946	NJ	0.183	NJ	
PCB-056	2.11		2.35		10.8
PCB-079	0.059	UJ	0.042	UJ	
PCB-078	0.063	UJ	0.046	UJ	
PCB-081	0.113	UJ	0.075	UJ	
PCB-077	0.251	NJ	0.091	UJ	
PCB-104	0.099	UJ	0.051	UJ	
PCB-096	0.182	UJ	0.09	UJ	
PCB-103	0.222	UJ	0.109	UJ	
PCB-100	0.249	UJ	0.123	UJ	
PCB-094	0.291	UJ	0.143	UJ	
PCB-093/098/102	0.287	UJ	0.142	UJ	
PCB-095	7.46		9.22		21.1
PCB-088	0.268	UJ	0.132	UJ	
PCB-091/121	0.234	UJ	1.66		

Lab ID (1404033-) Field ID	12 BBC-04		18 Rep BBC-04		RPD[1]
PCB-084	2.14		3.63		51.6
PCB-092	4.04		3.75		7.4
PCB-089	0.274	UJ	0.135	UJ	
PCB-090	0.315	UJ	0.156	UJ	
PCB-101	9.52		12.6		27.8
PCB-113	0.224	UJ	0.111	UJ	
PCB-099	3.12		5.2		50.0
PCB-112/119	1.05	NJ	0.107	UJ	
PCB-083/109	0.282	UJ	0.139	UJ	
PCB-086/117	0.278	UJ	0.137	UJ	
PCB-097/116	0.283	UJ	4.09		
PCB-125	0.235	UJ	0.116	UJ	
PCB-087/115	1.72	NJ	6.05		
PCB-111	0.224	UJ	0.11	UJ	
PCB-085	0.29	UJ	2.62	NJ	
PCB-120	0.226	UJ	0.112	UJ	
PCB-110	10.2		13.2		25.6
PCB-082	0.346	UJ	0.171	UJ	
PCB-124	0.239	UJ	0.126	UJ	
PCB-107/108	0.249	UJ	0.123	UJ	
PCB-123	0.321	UJ	0.157	UJ	
PCB-106	0.241	UJ	0.119	UJ	
PCB-118	6.87		7.98		14.9
PCB-114	0.342	UJ	0.156	UJ	
PCB-122	0.184	UJ	0.091	UJ	
PCB-105/127	1.91		3.86		67.6
PCB-126	0.307	UJ	0.133	UJ	
PCB-155	0.014	UJ	0.013	UJ	
PCB-150	0.026	UJ	0.022	UJ	
PCB-152	0.025	UJ	0.0304	NJ	
PCB-145	0.028	UJ	0.024	UJ	
PCB-136/148	1.66		2.72		48.4
PCB-154	0.032	UJ	0.147	NJ	
PCB-151	1.08	NJ	2.56		
PCB-135	0.039	UJ	0.033	UJ	
PCB-144	0.033	UJ	0.028	UJ	
PCB-147	0.04	UJ	0.033	UJ	
PCB-139/149	9.08		11.8		26.1
PCB-140	0.035	UJ	0.03	UJ	
PCB-143	0.035	UJ	0.029	UJ	
PCB-134	0.045	UJ	1.1		

Lab ID (1404033-) Field ID	12 BBC-04		18 Rep BBC-04		RPD[1]
PCB-142	0.038	UJ	0.032	UJ	
PCB-131	0.0776	NJ	0.221	NJ	
PCB-133	0.131	NJ	0.194	NJ	
PCB-165	0.03	UJ	0.026	UJ	
PCB-146	1.06		1.33		22.6
PCB-132/161	3.69		4.45		18.7
PCB-153	7.87		8.42		6.8
PCB-168	0.024	UJ	0.02	UJ	
PCB-141	2.02		2.01		0.5
PCB-137	0.862		0.871	J	
PCB-130	0.802	NJ	1.05		
PCB-163/164	2.79		3.46		21.4
PCB-138/160	8.02		8.55		6.4
PCB-158	0.955		1.09		13.2
PCB-129	0.03	UJ	0.026	UJ	
PCB-166	0.022	UJ	0.0203	NJ	
PCB-159	0.019	UJ	0.016	UJ	
PCB-128/162	1.64		2.19		28.7
PCB-167	0.235	NJ	0.589	J	
PCB-156	1.06		1.16		9.0
PCB-157	0.023	UJ	0.236	J	
PCB-169	0.018	UJ	0.014	UJ	
PCB-188	0.026	UJ	0.019	UJ	
PCB-184	0.021	UJ	0.013	UJ	
PCB-179	0.657	J	0.937		35.1
PCB-176	0.0939	NJ	0.281	NJ	
PCB-186	0.02	UJ	0.012	UJ	
PCB-178	0.13	NJ	0.312	NJ	
PCB-175	0.022	UJ	0.014	UJ	
PCB-182/187	2.33		2.34		0.4
PCB-183	1.05		0.963		8.6
PCB-185	0.022	UJ	0.014	UJ	
PCB-174	2.18		1.8		19.1
PCB-181	0.022	UJ	0.014	UJ	
PCB-177	0.935		1.02		8.7
PCB-171	0.371	NJ	0.214	NJ	
PCB-173	0.0926	NJ	0.0952	NJ	
PCB-172	0.12	NJ	0.118	NJ	
PCB-192	0.017	UJ	0.011	UJ	
PCB-180	3.81		4.16		8.8
PCB-193	0.016	UJ	0.01	UJ	

Lab ID (1404033-) Field ID	12 BBC-04		18 Rep BBC-04		RPD[1]
PCB-191	0.016	UJ	0.01	UJ	
PCB-170	1.33		1.4		5.1
PCB-190	0.391	J	0.365	NJ	
PCB-189	0.013	UJ	0.218	NJ	
PCB-202	0.261	NJ	0.0889	NJ	
PCB-201	0.013	UJ	0.0854	NJ	
PCB-204	0.012	UJ	0.0696	NJ	
PCB-197	0.131	NJ	0.0692	NJ	
PCB-200	0.011	UJ	0.008	UJ	
PCB-198	0.016	UJ	0.011	UJ	
PCB-199	1.21		2.28		61.3
PCB-196	0.553	NJ	0.009	UJ	
PCB-203	0.955		1.3		30.6
PCB-195	0.013	UJ	0.495	J	
PCB-194	0.866		0.977	NJ	
PCB-205	0.01	UJ	0.292	NJ	
PCB-208	0.236	NJ	0.075	UJ	
PCB-207	0.118	UJ	0.068	UJ	
PCB-206	0.149	UJ	0.082	UJ	
PCB-209	0.729	NJ	0.671	NJ	
Total PCBs	156	J	196	J	RPD 22

1: Relative percent difference.

Appendix C. Study Results

Table C-1. PCB Congeners Measured by CLAM^{TM} Samplers, Fall 2013 (pg/L).

Lab ID (1312033-) Site ID	14 BBC-01		12 BBC-02		11 BBC-03		09 BBC-04		15 COL-01		10 BUR-01		08 PET-01	
PCB-001	**0.239**		0.456	NJ	0.759	NJ	0.073	NJ	**0.21**		0.364	NJ	**1.1**	
PCB-002	**0.122**	**J**	**0.162**	**J**	0.054	UJ	0.051	NJ	**0.111**	**J**	**0.223**	**J**	**0.392**	
PCB-003	0.056	UJ	**0.431**	**J**	0.099	UJ	0.033	UJ	0.389	NJ	0.107	UJ	0.561	J
PCB-010	0.084	UJ	0.126	UJ	0.127	UJ	0.061	UJ	0.085	UJ	0.13	UJ	0.073	UJ
PCB-004	**1.15**		**1.37**		**2.52**		**0.737**		**2.63**		**1.1**		**1.86**	
PCB-009	0.083	UJ	0.124	UJ	0.125	UJ	0.06	UJ	0.084	UJ	0.128	UJ	0.072	UJ
PCB-007	**3.42**		**5.01**		**33.3**		**1.86**		**1.98**		**11.6**		**35.8**	
PCB-006	**0.418**		0.124	UJ	**0.916**		**0.322**		**0.698**		0.127	UJ	0.071	UJ
PCB-005/008	**3.21**		**4.05**		**6.89**		**2.12**		**5.79**		**3.38**		**3.76**	
PCB-014	0.083	UJ	0.124	UJ	0.125	UJ	0.06	UJ	0.084	UJ	0.128	UJ	0.072	UJ
PCB-011	2.48	U	3.62	U	3.97	U	2.02	U	3.24	U	3.08	U	**7.67**	
PCB-012/013	0.094	UJ	0.141	UJ	0.142	UJ	0.068	UJ	0.095	UJ	0.145	UJ	0.081	UJ
PCB-015	**1.13**		**2.2**		**4.56**		**0.772**		**3.71**		**1.36**		**2.1**	
PCB-019	**0.43**		0.333	NJ	**1.64**		**0.358**		**1.66**		0.314	NJ	**0.537**	
PCB-030	0.031	UJ	0.049	UJ	0.043	UJ	0.022	UJ	0.025	UJ	0.043	UJ	0.027	UJ
PCB-018	**2.91**		**3.55**		**9.63**		**1.98**		**6.51**		**3.58**		**3.39**	
PCB-017	**1.23**		**1.35**		**4.33**		**0.894**		**2.69**		**1.52**		**1.57**	
PCB-024	0.036	UJ	0.056	UJ	0.204	NJ	0.055	NJ	0.05	NJ	0.049	UJ	0.031	UJ
PCB-027	**0.204**	**J**	0.039	UJ	0.503	NJ	0.08	NJ	**0.466**		0.146	NJ	0.157	NJ
PCB-032	**1.19**		**1.55**		**3.41**		**0.691**		**3.27**		**1.02**		1.02	NJ
PCB-016	**0.683**		**1.15**		**2.83**		**0.539**		**1.83**		**1.29**		**0.878**	
PCB-023	0.03	UJ	0.046	UJ	0.042	UJ	0.021	UJ	0.024	UJ	0.043	UJ	0.026	UJ
PCB-034	0.033	UJ	0.052	UJ	0.046	UJ	0.023	UJ	0.026	UJ	0.046	UJ	0.029	UJ
PCB-029	0.027	UJ	0.042	UJ	0.038	UJ	0.019	UJ	0.022	UJ	0.039	UJ	0.023	UJ
PCB-026	**0.402**		0.04	UJ	0.889	NJ	0.064	NJ	**0.727**		**0.336**		0.364	NJ
PCB-025	0.031	UJ	0.048	UJ	0.675	NJ	0.103	NJ	**0.571**		0.392	NJ	**0.444**	
PCB-031	**1.87**		**3.19**		**5.95**		**1.27**		**3.97**		**2.4**		**2.61**	
PCB-028	**3.38**		**4.07**		**8.1**		**2**		**7.58**		**3.65**		**3.09**	
PCB-021	0.039	UJ	0.062	UJ	0.055	UJ	0.028	UJ	0.031	UJ	0.054	UJ	0.034	UJ
PCB-020/033	**1.66**		**2.54**		**4.77**		**1.16**		**3.5**		**2.35**		**1.71**	
PCB-022	**1.11**		**2**		**3.54**		**0.881**		**2.57**		**1.4**		**1.17**	
PCB-036	0.034	UJ	0.053	UJ	0.047	UJ	0.024	UJ	0.027	UJ	0.046	UJ	0.029	UJ
PCB-039	0.038	UJ	0.07	NJ	0.052	UJ	0.027	UJ	0.03	UJ	0.096	NJ	0.033	UJ
PCB-038	0.039	UJ	0.062	UJ	0.054	UJ	0.028	UJ	0.031	UJ	0.054	UJ	0.034	UJ
PCB-035	0.04	UJ	0.063	UJ	0.055	UJ	0.028	UJ	0.032	UJ	0.055	UJ	0.035	UJ
PCB-037	**0.828**		**1.04**		**1.72**		**0.457**		**1.86**		**0.565**		**1.36**	
PCB-054	0.019	UJ	0.03	UJ	0.192	NJ	0.024	NJ	0.021	UJ	**0.147**	**J**	0.02	UJ
PCB-050	0.034	UJ	0.052	UJ	0.059	UJ	0.024	UJ	0.04	UJ	0.046	UJ	0.037	UJ
PCB-053	0.191	NJ	0.293	NJ	**0.723**		**0.171**		**0.599**		0.051	UJ	**0.471**	
PCB-051	0.653	NJ	0.773	NJ	**1.89**		**0.414**		**0.613**		**2**		**3.34**	

Lab ID (1312033-)	14		12		11		09		15		10		08	
Site ID	BBC-01		BBC-02		BBC-03		BBC-04		COL-01		BUR-01		PET-01	
PCB-045	0.367	NJ	0.182	NJ	**0.904**		0.139	NJ	0.592	NJ	0.171	NJ	0.262	NJ
PCB-046	0.044	UJ	0.068	UJ	0.251	NJ	0.059	NJ	**0.466**		0.06	UJ	0.048	UJ
PCB-052/069	**1.42**		**1.88**		**2.14**		**1.05**		**3.15**		**1.31**		**2.29**	
PCB-073	0.029	UJ	0.045	UJ	0.051	UJ	0.021	UJ	0.034	UJ	0.04	UJ	0.032	UJ
PCB-043/049	**1.09**		**1.53**		**2.36**		**0.496**		**2.05**		**0.988**		**1.72**	
PCB-065/075	0.027	UJ	0.042	UJ	0.048	UJ	0.029	NJ	0.032	UJ	0.037	UJ	0.03	UJ
PCB-047/048	**2.88**		**4.21**		**7.14**		**1.06**		**2.1**		**6.03**		**10.5**	
PCB-062	0.032	UJ	0.05	UJ	0.056	UJ	0.038	NJ	0.038	UJ	0.044	UJ	0.035	UJ
PCB-044	1.34	U	**1.89**		**1.96**		0.869	U	**2.92**		0.674	UJ	**2.32**	
PCB-059	0.123	NJ	0.046	UJ	0.279	NJ	0.07	NJ	**0.387**		0.074	NJ	0.123	NJ
PCB-042	0.175	NJ	0.619	NJ	0.475	NJ	0.192	NJ	**0.96**		**0.533**		**0.719**	
PCB-064/072	**0.544**		0.561	NJ	**1.19**		**0.406**		**1.45**		**0.537**		0.73	NJ
PCB-071	**0.145**	**J**	0.372	NJ	0.441	NJ	**0.209**		**0.725**		0.037	UJ	**0.533**	
PCB-041	0.26	NJ	0.205	NJ	**0.551**		0.095	NJ	**0.368**		0.062	UJ	0.049	UJ
PCB-068	**1.17**		**1.72**		**4.06**		0.02	UJ	0.527	NJ	**3.1**		**5.77**	
PCB-040/057	1.28	NJ	1.12	NJ	1.42	NJ	1.03	NJ	0.916	NJ	1.55	NJ	1.34	NJ
PCB-067	0.031	UJ	0.048	UJ	0.055	UJ	0.022	UJ	0.037	UJ	0.043	UJ	0.034	UJ
PCB-063	0.03	UJ	0.047	UJ	0.053	UJ	0.021	UJ	0.095	NJ	0.042	UJ	0.105	NJ
PCB-058	0.03	UJ	0.046	UJ	0.052	UJ	0.021	UJ	0.035	UJ	0.041	UJ	0.032	UJ
PCB-061	0.034	UJ	0.053	UJ	0.06	UJ	0.024	UJ	0.04	UJ	0.047	UJ	0.037	UJ
PCB-074	**0.849**		**0.832**		**1.12**		**0.346**		1.03	NJ	0.245	NJ	**0.779**	
PCB-070	**1.69**		**2.37**		**1.98**		**0.857**		**2.63**		**1.11**		**2.45**	
PCB-055/080	0.031	UJ	0.048	UJ	0.054	UJ	0.022	UJ	0.036	UJ	0.042	UJ	0.033	UJ
PCB-066	**1.27**		**1.45**		**1.33**		**0.724**		**2.56**		**0.722**		**1.51**	
PCB-076	0.051	NJ	0.05	UJ	0.057	UJ	0.023	UJ	0.038	UJ	0.045	UJ	**0.139**	**J**
PCB-060	0.234	NJ	**0.47**		0.479	NJ	0.115	NJ	0.408	NJ	0.049	UJ	**0.465**	
PCB-056	**0.716**		**0.778**		0.773	NJ	**0.328**		**1.5**		0.222	NJ	0.774	NJ
PCB-079	0.033	UJ	0.051	UJ	0.058	UJ	0.023	UJ	0.039	UJ	0.045	UJ	0.036	UJ
PCB-078	0.035	UJ	0.055	UJ	0.062	UJ	0.041	NJ	0.042	UJ	0.049	UJ	0.039	UJ
PCB-081	0.049	UJ	0.099	NJ	0.111	NJ	0.041	UJ	0.158	NJ	0.265	NJ	0.06	UJ
PCB-077	**0.304**		**0.366**		0.124	UJ	**0.232**		0.273	NJ	0.095	UJ	**0.42**	
PCB-104	0.07	UJ	0.104	UJ	0.192	NJ	0.045	UJ	0.061	UJ	0.105	UJ	0.06	UJ
PCB-096	0.097	UJ	0.147	UJ	0.151	UJ	0.071	UJ	0.09	UJ	0.159	UJ	0.09	UJ
PCB-103	0.118	UJ	0.179	UJ	0.184	UJ	0.086	UJ	0.109	UJ	0.193	UJ	0.11	UJ
PCB-100	0.132	UJ	0.201	UJ	0.206	UJ	0.096	UJ	0.123	UJ	0.217	UJ	0.123	UJ
PCB-094	0.154	UJ	0.235	UJ	0.241	UJ	0.113	UJ	0.143	UJ	0.253	UJ	0.144	UJ
PCB-093/098/102	0.153	UJ	0.232	UJ	0.239	UJ	0.111	UJ	0.142	UJ	0.25	UJ	0.674	NJ
PCB-095	**2.15**		**2.21**		**1.87**		**1.29**		**2.92**		**1.11**		**2.39**	
PCB-088	0.142	UJ	0.217	UJ	0.222	UJ	0.104	UJ	0.132	UJ	0.234	UJ	0.133	UJ
PCB-091/121	0.343	NJ	**0.746**		0.312	NJ	0.16	NJ	**0.752**		0.204	UJ	**0.506**	
PCB-084	**0.544**		0.944	NJ	0.227	UJ	0.106	UJ	**0.861**		0.238	UJ	**0.795**	

Lab ID (1312033-) Site ID	14 BBC-01		12 BBC-02		11 BBC-03		09 BBC-04		15 COL-01		10 BUR-01		08 PET-01	
PCB-092	0.344	NJ	0.241	UJ	0.248	UJ	0.299	NJ	**1.26**		0.26	UJ	0.664	NJ
PCB-089	0.145	UJ	0.221	UJ	0.227	UJ	0.106	UJ	0.135	UJ	0.239	UJ	0.136	UJ
PCB-090	0.167	UJ	0.255	UJ	0.262	UJ	0.122	UJ	0.156	UJ	0.275	UJ	0.156	UJ
PCB-101	**3.45**		**3.32**		**2.75**		**0.843**		**3.39**		0.548	NJ	**3.18**	
PCB-113	0.119	UJ	0.181	UJ	0.186	UJ	0.087	UJ	0.111	UJ	0.195	UJ	0.111	UJ
PCB-099	**1.39**		**1.88**		0.756	NJ	**0.711**		**1.68**		**0.668**		1.47	NJ
PCB-112/119	0.115	UJ	**0.486**		0.181	UJ	0.084	UJ	0.145	NJ	0.19	UJ	0.108	UJ
PCB-083/109	0.15	UJ	0.291	NJ	0.234	UJ	0.109	UJ	0.139	UJ	0.246	UJ	0.14	UJ
PCB-086/117	0.148	UJ	0.225	UJ	0.231	UJ	0.108	UJ	0.137	UJ	0.242	UJ	0.138	UJ
PCB-097/116	0.15	UJ	0.228	UJ	0.509	NJ	0.409	NJ	**1.2**		0.246	UJ	0.14	UJ
PCB-125	0.125	UJ	0.19	UJ	0.195	UJ	0.091	UJ	0.116	UJ	0.205	UJ	0.116	UJ
PCB-087/115	**1.29**		0.22	UJ	**1.49**		0.106	UJ	**1.61**		0.238	UJ	**2**	
PCB-111	0.119	UJ	0.181	UJ	0.186	UJ	0.087	UJ	0.11	UJ	0.195	UJ	0.111	UJ
PCB-085	0.154	UJ	0.234	UJ	0.241	UJ	0.112	UJ	0.143	UJ	0.253	UJ	0.144	UJ
PCB-120	0.12	UJ	0.183	UJ	0.188	UJ	0.088	UJ	0.112	UJ	0.197	UJ	0.112	UJ
PCB-110	**4.13**		**4.13**		**3.05**		**1.34**		**4.46**		2.3	NJ	**4.31**	
PCB-082	0.183	UJ	0.279	UJ	0.287	UJ	0.134	UJ	0.218	NJ	0.301	UJ	0.171	UJ
PCB-124	0.12	UJ	0.186	UJ	0.212	UJ	0.094	UJ	0.129	UJ	0.203	UJ	0.124	UJ
PCB-107/108	0.132	UJ	0.201	UJ	0.207	UJ	0.158	NJ	0.123	UJ	0.217	UJ	0.365	NJ
PCB-123	0.146	UJ	0.224	UJ	0.247	UJ	0.114	UJ	0.145	UJ	0.239	UJ	0.146	UJ
PCB-106	0.128	UJ	0.195	UJ	0.2	UJ	0.093	UJ	0.119	UJ	0.21	UJ	0.12	UJ
PCB-118	2.96	U	3.18	U	2.43	U	1.25	U	3.83	U	1.39	U	3.16	U
PCB-114	0.143	UJ	0.224	UJ	0.239	UJ	0.296	U	0.143	UJ	0.262	UJ	0.173	UJ
PCB-122	0.097	UJ	0.148	UJ	0.152	UJ	0.071	UJ	0.091	UJ	0.16	UJ	0.091	UJ
PCB-105/127	**1.78**		1.03	NJ	**1.23**		**0.808**		**1.67**		0.21	UJ	1.16	NJ
PCB-126	0.11	UJ	0.189	UJ	0.478	NJ	0.094	UJ	0.34	NJ	0.196	UJ	**0.468**	
PCB-155	0.123	NJ	0.124	NJ	0.274	NJ	0.052	NJ	0.074	NJ	0.25	NJ	0.093	NJ
PCB-150	0.025	UJ	0.029	UJ	0.034	UJ	0.014	UJ	0.021	UJ	0.028	UJ	0.026	UJ
PCB-152	0.023	UJ	0.028	UJ	0.032	UJ	0.013	UJ	0.02	UJ	0.026	UJ	0.025	UJ
PCB-145	0.026	UJ	0.031	UJ	0.036	UJ	0.015	UJ	0.023	UJ	0.03	UJ	0.028	UJ
PCB-136/148	0.501	NJ	**0.663**		0.039	UJ	0.103	NJ	**0.792**		0.032	UJ	0.349	NJ
PCB-154	0.03	UJ	0.036	UJ	0.041	UJ	0.017	UJ	0.026	UJ	0.034	UJ	0.032	UJ
PCB-151	**1.08**		0.899	NJ	0.115	J	0.178	NJ	0.5	NJ	0.248	NJ	0.352	NJ
PCB-135	**0.395**		0.083	NJ	0.05	UJ	0.021	UJ	0.031	UJ	0.041	UJ	0.039	UJ
PCB-144	0.157	NJ	0.037	UJ	0.085	NJ	0.018	UJ	0.027	UJ	0.035	UJ	0.033	UJ
PCB-147	0.037	UJ	0.044	UJ	0.271	UJ	0.021	UJ	0.249	NJ	0.042	UJ	0.039	UJ
PCB-139/149	**4.47**		**3.54**		**4.07**		1.22	NJ	**4.8**		**1.97**		**3.86**	
PCB-140	0.033	UJ	0.04	UJ	0.045	UJ	0.019	UJ	0.028	UJ	0.037	UJ	0.035	UJ
PCB-143	0.032	UJ	0.039	UJ	0.044	UJ	0.018	UJ	0.028	UJ	0.036	UJ	0.034	UJ
PCB-134	0.096	NJ	0.05	UJ	0.057	UJ	0.024	UJ	0.036	UJ	0.047	UJ	0.044	UJ
PCB-142	0.035	UJ	0.042	UJ	0.048	UJ	0.02	UJ	0.03	UJ	0.04	UJ	0.038	UJ

Lab ID (1312033-) Site ID	14 BBC-01		12 BBC-02		11 BBC-03		09 BBC-04		15 COL-01		10 BUR-01		08 PET-01	
PCB-131	0.038	UJ	0.046	UJ	0.085	NJ	0.022	UJ	0.033	UJ	0.043	UJ	0.041	UJ
PCB-133	0.033	UJ	0.04	UJ	0.046	UJ	0.019	UJ	0.029	UJ	0.038	UJ	0.036	UJ
PCB-165	0.028	UJ	0.034	UJ	0.084	NJ	0.016	UJ	0.024	UJ	0.032	UJ	0.03	UJ
PCB-146	0.284	NJ	**0.592**		0.459	NJ	0.202	NJ	**0.858**		0.081	NJ	0.145	NJ
PCB-132/161	**1.36**		**1.25**		1.21	NJ	0.164	NJ	**1.59**		**0.352**		**1.13**	
PCB-153	**4.89**		**4.34**		**3.76**		**1.45**		**4.7**		**2.34**		**3.83**	
PCB-168	0.022	UJ	0.027	UJ	0.118	NJ	0.013	UJ	0.019	UJ	0.025	UJ	0.024	UJ
PCB-141	**1.2**		**0.948**		**0.98**		**0.416**		0.638	NJ	**0.374**		**0.891**	
PCB-137	0.282	NJ	0.053	NJ	0.082	NJ	0.017	UJ	**0.502**		0.033	UJ	0.159	NJ
PCB-130	**0.274**		0.036	UJ	0.041	UJ	0.017	UJ	**0.472**		0.205	NJ	**0.203**	
PCB-163/164	**1.81**		**1.07**		1.33	NJ	0.272	NJ	**1.77**		0.277	NJ	**1.32**	
PCB-138/160	**3.83**		**3.59**		**3.45**		**1.46**		**4.68**		**1.81**		**2.84**	
PCB-158	**0.513**		0.271	NJ	0.165	NJ	0.151	NJ	0.18	NJ	0.022	UJ	0.31	NJ
PCB-129	0.028	UJ	0.034	UJ	0.039	UJ	0.016	UJ	0.228	NJ	0.127	NJ	0.03	UJ
PCB-166	0.02	UJ	0.024	UJ	0.028	UJ	0.012	UJ	0.017	UJ	0.023	UJ	0.021	UJ
PCB-159	0.017	UJ	0.021	UJ	0.043	NJ	0.01	UJ	0.015	UJ	0.02	UJ	0.019	UJ
PCB-128/162	**1.09**		**0.615**		**0.608**		0.203	NJ	**1.19**		0.245	NJ	**0.597**	
PCB-167	0.23	UJ	1	U	0.519	UJ	0.246	UJ	0.372	U	0.101	UJ	0.425	UJ
PCB-156	**0.734**		**0.948**		**0.873**		**0.4**		**0.611**		**0.349**		**0.795**	
PCB-157	0.216	NJ	**0.563**		0.089	NJ	0.211	NJ	**0.526**		0.315	NJ	0.398	NJ
PCB-169	0.234	UJ	0.406	UJ	0.502	U	0.261	UJ	0.1334	U	0.592	U	0.365	U
PCB-188	0.174	NJ	0.514	NJ	0.167	NJ	0.231	NJ	0.016	UJ	0.24	NJ	0.174	NJ
PCB-184	0.015	UJ	0.067	NJ	0.057	NJ	0.01	UJ	0.011	UJ	0.019	UJ	0.016	UJ
PCB-179	**0.595**		0.329	NJ	**0.482**		0.071	NJ	0.181	NJ	0.018	UJ	0.169	NJ
PCB-176	0.012	UJ	0.017	UJ	0.019	UJ	0.024	NJ	0.039	UJ	0.016	UJ	0.013	UJ
PCB-186	0.014	UJ	0.02	UJ	0.022	UJ	0.009	UJ	0.01	UJ	0.018	UJ	0.015	UJ
PCB-178	**0.253**		0.066	NJ	0.217	NJ	0.055	NJ	0.185	NJ	0.022	UJ	0.018	UJ
PCB-175	0.016	UJ	0.022	UJ	0.025	UJ	**0.06**	**J**	0.012	UJ	0.02	UJ	0.017	UJ
PCB-182/187	**1.7**		**1.28**		**1.56**		**0.421**		**1.13**		**0.477**		0.782	NJ
PCB-183	**0.566**		0.295	NJ	**0.875**		0.041	NJ	**0.316**		**0.219**	**J**	0.45	NJ
PCB-185	0.077	NJ	0.022	UJ	0.025	UJ	0.05	NJ	0.095	NJ	0.021	UJ	0.017	UJ
PCB-174	**1.02**		**0.823**		**0.898**		**0.46**		**0.536**		0.401	NJ	**0.836**	
PCB-181	0.016	UJ	0.022	UJ	0.102	NJ	0.01	UJ	0.012	UJ	0.02	UJ	0.017	UJ
PCB-177	0.592	NJ	0.402	NJ	0.325	NJ	0.193	NJ	**0.426**		0.019	UJ	0.377	NJ
PCB-171	**0.267**		**0.321**		0.31	NJ	0.049	NJ	0.089	NJ	0.019	UJ	0.108	NJ
PCB-173	0.018	UJ	0.025	UJ	0.099	NJ	0.011	UJ	**0.084**	**J**	0.022	UJ	0.018	UJ
PCB-172	0.107	NJ	0.081	NJ	0.021	UJ	0.054	UJ	0.085	NJ	0.018	UJ	0.066	NJ
PCB-192	0.012	UJ	0.017	UJ	0.172	NJ	0.008	UJ	0.009	UJ	0.016	UJ	0.013	UJ
PCB-180	**3.19**		**2.43**		**2.75**		**0.782**		**1.66**		0.813	NJ	**1.85**	
PCB-193	0.011	UJ	0.016	UJ	0.017	UJ	0.007	UJ	0.046	NJ	0.014	UJ	0.012	UJ
PCB-191	0.053	NJ	0.016	UJ	**0.148**	**J**	0.007	UJ	0.008	UJ	0.014	UJ	0.012	UJ

Lab ID (1312033-) Site ID	14 BBC-01		12 BBC-02		11 BBC-03		09 BBC-04		15 COL-01		10 BUR-01		08 PET-01	
PCB-170	**1.06**		0.541	NJ	0.551	NJ	0.202	NJ	0.522	NJ	**0.353**		0.351	NJ
PCB-190	0.134	NJ	**0.197**	**J**	0.254	NJ	0.037	NJ	0.102	NJ	0.042	NJ	0.095	NJ
PCB-189	0.534	U	0.799	UJ	0.847	U	0.391	U	0.321	U	0.49	U	0.525	U
PCB-202	**0.563**		**0.699**		0.557	NJ	0.297	NJ	**0.332**		**0.471**		0.384	NJ
PCB-201	0.006	UJ	0.068	NJ	0.189	NJ	0.005	UJ	0.013	NJ	0.073	NJ	0.007	UJ
PCB-204	0.006	UJ	0.123	NJ	0.175	NJ	0.005	UJ	0.005	UJ	0.014	UJ	0.007	UJ
PCB-197	0.006	UJ	0.105	NJ	0.1	UJ	0.005	UJ	0.005	UJ	0.125	NJ	0.007	UJ
PCB-200	0.005	UJ	0.009	UJ	0.008	UJ	0.004	UJ	0.004	UJ	0.013	UJ	0.006	UJ
PCB-198	0.008	UJ	0.013	UJ	0.012	UJ	0.007	UJ	0.006	UJ	0.019	UJ	0.022	NJ
PCB-199	**1.11**		0.525	NJ	**1.06**		**0.48**		**0.998**		0.249	NJ	**0.624**	
PCB-196	0.007	UJ	0.011	UJ	0.431	NJ	0.005	UJ	**0.245**		0.236	NJ	**0.276**	
PCB-203	**1.17**		0.846	NJ	0.362	NJ	**0.475**		**0.555**		0.244	NJ	**0.532**	
PCB-195	0.132	NJ	0.024	NJ	0.055	NJ	**0.248**		0.226	NJ	0.32	NJ	0.067	NJ
PCB-194	0.494	NJ	0.66	NJ	0.527	NJ	0.151	NJ	0.45	NJ	0.203	NJ	**0.487**	
PCB-205	**0.422**		0.704	NJ	**0.513**		**0.367**		**0.541**		**0.549**		**0.489**	
PCB-208	**0.691**		0.614	NJ	0.562	NJ	0.41	NJ	**0.429**		0.131	UJ	**0.791**	
PCB-207	0.073	UJ	0.107	UJ	0.118	UJ	0.058	UJ	0.066	UJ	0.119	UJ	0.073	UJ
PCB-206	**1.38**		**1.53**		0.748	NJ	0.705	NJ	**0.97**		1.24	NJ	**0.997**	
PCB-209	0.635	NJ	1.02	NJ	0.626	NJ	0.361	NJ	**0.494**		0.602	NJ	0.549	NJ
Total PCBs[1]	**87.8**	**J**	**89.3**	**J**	**154**	**J**	**34.3**	**J**	**126**	**J**	**63.3**	**J**	**139**	**J**
Detections[2]	63		50		47		44		71		38		57	

BBC-01: Burnt Bridge Creek downstream at 2nd Avenue bridge.
BBC-02: Burnt Bridge Creek at Rossiter Street Apartments.
BBC-03: Burnt Bridge Creek at Burton Channel confluence.
BBC-04: Burnt Bridge Creek at Peterson Channel.
COL-01: Cold Creek at Burnt Bridge Creek confluence.
BUR-01: Burton Channel at the confluence with Burnt Bridge Creek.
PET-01: Peterson Channel at the confluence with Burnt Bridge Creek.
1: PCB totals include detected and “J” qualified (estimated) values, “NJ” qualified results not included in totals.
2: Total number of detected congeners per sample. “U”, “UJ”, and “NJ” qualified results are not included in totals.

Table C- 1. Total PCBs and Homolog Groups Measured by CLAM™ Samplers, Fall 2013.

MEL ID	ID	PCB Name	Result		UOM
1312033-14	BBC-01	Monochlorobiphenyls	0.361	J	pg/L
1312033-14	BBC-01	Dichlorobiphenyls	9.33	J	
1312033-14	BBC-01	Trichlorobiphenyls	15.7	J	
1312033-14	BBC-01	Tetrachlorobiphenyls	12.1	J	
1312033-14	BBC-01	Pentachlorobiphenyls	14.7	J	
1312033-14	BBC-01	Hexachlorobiphenyls	21.6		
1312033-14	BBC-01	Heptachlorobiphenyls	8.65	J	
1312033-14	BBC-01	Octachlorobiphenyls	3.27		
1312033-14	BBC-01	Nonachlorobiphenyls	2.07		
1312033-14	BBC-01	Decachlorobiphenyl		UJ	
1312033-14	BBC-01	Total PCB	**87.8**	**J**	
1312033-12	BBC-02	Monochlorobiphenyls	0.59	J	pg/L
1312033-12	BBC-02	Dichlorobiphenyls	12.6	J	
1312033-12	BBC-02	Trichlorobiphenyls	20.4	J	
1312033-12	BBC-02	Tetrachlorobiphenyls	17.5		
1312033-12	BBC-02	Pentachlorobiphenyls	12.8	J	
1312033-12	BBC-02	Hexachlorobiphenyls	18.1	J	
1312033-12	BBC-02	Heptachlorobiphenyls	5.05	J	
1312033-12	BBC-02	Octachlorobiphenyls	0.70		
1312033-12	BBC-02	Nonachlorobiphenyls	1.53		
1312033-12	BBC-02	Decachlorobiphenyl		UJ	
1312033-12	BBC-02	Total PCB	**89.3**	**J**	
1312033-11	BBC-03	Monochlorobiphenyls		UJ	pg/L
1312033-11	BBC-03	Dichlorobiphenyls	48.2	J	
1312033-11	BBC-03	Trichlorobiphenyls	45.9	J	
1312033-11	BBC-03	Tetrachlorobiphenyls	27.3		
1312033-11	BBC-03	Pentachlorobiphenyls	10.4	J	
1312033-11	BBC-03	Hexachlorobiphenyls	13.9		
1312033-11	BBC-03	Heptachlorobiphenyls	6.71	J	
1312033-11	BBC-03	Octachlorobiphenyls	1.57		
1312033-11	BBC-03	Nonachlorobiphenyls		UJ	
1312033-11	BBC-03	Decachlorobiphenyl		UJ	
1312033-11	BBC-03	Total PCB	**154**	**J**	
1312033-09	BBC-04	Monochlorobiphenyls		UJ	pg/L
1312033-09	BBC-04	Dichlorobiphenyls	5.81		
1312033-09	BBC-04	Trichlorobiphenyls	10.2	J	
1312033-09	BBC-04	Tetrachlorobiphenyls	6.29	J	
1312033-09	BBC-04	Pentachlorobiphenyls	4.99	J	
1312033-09	BBC-04	Hexachlorobiphenyls	3.73	J	
1312033-09	BBC-04	Heptachlorobiphenyls	1.72	J	

MEL ID	ID	PCB Name	Result		UOM
1312033-09	BBC-04	Octachlorobiphenyls	1.57		
1312033-09	BBC-04	Nonachlorobiphenyls		UJ	
1312033-09	BBC-04	Decachlorobiphenyl		UJ	
1312033-09	BBC-04	Total PCB	**34.3**	**J**	
1312033-15	COL-01	Monochlorobiphenyls	0.32	J	pg/L
1312033-15	COL-01	Dichlorobiphenyls	14.8	J	
1312033-15	COL-01	Trichlorobiphenyls	37.2	J	
1312033-15	COL-01	Tetrachlorobiphenyls	22.5		
1312033-15	COL-01	Pentachlorobiphenyls	19.8	J	
1312033-15	COL-01	Hexachlorobiphenyls	22.5	J	
1312033-15	COL-01	Heptachlorobiphenyls	4.15	J	
1312033-15	COL-01	Octachlorobiphenyls	2.67		
1312033-15	COL-01	Nonachlorobiphenyls	1.4		
1312033-15	COL-01	Decachlorobiphenyl	0.49		
1312033-15	COL-01	Total PCB	**126**	**J**	
1312033-10	BUR-01	Monochlorobiphenyls	0.22	J	pg/L
1312033-10	BUR-01	Dichlorobiphenyls	17.4	J	
1312033-10	BUR-01	Trichlorobiphenyls	18.1	J	
1312033-10	BUR-01	Tetrachlorobiphenyls	16.5		
1312033-10	BUR-01	Pentachlorobiphenyls	1.78	J	
1312033-10	BUR-01	Hexachlorobiphenyls	7.20	J	
1312033-10	BUR-01	Heptachlorobiphenyls	1.05	J	
1312033-10	BUR-01	Octachlorobiphenyls	1.02		
1312033-10	BUR-01	Nonachlorobiphenyls		UJ	
1312033-10	BUR-01	Decachlorobiphenyl		UJ	
1312033-10	BUR-01	Total PCB	**63.3**	**J**	
1312033-08	PET-01	Monochlorobiphenyls	2.05	J	pg/L
1312033-08	PET-01	Dichlorobiphenyls	51.2		
1312033-08	PET-01	Trichlorobiphenyls	16.8		
1312033-08	PET-01	Tetrachlorobiphenyls	33.4		
1312033-08	PET-01	Pentachlorobiphenyls	13.6	J	
1312033-08	PET-01	Hexachlorobiphenyls	15.5	J	
1312033-08	PET-01	Heptachlorobiphenyls	2.69	J	
1312033-08	PET-01	Octachlorobiphenyls	2.41		
1312033-08	PET-01	Nonachlorobiphenyls	1.79		
1312033-08	PET-01	Decachlorobiphenyl		UJ	
1312033-08	PET-01	Total PCB	**139**	**J**	
LAB BLANK		Monochlorobiphenyls		UJ	pg/L
LAB BLANK		Dichlorobiphenyls	1.17		
LAB BLANK		Trichlorobiphenyls	0.856		
LAB BLANK		Tetrachlorobiphenyls	0.515		

MEL ID	ID	PCB Name	Result	UOM
LAB BLANK		Pentachlorobiphenyls	2.03	
LAB BLANK		Hexachlorobiphenyls	0.916	
LAB BLANK		Heptachlorobiphenyls	0.402	
LAB BLANK		Octachlorobiphenyls	UJ	
LAB BLANK		Nonachlorobiphenyls	UJ	
LAB BLANK		Decachlorobiphenyl	UJ	
LAB BLANK		Total PCB	**5.89**	

BBC-01: Burnt Bridge Creek downstream at 2nd Avenue bridge.
BBC-02: Burnt Bridge Creek at Rossiter Street Apartments.
BBC-03: Burnt Bridge Creek at Burton Channel confluence.
BBC-04: Burnt Bridge Creek at Peterson Channel.
COL-01: Cold Creek at Burnt Bridge Creek confluence.
BUR-01: Burton Channel at the confluence with Burnt Bridge Creek.
PET-01: Peterson Channel at the confluence with Burnt Bridge Creek.
UOM: Unit of measurement.

Table C-2. Total Organic Carbon, Total Suspended Solids, and CLAM™ Flow Volumes Measured Fall 2013.

Lab ID (1312033-) Site ID	02 BBC-04	04 BBC-03	05 BBC-02	07 BBC-01	06 COL-01	03 BUR-01	01 PET-01
	Day 1						
TOC[1] (mg/L)	2.7	4.5	5.4	4.4	2.1	3.8	1.0 U
TSS[2] (mg/L)	7	10	5	9	22	2	2
Flow Rate Initial[3] (mLs)	82	60	58	60	24	54	68
Lab ID (1312033-)	09	11	12	14	13	10	08
	Day 2						
TOC	1.0 U	3.2	4.0	3.9	1.4/1.3[4]	2.6	2.5
TSS	2	12	8	5	4/4[4]	1	4
Flow Rate Final[3] (mLs)	14	1.5	2	13	8	1.5	3
Total Flow Volume (L)	71.3	42.6	41.6	48.5	22.9	38.9	52.0

1: Total organic carbon.
2: Total suspended solids.
3: Milliliters per minute.
4: Results presented for both replicate field samples.
See site location list following Table C-1.

Table C-4. PCB Congeners Measured by CLAM^{TM} Samplers, Spring 2014 (pg/L).

Lab ID (1404033-) Site ID	17 BBC-01		15 BBC-02		14 BBC-03		12 BBC-04		16 COL-01		13 BUR-01		11 PET-01	
PCB-001	**0.263**	**J**	**0.234**	**J**	0.604	NJ	**0.192**	**J**	0.913	NJ	**0.228**	**J**	**9.7**	
PCB-002	**0.196**	**J**	**0.133**	**J**	**0.211**	**J**	0.043	UJ	**0.357**	**J**	**0.212**	**J**	**0.79**	
PCB-003	0.329	NJ	**0.124**	**J**	**0.249**	**J**	0.066	UJ	**0.53**	**J**	**0.196**	**J**	**4.17**	
PCB-010	0.114	UJ	0.086	UJ	0.082	UJ	0.152	UJ	0.104	NJ	0.052	UJ	0.089	UJ
PCB-004	**1.36**		**1.05**		0.775	NJ	0.169	UJ	**1.93**		**0.916**		**3.44**	
PCB-009	0.113	UJ	0.085	UJ	0.081	UJ	0.15	UJ	0.066	UJ	0.051	UJ	0.088	UJ
PCB-007	2.09	UJ	2.45	UJ	2.32	UJ	4.77	UJ	2.95	UJ	3.48	UJ	**15.6**	
PCB-006	0.112	UJ	0.084	UJ	0.08	UJ	0.149	UJ	**0.668**	**J**	0.051	UJ	**2.27**	
PCB-005/008	2.56	UJ	2.77	UJ	2.53	UJ	2.12	UJ	3.94	UJ	1.87	UJ	**6.78**	
PCB-014	0.113	UJ	0.085	UJ	0.081	UJ	0.15	UJ	0.066	UJ	0.051	UJ	0.088	UJ
PCB-011	4.15	UJ	5.99	UJ	6.73	UJ	**7.47**		**9.37**		4.06	UJ	**8.26**	
PCB-012/013	0.128	UJ	0.096	UJ	0.091	UJ	0.17	UJ	0.075	UJ	0.058	UJ	0.1	UJ
PCB-015	**1.02**	**J**	**2.35**		**0.86**	**J**	0.277	UJ	**4.53**		**0.891**		**3.32**	
PCB-019	**0.695**	**J**	**0.577**	**J**	**0.4**	**J**	0.374	NJ	**5.57**		**0.273**	**J**	**0.632**	**J**
PCB-030	0.027	UJ	0.023	UJ	0.021	UJ	0.034	UJ	0.041	UJ	0.017	UJ	0.021	UJ
PCB-018	3.91	UJ	4.71	UJ	2.88	UJ	2.79	UJ	5.11	UJ	1.87	UJ	4.79	UJ
PCB-017	1.55	UJ	2.05	UJ	1.24	UJ	1.11	UJ	1.87	UJ	0.8677	U	2.06	UJ
PCB-024	0.03	UJ	0.027	UJ	0.024	UJ	0.039	UJ	**0.329**	**J**	0.019	UJ	0.024	UJ
PCB-027	**0.295**	**J**	**0.334**	**J**	**0.236**	**J**	0.16	NJ	**1.25**		**0.17**	**J**	**0.311**	**J**
PCB-032	**1.97**		**1.76**		**0.872**	**J**	**1.29**		**5.11**		**0.687**	**J**	**1.9**	
PCB-016	1.0204	U	1.0152	U	0.9217	U	0.8529	U	**3.37**		0.391	NJ	0.911	UJ
PCB-023	0.03	UJ	0.025	UJ	0.023	UJ	0.038	UJ	0.039	UJ	0.019	UJ	0.023	UJ
PCB-034	0.028	UJ	0.025	UJ	0.022	UJ	0.036	UJ	0.043	UJ	0.018	UJ	0.022	UJ
PCB-029	0.027	UJ	0.108	NJ	0.021	UJ	0.035	UJ	0.035	UJ	0.017	UJ	0.02	UJ
PCB-026	0.48	NJ	**0.578**	**J**	0.02	UJ	0.033	UJ	**1.2**		**0.312**	**J**	0.019	UJ
PCB-025	**0.355**	**J**	0.233	NJ	0.28	NJ	0.04	UJ	**0.777**	**J**	**0.188**	**J**	0.023	UJ
PCB-031	**2.68**		**3.19**		**1.78**		**2.54**		**6.39**		**1.28**		**3.93**	
PCB-028	3.82	UJ	4.59	UJ	2.7	UJ	2.93	UJ	**14.9**		1.99	UJ	**4.53**	
PCB-021	0.034	UJ	0.03	UJ	0.027	UJ	0.043	UJ	0.051	UJ	0.021	UJ	0.026	UJ
PCB-020/033	**2.23**		**1.97**		**1.29**		**1.65**		**5.02**		**0.834**	**J**	**2.69**	
PCB-022	**1.78**		**1.96**		**1.11**		**1.14**		**7.68**		**0.748**	**J**	**1.83**	
PCB-036	0.029	UJ	0.025	UJ	0.023	UJ	0.037	UJ	0.044	UJ	0.018	UJ	0.022	UJ
PCB-039	0.032	UJ	0.028	UJ	0.18	NJ	0.041	UJ	0.049	UJ	0.02	UJ	0.025	UJ
PCB-038	0.034	UJ	0.029	UJ	0.027	UJ	0.043	UJ	0.051	UJ	0.021	UJ	0.026	UJ
PCB-035	0.034	UJ	0.03	UJ	0.027	UJ	0.044	UJ	0.052	UJ	0.021	UJ	0.026	UJ
PCB-037	**1.92**		**1.57**		**0.919**	**J**	0.424	NJ	**8.52**		**0.446**	**J**	**1.31**	
PCB-054	0.027	UJ	0.023	UJ	0.019	UJ	0.03	UJ	0.078	UJ	**0.0857**	**J**	0.021	UJ
PCB-050	0.055	UJ	0.045	UJ	0.038	UJ	0.061	UJ	0.131	UJ	**0.0664**	**J**	0.043	UJ
PCB-053	**0.77**	**J**	**0.721**	**J**	**0.263**	**J**	**0.44**	**J**	**3.27**		**0.278**	**J**	**0.572**	**J**
PCB-051	**0.904**	**J**	**1.28**		**1**		**1.22**		**1.73**		**0.936**		**2.66**	

Lab ID (1404033-) Site ID	17 BBC-01		15 BBC-02		14 BBC-03		12 BBC-04		16 COL-01		13 BUR-01		11 PET-01	
PCB-045	**1.01**	**J**	**0.826**	**J**	0.318	NJ	**1.02**		3.83	NJ	0.241	NJ	**0.767**	
PCB-046	0.071	UJ	0.058	UJ	0.049	UJ	0.078	UJ	**2.71**		0.039	UJ	0.055	UJ
PCB-052/069	**6.77**		**3.29**		**2.98**		**6.03**		**23.2**		**1.33**		**4.76**	
PCB-073	0.047	UJ	0.039	UJ	0.032	UJ	0.052	UJ	0.112	UJ	0.026	UJ	0.037	UJ
PCB-043/049	**4.36**		**2.42**		**1.74**		**3.1**		**11.3**		**0.755**	**J**	**3.02**	
PCB-065/075	0.044	UJ	0.036	UJ	0.03	UJ	0.049	UJ	0.105	UJ	0.024	UJ	0.034	UJ
PCB-047/048	**4.83**		**4.02**		**3.44**		**5.59**		**10.3**		**3.14**		**9.24**	
PCB-062	0.052	UJ	0.043	UJ	0.036	UJ	0.058	UJ	0.124	UJ	0.029	UJ	0.041	UJ
PCB-044	**5.29**		3.26	UJ	2.05	UJ	**4.55**		**20.9**		0.926	UJ	**4.69**	
PCB-059	0.048	UJ	0.318	NJ	0.153	NJ	0.054	UJ	**1.73**		**0.236**	**J**	0.262	NJ
PCB-042	**1.65**		**1.12**		0.483	NJ	**0.809**	**J**	**4.83**		0.465	NJ	**1.02**	
PCB-064/072	**2.51**		**1.88**		**1.34**		**2.21**		**10.6**		**0.688**	**J**	**2.22**	
PCB-071	**1.27**		**0.767**	**J**	**0.452**	**J**	**0.822**	**J**	**5.2**		**0.232**	**J**	**1.14**	
PCB-041	0.415	NJ	0.392	NJ	0.051	UJ	**0.47**	**J**	**1.72**		0.041	UJ	**0.437**	**J**
PCB-068	**0.963**	**J**	**1.14**		0.032	UJ	1.43	NJ	**1.09**		**1.07**		**3.59**	
PCB-040/057	0.06	UJ	0.049	UJ	0.041	UJ	0.066	UJ	**2.64**		0.033	UJ	0.047	UJ
PCB-067	0.051	UJ	0.042	UJ	0.035	UJ	0.056	UJ	0.395	NJ	0.028	UJ	0.039	UJ
PCB-063	0.049	UJ	0.04	UJ	0.034	UJ	0.0967	NJ	0.117	UJ	0.027	UJ	0.038	UJ
PCB-058	0.048	UJ	0.04	UJ	0.033	UJ	0.053	UJ	0.114	UJ	0.104	NJ	0.038	UJ
PCB-061	0.055	UJ	0.046	UJ	0.038	UJ	0.061	UJ	0.131	UJ	0.031	UJ	0.043	UJ
PCB-074	**2.66**		**1.25**		**0.977**		**2**		**9.04**		**0.504**	**J**	1.41	NJ
PCB-070	**7.76**		**3.69**		**2.35**		**5.83**		**26.1**		**1.2**		**5.26**	
PCB-055/080	0.05	UJ	0.041	UJ	0.034	UJ	0.055	UJ	0.119	UJ	0.028	UJ	0.039	UJ
PCB-066	**3.82**		**2.64**		**1.67**		**3.81**		**18.7**		**0.903**		**3.9**	
PCB-076	0.053	UJ	0.043	UJ	0.036	UJ	0.058	UJ	0.126	UJ	0.029	UJ	0.041	UJ
PCB-060	**0.607**	**J**	**1.25**		0.04	UJ	0.946	NJ	**4.91**		0.032	UJ	**1.09**	
PCB-056	**2.67**		**1.92**		**0.922**		**2.11**		**9.47**		0.576	NJ	**2.66**	
PCB-079	0.053	UJ	0.044	UJ	0.037	UJ	0.059	UJ	0.127	UJ	0.029	UJ	0.042	UJ
PCB-078	0.057	UJ	0.047	UJ	0.04	UJ	0.063	UJ	0.137	UJ	0.032	UJ	0.045	UJ
PCB-081	0.102	UJ	0.079	UJ	0.069	UJ	0.113	UJ	0.208	UJ	0.05	UJ	0.0795	NJ
PCB-077	0.118	UJ	0.162	NJ	0.077	UJ	0.251	NJ	**3.02**		0.058	UJ	0.097	UJ
PCB-104	0.073	UJ	0.051	UJ	0.057	UJ	0.099	UJ	0.126	UJ	0.036	UJ	0.066	UJ
PCB-096	0.134	UJ	0.09	UJ	0.103	UJ	0.182	UJ	0.13	UJ	0.064	UJ	0.119	UJ
PCB-103	0.162	UJ	0.11	UJ	0.125	UJ	0.222	UJ	0.158	UJ	0.5	NJ	0.144	UJ
PCB-100	0.182	UJ	0.123	UJ	0.14	UJ	0.249	UJ	0.177	UJ	0.087	UJ	0.162	UJ
PCB-094	0.213	UJ	0.144	UJ	0.164	UJ	0.291	UJ	0.207	UJ	0.101	UJ	0.189	UJ
PCB-093/098/102	0.211	UJ	0.143	UJ	0.162	UJ	0.287	UJ	0.204	UJ	0.1	UJ	0.187	UJ
PCB-095	**12.6**		**3.94**		**4.86**		**7.46**		**17.9**		**2.48**		**5.21**	
PCB-088	0.197	UJ	0.133	UJ	0.151	UJ	0.268	UJ	0.191	UJ	0.094	UJ	0.175	UJ
PCB-091/121	**2.64**		0.116	UJ	0.131	UJ	0.234	UJ	**2.52**		0.082	UJ	0.152	UJ
PCB-084	**3.85**		0.463	NJ	0.154	UJ	**2.14**		**4.14**		0.095	UJ	0.178	UJ

Lab ID (1404033-) Site ID	17 BBC-01		15 BBC-02		14 BBC-03		12 BBC-04		16 COL-01		13 BUR-01		11 PET-01	
PCB-092	**3.4**		0.148	UJ	0.168	UJ	**4.04**		**5.17**		0.485	NJ	**3.48**	
PCB-089	0.201	UJ	0.136	UJ	0.154	UJ	0.274	UJ	0.195	UJ	0.096	UJ	0.178	UJ
PCB-090	0.231	UJ	0.156	UJ	0.177	UJ	0.315	UJ	0.224	UJ	0.11	UJ	0.205	UJ
PCB-101	**19.1**		**5.72**		**4.94**		**9.52**		**20**		**2.88**		**8.19**	
PCB-113	0.164	UJ	0.111	UJ	0.126	UJ	0.224	UJ	0.159	UJ	0.078	UJ	0.146	UJ
PCB-099	**9.23**		**3**		**1.92**		**3.12**		**7.99**		**1.42**		**3.29**	
PCB-112/119	0.159	UJ	0.108	UJ	0.122	UJ	1.05	NJ	0.201	NJ	0.076	UJ	0.142	UJ
PCB-083/109	0.207	UJ	0.14	UJ	0.159	UJ	0.282	UJ	0.201	UJ	0.099	UJ	0.184	UJ
PCB-086/117	0.204	UJ	0.138	UJ	0.156	UJ	0.278	UJ	0.198	UJ	0.097	UJ	0.181	UJ
PCB-097/116	**6.64**		**2.76**		0.159	UJ	0.283	UJ	**9.88**		1.7	NJ	0.184	UJ
PCB-125	0.172	UJ	0.501	NJ	0.132	UJ	0.235	UJ	0.167	UJ	0.082	UJ	0.153	UJ
PCB-087/115	**7.87**		**2.08**		**2.24**		1.72	NJ	**11.9**		0.095	UJ	**4.27**	
PCB-111	0.164	UJ	0.111	UJ	0.126	UJ	0.224	UJ	0.159	UJ	0.078	UJ	0.146	UJ
PCB-085	0.212	UJ	0.144	UJ	0.163	UJ	0.29	UJ	**5.18**		0.101	UJ	0.189	UJ
PCB-120	0.166	UJ	0.112	UJ	0.127	UJ	0.226	UJ	0.161	UJ	0.079	UJ	0.147	UJ
PCB-110	**25.8**		**7.85**		**6.37**		**10.2**		**27**		**3.15**		**9.14**	
PCB-082	0.253	UJ	0.171	UJ	0.194	UJ	0.346	UJ	**4.28**		0.121	UJ	0.225	UJ
PCB-124	0.183	UJ	0.128	UJ	0.135	UJ	0.239	UJ	**4.06**		0.089	UJ	0.172	UJ
PCB-107/108	1.84	NJ	0.123	UJ	0.14	UJ	0.249	UJ	**3.06**		0.087	UJ	0.162	UJ
PCB-123	0.24	UJ	0.162	UJ	0.186	UJ	0.321	UJ	0.164	UJ	0.111	UJ	0.212	UJ
PCB-106	0.177	UJ	0.12	UJ	0.136	UJ	0.241	UJ	0.171	UJ	0.084	UJ	0.157	UJ
PCB-118	**17.3**		**4.51**		**4.46**		**6.87**		**36.2**		**2.17**		**5.64**	
PCB-114	0.249	UJ	0.157	UJ	0.18	UJ	0.342	UJ	0.169	UJ	0.115	UJ	0.205	UJ
PCB-122	0.135	UJ	0.091	UJ	0.103	UJ	0.184	UJ	0.368	NJ	0.064	UJ	0.12	UJ
PCB-105/127	**6.66**		**2.5**		**1.67**		**1.91**		**15.8**		**1.05**		**4.08**	
PCB-126	0.22	UJ	0.136	UJ	0.252	NJ	0.307	UJ	0.125	UJ	0.087	UJ	0.184	UJ
PCB-155	0.016	UJ	0.0329	NJ	0.011	UJ	0.014	UJ	0.085	UJ	0.008	UJ	0.01	UJ
PCB-150	0.0667	NJ	0.021	UJ	0.0636	NJ	0.026	UJ	0.082	UJ	0.014	UJ	0.019	UJ
PCB-152	0.03	UJ	0.02	UJ	0.0578	NJ	0.025	UJ	0.077	UJ	**0.031**	**J**	0.018	UJ
PCB-145	0.034	UJ	0.023	UJ	0.021	UJ	0.028	UJ	0.087	UJ	0.015	UJ	0.02	UJ
PCB-136/148	**4.07**		**1.51**		**1.28**		**1.66**		**4.3**		0.801	NJ	**1.69**	
PCB-154	0.038	UJ	0.026	UJ	0.024	UJ	0.032	UJ	0.099	UJ	0.017	UJ	0.023	UJ
PCB-151	**5.07**		**2.11**		**1.93**		1.08	NJ	**4.7**		**0.876**		**1.55**	
PCB-135	0.047	UJ	0.031	UJ	0.03	UJ	0.039	UJ	**4.12**		0.021	UJ	0.028	UJ
PCB-144	0.482	NJ	0.027	UJ	0.025	UJ	0.033	UJ	0.694	NJ	0.018	UJ	0.229	NJ
PCB-147	0.048	UJ	0.032	UJ	0.03	UJ	0.04	UJ	0.123	UJ	0.022	UJ	0.028	UJ
PCB-139/149	**28.7**		**8.04**		**7.62**		**9.08**		**28**		**3.98**		**7.81**	
PCB-140	0.043	UJ	0.028	UJ	0.027	UJ	0.035	UJ	0.11	UJ	0.019	UJ	0.026	UJ
PCB-143	0.041	UJ	0.028	UJ	0.0319	NJ	0.035	UJ	0.295	NJ	0.062	NJ	0.025	UJ
PCB-134	**1.9**		0.036	UJ	0.034	UJ	0.045	UJ	**4.26**		0.038	NJ	0.322	NJ
PCB-142	0.046	UJ	0.03	UJ	0.029	UJ	0.038	UJ	0.118	UJ	0.0321	NJ	0.027	UJ

Lab ID (1404033-) Site ID	17 BBC-01		15 BBC-02		14 BBC-03		12 BBC-04		16 COL-01		13 BUR-01		11 PET-01	
PCB-131	0.11	NJ	0.033	UJ	0.032	UJ	0.0776	NJ	0.863	NJ	0.0806	NJ	0.03	UJ
PCB-133	**0.28**	**J**	0.029	UJ	0.0949	NJ	0.131	NJ	0.802	NJ	0.045	NJ	0.026	UJ
PCB-165	0.036	UJ	0.024	UJ	0.023	UJ	0.03	UJ	0.094	UJ	0.016	UJ	0.022	UJ
PCB-146	3.56	NJ	**0.943**	**J**	**0.959**		**1.06**		**8.18**		0.162	NJ	**1.12**	
PCB-132/161	**9.64**		**2.57**		**2.01**		**3.69**		**22.5**		**1.03**		**3.2**	
PCB-153	**23.7**		**6.96**		**6.1**		**7.87**		**40.8**		**3.26**		**5.97**	
PCB-168	0.029	UJ	0.019	UJ	0.018	UJ	0.024	UJ	0.075	UJ	0.013	UJ	0.017	UJ
PCB-141	**5.39**		**1.34**		**1.34**		**2.02**		**9.81**		0.167	NJ	**1.25**	
PCB-137	1.6	NJ	**0.514**	**J**	0.273	NJ	**0.862**		**4.47**		0.215	NJ	0.345	NJ
PCB-130	**2.46**		0.388	NJ	0.358	NJ	0.802	NJ	**5.03**		0.017	UJ	0.294	NJ
PCB-163/164	**8.03**		**2.72**		**1.94**		**2.79**		**17.3**		**1.34**		**2.18**	
PCB-138/160	**25**		**6.04**		**5.26**		**8.02**		**45.1**		**2.34**		**5.89**	
PCB-158	**3.03**		**0.899**	**J**	**0.676**	**J**	**0.955**		**6.41**		**0.449**	**J**	**0.603**	**J**
PCB-129	**1.77**		0.024	UJ	0.023	UJ	0.03	UJ	**3.09**		0.016	UJ	0.022	UJ
PCB-166	0.026	UJ	0.017	UJ	0.0444	NJ	0.022	UJ	0.067	UJ	0.012	UJ	0.016	UJ
PCB-159	0.022	UJ	0.015	UJ	0.014	UJ	0.019	UJ	0.058	UJ	0.01	UJ	0.013	UJ
PCB-128/162	**5.64**		**1.75**		**1.31**		**1.64**		**10.8**		**0.493**	**J**	**1.47**	
PCB-167	**1.37**		0.157	NJ	0.203	NJ	0.235	NJ	**2.77**		**0.308**	**J**	0.39	NJ
PCB-156	**3.58**		**0.868**	**J**	**0.8**	**J**	**1.06**		**6.01**		**0.506**	**J**	0.65	NJ
PCB-157	**0.871**	**J**	0.018	UJ	0.228	NJ	0.023	UJ	**1.77**		0.012	UJ	0.132	NJ
PCB-169	0.022	UJ	0.014	UJ	0.013	UJ	0.018	UJ	0.044	UJ	0.009	UJ	0.014	UJ
PCB-188	0.0575	UJ	0.018	UJ	0.0399	NJ	0.026	UJ	0.068	UJ	0.016	UJ	0.018	UJ
PCB-184	0.019	UJ	0.013	UJ	0.016	UJ	0.021	UJ	0.037	UJ	0.052	NJ	0.0585	NJ
PCB-179	**2.03**		**0.886**	**J**	0.906	NJ	**0.657**	**J**	**2.71**		0.27	NJ	0.535	NJ
PCB-176	0.443	NJ	0.011	UJ	0.205	NJ	0.0939	NJ	**0.739**	**J**	0.065	NJ	0.0689	NJ
PCB-186	0.017	UJ	0.0307	NJ	0.0676	NJ	0.02	UJ	0.034	UJ	0.0307	NJ	0.014	UJ
PCB-178	**0.958**	**J**	0.251	NJ	**0.565**	**J**	0.13	NJ	**1.11**		0.242	NJ	0.184	NJ
PCB-175	0.02	UJ	0.0875	NJ	0.0545	NJ	0.022	UJ	0.422	UJ	0.012	UJ	0.015	UJ
PCB-182/187	**6.04**		**2.01**		**2.9**		**2.33**		**7.62**		**1.18**		**1.9**	
PCB-183	**2.14**		**0.71**	**J**	**0.969**		**1.05**		**2.89**		**0.472**	**J**	0.664	NJ
PCB-185	0.02	UJ	0.014	UJ	0.016	UJ	0.022	UJ	**0.487**	**J**	0.012	UJ	0.015	UJ
PCB-174	**4.12**		**1.66**		**1.71**		**2.18**		**5.77**		**1.02**		**1.2**	
PCB-181	0.019	UJ	0.014	UJ	0.016	UJ	0.022	UJ	0.038	UJ	0.012	UJ	0.015	UJ
PCB-177	**2.28**		**0.997**	**J**	**0.794**	**J**	**0.935**		**2.85**		**0.512**	**J**	0.739	NJ
PCB-171	**1.49**		0.219	NJ	0.496	NJ	0.371	NJ	**1.65**		**0.261**	**J**	**0.375**	**J**
PCB-173	**0.28**	**J**	0.0658	NJ	0.018	UJ	0.0926	NJ	0.042	UJ	0.013	UJ	0.017	UJ
PCB-172	0.017	UJ	**0.484**	**J**	0.236	NJ	0.12	NJ	**0.93**		0.181	NJ	0.013	UJ
PCB-192	0.015	UJ	0.011	UJ	0.013	UJ	0.017	UJ	0.03	UJ	0.009	UJ	0.012	UJ
PCB-180	**11.2**		**4.12**		**4.06**		**3.81**		**15.3**		**1.91**		**3.83**	
PCB-193	0.014	UJ	0.01	UJ	0.012	UJ	0.016	UJ	0.027	UJ	0.008	UJ	0.011	UJ
PCB-191	0.014	UJ	0.01	UJ	0.011	UJ	0.016	UJ	0.027	UJ	0.008	UJ	0.011	UJ

Lab ID (1404033-)	17		15		14		12		16		13		11	
Site ID	BBC-01		BBC-02		BBC-03		BBC-04		COL-01		BUR-01		PET-01	
PCB-170	**3.6**		**1.39**		**1.17**		**1.33**		**5.11**		0.599	NJ	**1.03**	
PCB-190	**0.734**	**J**	**0.311**	**J**	**0.348**	**J**	**0.391**	**J**	**1.1**		**0.187**	**J**	0.183	NJ
PCB-189	0.011	UJ	0.008	UJ	0.009	UJ	0.013	UJ	0.441	NJ	0.007	UJ	0.009	UJ
PCB-202	**0.56**	**J**	**0.261**	**J**	0.391	NJ	0.261	NJ	**1.3**		0.165	NJ	0.172	NJ
PCB-201	0.01	UJ	0.01	UJ	0.291	NJ	0.013	UJ	0.0716	NJ	0.0243	NJ	0.0766	NJ
PCB-204	0.01	UJ	0.009	UJ	0.012	UJ	0.012	UJ	0.013	UJ	0.005	UJ	0.009	UJ
PCB-197	0.0814	NJ	0.0584	NJ	0.012	UJ	0.131	NJ	0.0392	NJ	0.0672	NJ	0.009	UJ
PCB-200	0.306	NJ	**0.273**	**J**	**0.167**	**J**	0.011	UJ	0.012	UJ	0.0956	NJ	0.008	UJ
PCB-198	0.013	UJ	0.012	UJ	0.016	UJ	0.016	UJ	0.017	UJ	0.006	UJ	0.011	UJ
PCB-199	**3.47**		**1.55**		**1.7**		**1.21**		**6.32**		0.66	NJ	**1.43**	
PCB-196	0.834	NJ	**0.646**	**J**	0.013	UJ	0.553	NJ	0.014	UJ	0.005	UJ	**0.448**	**J**
PCB-203	**1.78**		**0.922**	**J**	0.83	NJ	**0.955**		**4.75**		**0.865**	**J**	**0.534**	**J**
PCB-195	**0.867**	**J**	**0.799**	**J**	0.441	NJ	0.013	UJ	1.55	NJ	0.127	NJ	**0.458**	**J**
PCB-194	**1.87**		**1.06**		1.16	NJ	**0.866**		**4.88**		0.655	NJ	**0.903**	
PCB-205	0.276	NJ	0.007	UJ	0.236	NJ	0.01	UJ	0.0971	NJ	0.003	UJ	0.007	UJ
PCB-208	0.101	UJ	0.078	UJ	0.088	UJ	0.236	NJ	**1.57**		0.053	UJ	0.097	UJ
PCB-207	0.092	UJ	0.071	UJ	0.081	UJ	0.118	UJ	0.521	NJ	0.049	UJ	0.092	UJ
PCB-206	2.27	NJ	1.19	NJ	0.099	UJ	0.149	UJ	**4.76**		0.49	NJ	0.116	UJ
PCB-209	1.59	NJ	0.516	NJ	0.653	NJ	0.729	NJ	1.29	NJ	0.415	NJ	0.464	NJ
Total PCBs[1]	**352**	**J**	**131**	**J**	**97**	**J**	**176**[3]	**J**	**726**	**J**	**53**	**J**	**207**	**J**
Detections[2]	72		65		50		52		91		53		62	

BBC-01: Burnt Bridge Creek downstream at 2^{nd} Avenue bridge.
BBC-02: Burnt Bridge Creek at Rossiter Street Apartments.
BBC-03: Burnt Bridge Creek at Burton Channel confluence.
BBC-04: Burnt Bridge Creek at Peterson Channel confluence.
COL-01: Cold Creek above Burnt Bridge Creek confluence.
BUR-01: Burton Channel at the confluence with Burnt Bridge Creek.
PET-01: Peterson Channel at the confluence with Burnt Bridge Creek.
1: PCB totals include detected and “J” qualified (estimated) values, “NJ” qualified results not included.
2: Total number of congeners detected per sample. “U”, “UJ”, and “NJ” qualified results are not included in totals.
3: Value represents the mean total PCB concentration of the sample and field replicate.

Table C-5. Total PCBs and Homolog Groups Measured by CLAM™ Samplers, Spring 2014.

MEL ID	Site ID	PCB Name	Result		UOM
1404033-17	BBC-01	Monochlorobiphenyls	0.459	J	pg/L
1404033-17	BBC-01	Dichlorobiphenyls	2.38	J	
1404033-17	BBC-01	Trichlorobiphenyls	11.9	J	
1404033-17	BBC-01	Tetrachlorobiphenyls	47.8	J	
1404033-17	BBC-01	Pentachlorobiphenyls	115		
1404033-17	BBC-01	Hexachlorobiphenyls	131		
1404033-17	BBC-01	Heptachlorobiphenyls	34.9		
1404033-17	BBC-01	Octachlorobiphenyls	8.55	J	
1404033-17	BBC-01	Nonachlorobiphenyls		UJ	
1404033-17	BBC-01	Decachlorobiphenyl		UJ	
1404033-17	BBC-01	Total PCBs	**352**		
1404033-15	BBC-02	Monochlorobiphenyls	0.491	J	pg/L
1404033-15	BBC-02	Dichlorobiphenyls	3.4	J	
1404033-15	BBC-02	Trichlorobiphenyls	11.9	J	
1404033-15	BBC-02	Tetrachlorobiphenyls	28.2	J	
1404033-15	BBC-02	Pentachlorobiphenyls	32.4		
1404033-15	BBC-02	Hexachlorobiphenyls	36.3		
1404033-15	BBC-02	Heptachlorobiphenyls	12.6		
1404033-15	BBC-02	Octachlorobiphenyls	5.51		
1404033-15	BBC-02	Nonachlorobiphenyls		UJ	
1404033-15	BBC-02	Decachlorobiphenyl		UJ	
1404033-15	BBC-02	Total PCBs	**131**	**J**	
1404033-14	BBC-03	Monochlorobiphenyls	0.46	J	pg/L
1404033-14	BBC-03	Dichlorobiphenyls	0.86	J	
1404033-14	BBC-03	Trichlorobiphenyls	6.61	J	
1404033-14	BBC-03	Tetrachlorobiphenyls	17.1	J	
1404033-14	BBC-03	Pentachlorobiphenyls	26.5		
1404033-14	BBC-03	Hexachlorobiphenyls	31.2		
1404033-14	BBC-03	Heptachlorobiphenyls	12.5		
1404033-14	BBC-03	Octachlorobiphenyls	1.87		
1404033-14	BBC-03	Nonachlorobiphenyls		UJ	
1404033-14	BBC-03	Decachlorobiphenyl		UJ	
1404033-14	BBC-03	Total PCBs	**97.1**	**J**	
1404033-12	BBC-04	Monochlorobiphenyls	0.192	J	pg/L
1404033-12	BBC-04	Dichlorobiphenyls	7.47	J	
1404033-12	BBC-04	Trichlorobiphenyls	6.62	J	
1404033-12	BBC-04	Tetrachlorobiphenyls	40		
1404033-12	BBC-04	Pentachlorobiphenyls	45.3		
1404033-12	BBC-04	Hexachlorobiphenyls	40.7		
1404033-12	BBC-04	Heptachlorobiphenyls	12.7		

MEL ID	Site ID	PCB Name	Result		UOM
1404033-12	BBC-04	Octachlorobiphenyls	3.03		
1404033-12	BBC-04	Nonachlorobiphenyls		UJ	
1404033-12	BBC-04	Decachlorobiphenyl		UJ	
1404033-12	BBC-04	Total PCBs	**156**	**J**	
1404033-18	BBC-04REP	Monochlorobiphenyls	0.202	J	pg/L
1404033-18	BBC-04REP	Dichlorobiphenyls	8.08	J	
1404033-18	BBC-04REP	Trichlorobiphenyls	7.19	J	
1404033-18	BBC-04REP	Tetrachlorobiphenyls	38.6		
1404033-18	BBC-04REP	Pentachlorobiphenyls	71.2		
1404033-18	BBC-04REP	Hexachlorobiphenyls	53.6		
1404033-18	BBC-04REP	Heptachlorobiphenyls	12.6		
1404033-18	BBC-04REP	Octachlorobiphenyls	4.08		
1404033-18	BBC-04REP	Nonachlorobiphenyls		UJ	
1404033-18	BBC-04REP	Decachlorobiphenyl		UJ	
1404033-18	BBC-04REP	Total PCBs	**196**	**J**	
1404033-16	COL-01	Monochlorobiphenyls	0.887		pg/L
1404033-16	COL-01	Dichlorobiphenyls	16.5	J	
1404033-16	COL-01	Trichlorobiphenyls	60.1	J	
1404033-16	COL-01	Tetrachlorobiphenyls	172		
1404033-16	COL-01	Pentachlorobiphenyls	175		
1404033-16	COL-01	Hexachlorobiphenyls	229		
1404033-16	COL-01	Heptachlorobiphenyls	48.3		
1404033-16	COL-01	Octachlorobiphenyls	17.3		
1404033-16	COL-01	Nonachlorobiphenyls	6.33		
1404033-16	COL-01	Decachlorobiphenyl		UJ	
1404033-16	COL-01	Total PCBs	**726**	**J**	
1404033-13	BUR-01	Monochlorobiphenyls	0.636	J	pg/L
1404033-13	BUR-01	Dichlorobiphenyls	1.81	J	
1404033-13	BUR-01	Trichlorobiphenyls	4.94	J	
1404033-13	BUR-01	Tetrachlorobiphenyls	11.4	J	
1404033-13	BUR-01	Pentachlorobiphenyls	13.2		
1404033-13	BUR-01	Hexachlorobiphenyls	14.6		
1404033-13	BUR-01	Heptachlorobiphenyls	5.54		
1404033-13	BUR-01	Octachlorobiphenyls	0.865	J	
1404033-13	BUR-01	Nonachlorobiphenyls		UJ	
1404033-13	BUR-01	Decachlorobiphenyl		UJ	
1404033-13	BUR-01	Total PCBs	**53**	**J**	
1404033-11	PET-01	Monochlorobiphenyls	14.7		pg/L
1404033-11	PET-01	Dichlorobiphenyls	39.7		
1404033-11	PET-01	Trichlorobiphenyls	17.1	J	
1404033-11	PET-01	Tetrachlorobiphenyls	47		
1404033-11	PET-01	Pentachlorobiphenyls	43.3		

MEL ID	Site ID	PCB Name	Result		UOM
1404033-11	PET-01	Hexachlorobiphenyls	32.7		
1404033-11	PET-01	Heptachlorobiphenyls	8.35		
1404033-11	PET-01	Octachlorobiphenyls	3.77		
1404033-11	PET-01	Nonachlorobiphenyls		UJ	
1404033-11	PET-01	Decachlorobiphenyl		UJ	
1404033-11	PET-01	Total PCBs	**207**	**J**	
1312033-16	FIELD BLANK	Monochlorobiphenyls		UJ	pg/L
1312033-16	FIELD BLANK	Dichlorobiphenyls	1.44	J	
1312033-16	FIELD BLANK	Trichlorobiphenyls	8.52		
1312033-16	FIELD BLANK	Tetrachlorobiphenyls	4.23	J	
1312033-16	FIELD BLANK	Pentachlorobiphenyls		UJ	
1312033-16	FIELD BLANK	Hexachlorobiphenyls		UJ	
1312033-16	FIELD BLANK	Heptachlorobiphenyls		UJ	
1312033-16	FIELD BLANK	Octachlorobiphenyls		UJ	
1312033-16	FIELD BLANK	Nonachlorobiphenyls		UJ	
1312033-16	FIELD BLANK	Decachlorobiphenyl		UJ	
1312033-16	FIELD BLANK	Total PCBs	**14.2**	**J**	
LAB BLANK		Monochlorobiphenyls		UJ	pg/L
LAB BLANK		Dichlorobiphenyls	3.84		
LAB BLANK		Trichlorobiphenyls	3.37		
LAB BLANK		Tetrachlorobiphenyls	0.538	J	
LAB BLANK		Pentachlorobiphenyls		UJ	
LAB BLANK		Hexachlorobiphenyls		UJ	
LAB BLANK		Heptachlorobiphenyls		UJ	
LAB BLANK		Octachlorobiphenyls		UJ	
LAB BLANK		Nonachlorobiphenyls		UJ	
LAB BLANK		Decachlorobiphenyl		UJ	
LAB BLANK		Total PCBs	**7.75**		

BBC-01: Burnt Bridge Creek downstream at 2nd Avenue bridge.
BBC-02: Burnt Bridge Creek at Rossiter Street Apartments.
BBC-03: Burnt Bridge Creek at Burton Channel confluence.
BBC-04: Burnt Bridge Creek at Peterson Channel confluence.
COL-01: Cold Creek at Burnt Bridge Creek confluence.
BUR-01: Burton Channel at the confluence with Burnt Bridge Creek.
PET-01: Peterson Channel at the confluence with Burnt Bridge Creek.

Table C-6. Total Organic Carbon, Total Suspended Solids, and CLAM^{TM} Flow Volumes Measured, Spring 2014.

Lab ID (1404033-) Site ID	02 BBC-04	04 BBC-03	05 BBC-02	07 BBC-01	06 COL-01	03 BUR-01	01 PET-01
	Day 1						
TOC[1]	1.4/1.6[3]	1.9	2.7	2.7	1.8	2.2	1.0 U
TSS[2]	4/4[3]	5	5	12	6	3	3
Flow Rate Initial (mLs)	68/64[3]	64	57	58	71	67	63
Lab ID (1404033-)	12	14	15	17	16	13	11
	Day 2						
TOC[1]	1.9/1.7[3]	2.4	3.1	3.7	2.7	3.1	1.1
TSS[2]	5/5[3]	5	10	18	3	3	3
Flow Rate Final (mLs)	4/5	2	5	2	2	3	26
Total Flow Volume (L)	46.9/45.8[3]	43.4	39.4	39.2	45.6	46.1	61.7

1: Total organic carbon.
2: Total suspended solids.
3: Results presented for both replicate field samples.
U: Not detected at the detection limit shown.
See site location list following Table C-5.

Table C-7. PCB Aroclors and Dieldrin in Stream and Wetland Sediments, 2014 (ug/Kg, dw).

Aroclor	PCB 1016	PCB 1221	PCB 1232	PCB 1242	PCB 1248	PCB 1254	PCB 1260	PCB 1262	PCB 1268	Total PCBs	Dieldrin
WET-02[1]	6.5 U	6.5 U	6.5 U	6.5 U	5.5 U	**9.6**	**3.6 J**	3.3 U	3.3 U	**13.2 J**	NS
WET-03[1]	15 U	15 UJ	15 U	15 UJ	**11 J**	**16 J**	7.6 U	7.6 U	7.6 U	**27 J**	NS
WET-04[1]	14 U	7 U	14 U	7 U	**15 J**	**22 J**	7 U	7 U	7 U	**37 J**	**0.99 J**
BBC-11	3.8 UJ	7.6 UJ	7.6 UJ	7.6 UJ	1.9 U	**2.3**	1.9 U	1.9 U	1.9 U	**2.3**	0.38 U
BBC-02	4.5 U	2.2 U	4.5 U	2.2 U	2.2 U	**2.8 J**	2.2 U	2.2 U	2.2 U	**2.8 J**	**0.54**
BBC-03	12 U	6.2 U	12 U	6.2 U	6.2 U	**6.5 J**	6.2 U	6.2 U	6.2 U	**6.5 J**	1.2 U
BBC-04	16 U	8.2 U	16 U	8.2 U	8.2 U	8.2 U	8.2 U	8.2 U	8.2 U	16 U	**4.9**
BBC-05	19 U	9.6 U	19 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	19 U	**5.1**
BBC-06	21 U	42 UJ	42 UJ	42 UJ	11 U	11 U	11 U	11 U	11 U	42 UJ	**2.6**
COL-02	4.0 U	2.0 U	4.0 U	2.0 U	3.2 UJ	**6.0 J**	2.0 U	2.0 U	2.0 U	**6.0 J**	NS
COL-03	3.4 U	1.7 U	3.4 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	3.4 U	NS
COL-04	7.6 U	3.8 U	7.6 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	7.6 U	NS
BUR-01	12 U	12 UJ	12 UJ	12 UJ	5.8 U	5.8 U	5.8 U	5.8 U	5.8 U	12 UJ	1.2 U
BUR-02	7.1 U	3.6 U	7.1 U	3.6 U	3.6 UJ	3.6 UJ	3.6 UJ	3.6 UJ	3.6 UJ	7.1 U	**0.87**
PET-01	8.7 U	4.3 U	8.7 U	4.3 U	4.3 U	**5.0 J**	4.3 U	4.3 U	4.3 U	**5.0 J**	NS
PET-02	17 UJ	34 UJ	34 UJ	68 UJ	**14 J**	**9.6 J**	8.5 U	8.5 U	8.5 U	**23.6 J**	NS
PET-03	15 U	15 UJ	30 UJ	30 UJ	**15 J**	**15 J**	7.6 U	7.6 U	7.6 U	**30 J**	NS
							SMS Criteria (ug/Kg, dw)			110	4.9

Bold: Detected compound.
U: Not detected at the detection limit shown.
UJ: Not detected at the estimated detection limit shown.
J: Compound positively identified, result is an estimate.
NS: Not sampled.
1: Wetland samples collected October 8th, all others July 21st, 2014.
2: Sediment Management Standards, WAC 173-204-563, Sediment Cleanup Objective.

Sample identification and description. For sample locations, see Figures A-3 for wetland sites and see Figure A-2 for all others.

Site	Sample ID	Description
WET-02	1409081-02	Wetland at discharge of Burnt Bridge Creek.
WET-03	1409081-03	Wetland center in deepest area.
WET-04	1409081-04	Near the wetland outlet tunnel to Vancouver Lake.
BBC-11	1407083-04	Burnt Bridge Creek above Cold Creek confluence.
BBC-02	1407083-05	Burnt Bridge Creek at Rossiter Street Apartments.
BBC-03	1407083-06	Burnt Bridge Creek at Burton Channel confluence.
BBC-04	1407083-07	Burnt Bridge Creek at Peterson Channel confluence.
BBC-05	1407083-08	Burnt Bridge Creek off 112th Street.
BBC-06	1407083-09	Burnt Bridge Creek upstream at NE 49th Street.
COL-02	1407083-17	Cold Creek at Ross Complex just before going subsurface.
COL-03	1407083-02	Cold Creek at Ross Complex Construct. Services Bldg.
COL-04	1407083-03	Cold Creek at construction site off 47th Street.
BUR-01	1407083-13	Burton Channel at Burnt Bridge Creek confluence.
BUR-02	1407083-14	Burton upstream at NE 96th Court and NE 21st Street.
PET-01	1407083-10	Peterson Channel near confluence with Burnt Bridge.
PET-02	1407083-11	Peterson Channel at the settling pond at I-205.
PET-03	1407083-12	Peterson Channel behind 4000 NE 109th Townhomes.

Table C-8. Grain Size Distribution-Gravel, Sand, Silt, Clay, Fines, and TOC.

Site ID	Sample ID[1]	Gravel (>2,000)	Sand (<2,000 x >62.5)	Silt (<62.5 x >4)	Clay (<4)	Fines (Silts + Clay)	TOC
	1409081						
WET-02	-02	1.3	82.1	15.3	1.3	16.6	2.43
WET-03	-03	1.4	40.6	51.6	6.4	58.0	7.64
WET-04[2]	-04	1.4	38.6	52.8	7.3	60.0	6.17
WET-03REP	-05	3.0	42.6	48.4	6.0	54.4	7.55
	1407083						
BBC-11	-04	5.0	90.0	2.7 J	2.3 J	5.0 J	0.94
BBC-02	-05	0.6	91.8	6.5	1.0	7.5	1.52
BBC-03	-06	7.4	41.4	41.1	10.1	52.0	8.57
BBC-04[2]	-07	11.3	29.5	45.0	14.2	59.2	13.1
BBC-05	-08	0.1	28.3	53.1	18.5	71.6	13.3
BBC-05REP	-16	0.1	32.0	51.0	17.0	68.0	13.0
BBC-06	-09	0.1	23.4	63.2	13.3	76.5	13.3
COL-02	-17	0.5	89.7	9.0	0.8	9.8	0.69
COL-03	-02	0.2	93.6	5.6	0.6	6.2	0.30
COL-04	-03	7.5	83.2	6.7 J	2.6 J	9.3 J	2.43
BUR-01	-13	41.1	51.0	2.9 J	5.0 J	7.9 J	5.39
BUR-02	-14	29.1	47.3	18.7	4.9	23.6	6.46
PET-01	-10	12.7	49.9	31.0	6.3	37.3	9.24
PET-02	-11	0.4	41.5	50.6	7.5	58.1	13.3
PET-02REP	-15	4.2	50.8	39.3	5.7	45.0	14.2
PET-03	-12	5.6	47.1	41.3	6.0	47.3	14.9

1: Sample locations listed below by ID number.
2: Sample results are the mean of triplicate (laboratory split) analyses.
J: Result is an estimate.

Site ID	Sample ID	Description
WET-02	1409081-02	Wetland at confluence with Burnt Bridge Creek.
WET-03	1409081-03	Wetland center at deepest area.
WET-04	1409081-04	Near the wetland outlet tunnel to Vancouver Lake.
BBC-11	1407083-04	Burnt Bridge Creek above Cold Creek confluence.
BBC-02	1407083-05	Burnt Bridge Creek at Rossiter Street Apartments.
BBC-03	1407083-06	Burnt Bridge Creek at Burton Channel.
BBC-04	1407083-07	Burnt Bridge Creek at Peterson Channel.
BBC-05	1407083-08	Burnt Bridge Creek off 112th Avenue next to gas station.
BBC-05REP	1407083-16	Replicate of Burnt Bridge Creek off 112th Avenue next to gas station.
BBC-06	1407083-09	Burnt Bridge Creek off NE 49th Street.
COL-02	1407083-17	Cold Creek downstream at Ross Complex just before going subsurface.
COL-03	1407083-02	Cold Creek at Ross Complex Construction Services Building.
COL-04	1407083-03	Cold Creek at 47th Street construction site.
BUR-01	1407083-13	Burton Channel at Burnt Bridge Creek.
BUR-02	1407083-14	Burton Channel within fenced ditch at NE 96th Court.
PET-01	1407083-10	Peterson Channel at Burnt Bridge Creek.
PET-02	1407083-11	Peterson Channel settling pond next to I-205.
PET-02REP	1407083-15	Replicate of Peterson Channel settling pond next to I-205.
PET-03	1407083-12	Peterson Channel behind Stonebrooke Townhomes off NE 109th.

Appendix D. Glossary, Acronyms, and Abbreviations

Glossary

Co-elution: When two or more chemical compounds elute from a chromatographic column at the same time, making individual identification difficult.

Dieldrin and Aldrin: The organochlorine insecticides dieldrin and aldrin have similar chemical structure and commercial uses. There are no natural sources of dieldrin or aldrin. Aldrin rapidly breaks down to dieldrin in plants and animals when exposed to sunlight or bacteria so we mostly find dieldrin in the environment. From the 1950s through the 1970s, dieldrin and aldrin were mainly used for the control of soil insects for crops like corn and cotton. Humans were exposed to these by eating contaminated foods like root crops, fish, or seafood. It is considered a probable human carcinogen. In 1970, the U.S. Department of Agriculture cancelled all uses of dieldrin and aldrin due to concerns about severe damage to aquatic ecosystems and the insecticides' potential carcinogenic properties. In 1972, the EPA lifted the cancellation to allow for use in termite control. Then in 1987, dieldrin and aldrin were again banned for use of termite control. Trade names for dieldrin include Alvit, Dieldrix, Octalox, Quintox, and Red Shield. Trade names for aldrin include Aldrec, Aldrex, Drinox, Octalene, Seedrin, and Compound 118 (ATSDR, 2002, USEPA, 2010).

Exceed a criterion: The term "exceed" a criterion is used instead of "violate" when the reported result is greater than the criterion but is not considered a violation of criteria (for example, when the criterion requires a sample average or multiple samples for comparison).

National Toxics Rule (NTR): A rule that establishes Federal criteria for about 150 priority pollutants adopted by states for the protection of human health.

Nonpoint source: Pollution that enters any waters of the state from any dispersed land-based or water-based activities, including but not limited to atmospheric deposition, surface-water runoff from agricultural lands, urban areas, or forest lands, subsurface or underground sources, or discharges from boats or marine vessels not otherwise regulated under the National Pollutant Discharge Elimination System (NPDES) program. Generally, any unconfined and diffuse source of contamination. Legally, any source of water pollution that does not meet the legal definition of "point source" in section 502(14) of the Clean Water Act.

Parameter: Water quality constituent being measured (analyte). A physical, chemical, or biological property whose values determine environmental characteristics or behavior.

PCBs (Polychlorinated biphenyls): There are no natural sources of PCBs. In the United States, PCB production began in 1929 by the Monsanto Company. Because PCBs are resistant to thermal breakdown, they were developed as a mixture of compounds widely used in industrial applications as insulating fluids, plasticizers, in inks and carbonless paper, as heat transfer and hydraulic fluids, and a variety of other uses. They were also used as stabilizing additives in the manufacture of flexible PVC coatings for electrical wiring and electronics to enhance the heat and fire resistance of the PVC. The commercial utility was based largely on their chemical stability which is also responsible for their persistence in the environment. As persistent organic pollutants, PCBs enter the environment through both use and disposal and are considered a likely carcinogen. In wildlife, PCBs demonstrate a trend to bioaccumulate and biomagnify in the food chain. Environmental transport is nearly global in scale. Due to PCBs' toxicity and persistence in the environment, production was banned by the United States Congress in 1979 and the Stockholm Convention on Persistent Organic Pollutants in 2001. Despite regulatory actions and an effective ban since the 1970s, PCBs still persist and are likely one of the most often detected groups of toxic chemicals in the environment today. There are a possible 209 different PCB congeners. Congeners are organic compounds each defined by the number and location of chlorine atoms located around a pair of biphenyl rings, i.e., two bonded hexagonal carbon rings. Toxicity among PCB congeners ranges widely, with 12 of the 209 considered toxic. These 12 have similar structure and properties of dioxin and furans and are referred to as dioxin-like compounds. From 1930 to 1977, Monsanto marketed and sold mixtures of PCB congeners under the trade name Aroclors. The combinations of congeners were mixed to create what was best suited for a specific application. The EPA started restrictions on the manufacture of PCBs in 1977 and by 1985 phased out use of PCBs through regulation. The biggest reservoir for PCBs is the planet's hydrosphere, followed by soils, then organisms. Even with low water solubility, oceans are vast and can dissolve a large amount of PCBs (ExtoxNet, 1997; ATSDR, 2000; ATSDR, 2001; USFWS, 2002).

Pollution: Contamination or other alteration of the physical, chemical, or biological properties of any waters of the state. This includes change in temperature, taste, color, turbidity, or odor of the waters. It also includes discharge of any liquid, gaseous, solid, radioactive, or other substance into any waters of the state. This definition assumes that these changes will, or are likely to, create a nuisance or render such waters harmful, detrimental, or injurious to (1) public health, safety, or welfare, or (2) domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses, or (3) livestock, wild animals, birds, fish, or other aquatic life.

Reach: A specific portion or segment of a stream.

Stormwater: The portion of precipitation that does not naturally percolate into the ground or evaporate but instead runs off roads, pavement, and roofs during rainfall or snow melt. Stormwater can also come from hard or saturated grass surfaces, such as lawns, pastures, and playfields, and from gravel roads and parking lots.

Watershed: A basin area or basin in which all land and water areas drain or flow toward a central collector such as a stream, river, or lake at a lower elevation.

Acronyms and Abbreviations

DOT	Washington State Department of Transportation
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
MEL	Manchester Environmental Laboratory
NOAA	National Oceanic and Atmospheric Administration
NTR	National Toxics Rule
PCB	Polychlorinated biphenyl

QA	Quality assurance
QC	Quality control
RPD	Relative percent difference
SMS	Sediment Management Standards
SOP	Standard operating procedures
SPE	Solid phase extraction
SPMD	Semipermeable membrane device
TOC	Total organic carbon
USGS	U.S. Geological Survey
WAC	Washington Administrative Code

Units of Measurement

dw	dry weight
kg	kilogram, a unit of mass equal to 1,000 grams
mg	milligram, a unit of mass equal to 0.001 gram
mg/Kg	milligrams per kilogram (parts per million)
mg/L	milligrams per liter (parts per million)
mL	milliliter, a unit of liquid volume equal to 0.001 liter
ng/L	nanograms per liter (parts per trillion)
pg/L	picograms per liter (parts per quadrillion)
ug/Kg	micrograms per kilogram (parts per billion)