



**RMP**  
REGIONAL MONITORING  
PROGRAM FOR WATER QUALITY  
IN SAN FRANCISCO BAY

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# San Leandro Bay Priority Margin Unit Study, Phase Two Data Report

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Phase Two Data Report**

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## Preface

The goal of RMP PCB special studies over the next few years is to inform the review and possible revision of the PCB TMDL and the reissuance of the Municipal Regional Permit for Stormwater, both of which are tentatively scheduled to occur in 2020. Conceptual model development for a set of four representative priority margin units will provide a foundation for establishing an effective and efficient monitoring plan to track responses to load reductions, and will also help guide planning of management actions. The Emeryville Crescent was the first PMU to be studied in 2015-2016. The San Leandro Bay PMU is second (2016-2017), Steinberger Slough in San Carlos is third (2017), and Richmond Harbor will be fourth (2018).

The conceptual model reports for these four PMUs will be developed and presented using a consistent framework, and will build on each other to form an integrated assessment of these four areas. The lessons learned from these analyses will also be more generally applicable to similar contaminated sites on the margins of the Bay.

This document is a data report on field studies to support development of a conceptual model for San Leandro Bay. Funding for these field studies was provided by two Supplemental Environmental Projects (SEPs). This report is a deliverable for the second SEP.

Additional field data will be generated by a study of fish gut contents. This work was funded by the Regional Monitoring Program and will be completed in early 2018.

A final conceptual model report that incorporates all of the data from Phase 1, Phase 2, and the gut contents study will be completed in 2018.

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## Abstract

The goal of RMP PCB Strategy work over the next two years is to inform the review and possible revision of the PCB TMDL and the reissuance of the Municipal Regional Permit for Stormwater (MRP), both of which are tentatively scheduled to occur in 2020. Conceptual model development for four priority margin units (PMUs) will provide a foundation for establishing an effective and efficient monitoring plan to track the response in the Bay to stormwater load reductions and also help guide planning of management actions. San Leandro Bay (Figure 1) is the subject of this report and the second PMU to be studied. Field studies have been performed in San Leandro Bay using funds from two Supplemental Environmental Projects. This data report documents the methods used in the San Leandro Bay field studies and presents the complete datasets generated for fish, sediment, and water.

Sediment, water, and fish samples were collected in August 2016. Sediment was sampled at thirty stations, water at three stations, and fish at nine stations. PCB congeners were analyzed in all samples. Ancillary parameters were analyzed in sediment (total organic carbon and grain size) and water (dissolved organic carbon, particulate organic carbon, suspended solids concentration, and total suspended solids). Results met reportability criteria, with the exception of dissolved organic carbon and one very coarse grain size fraction.

The mean sum of PCB (51 congeners) concentration in topsmelt was 182 ng/g, with station means ranging from 111 ng/g at San Leandro Channel Road to 244 ng/g at Alameda Channel. The mean concentration in shiner surfperch was 164 ng/g, with station means of 145 ng/g at Airport Lagoon and 183 ng/g at San Leandro Main Bay.

Sum of PCB (208 congeners) concentrations in 43 sediment samples from 30 stations ranged from 29 ng/g to 1136 ng/g, with a mean of 193 ng/g.

The sum of PCB (208 congeners) concentrations in individual grab water samples from 3 stations were 857 ng/g (station B5g in the northern open water of San Leandro Bay), 1011 ng/g (station SLBsub1 near the mouth of Damon Slough), and 1860 ng/g (E6g at the northern end of Airport Channel).

## Introduction

The RMP PCB Strategy Team formulated a PCB Strategy in 2009. The Team recognized that a wealth of new information had been generated since the PCBs TMDL Staff Report (SFBRWQCB 2008) was prepared. The Strategy articulated management questions to guide a long-term program of studies to support reduction of PCB impairment in the Bay. The PCB Team recommended two studies to begin addressing these questions. The first recommended study was to take advantage of an opportunity to piggyback on the final year of the three-year prey fish mercury sampling in 2010 to collect data on PCBs in prey fish also. The second study that was recommended was a synthesis and conceptual model update based on the information that had been generated since the writing of the TMDL Staff Report.

The prey fish monitoring revealed extremely high concentrations of PCBs in the food web in several areas on the Bay margins (Greenfield and Allen 2013), and highlighted a need to develop a more detailed conceptual model than the one-box model used as a basis for the TMDL. A model that would support the implementation of actions to reduce loads from small tributaries, a primary focus of the TMDL, would be of particular value. A revised conceptual model was developed that shifted focus from the open Bay to the contaminated areas on the margins where impairment is greatest, where load reductions are being pursued, and where reductions in impairment in response to load reductions would be most apparent (Davis et al. 2014).

The margins appear to be a collection of distinct local food webs that share some general similarities but are largely functionally discrete from each other. Monitoring, forecasting, and management should therefore treat these margin locations as discrete local-scale units. Local-scale actions within a margin unit, or in upstream watersheds, will likely be needed to reduce exposure within that unit. Better characterization of impairment on the margins through more thorough sampling of sediment and biota would help focus attention on the margin units where the need for action is greatest ("priority margin units" or PMUs), and will also provide an important performance measure for load reduction actions taken in local watersheds. Davis et al. (2014) recommended a focus on assessing the effectiveness of small tributary load reduction actions in priority margin units, and provided an initial foundation for these activities.

The 2014 update of the PCB Strategy called for a multi-year effort to implement the recommendations of the PCB Synthesis Report (Davis et al. 2014) pertaining to:

1. identifying margin units that are high priorities for management and monitoring,
2. development of conceptual models and mass budgets for margin units downstream of watersheds where management actions will occur, and
3. monitoring in these units as a performance measure.

A thorough and thoughtful planning effort is warranted given the large expenditures of funding and effort that will be needed to implement management actions to reduce PCB loads from urban stormwater.

The goal of RMP PCB Strategy work over the next few years is to inform the review and possible revision of the PCB TMDL and the reissuance of the Municipal Regional Permit for Stormwater (MRP), both of which are tentatively scheduled to occur in 2020. Gilbreath et al. (2015) identified four margin units that are high priorities for management and monitoring. Conceptual model development for these four priority margin units will provide a foundation for establishing an effective and efficient monitoring plan to track responses to load reductions and also help guide planning of management actions. The first PMU studied was the Emeryville Crescent (Davis et al. 2017). San Leandro Bay (Figure 1) is the subject of this report and the second PMU to be studied.

The goal of the PMU studies is to answer the following three questions related to management and monitoring of PCBs.

1. Can we expect a decline in any compartment of the PMU in response to projected load reductions in the PMU watershed?
2. How should tributary loads be managed to maximize PMU recovery?
3. How should the PMU be monitored to detect the expected reduction?

This data report documents the methods used in the San Leandro Bay field studies and presents the complete datasets generated for fish, sediment, and water.

## Methods

A brief summary of the sampling and analytical methods are provided here. Additional information is available in the 2016 San Leandro Bay Study Plan, available upon request from SFEI.

### Sample Collection

Sample collection and processing were performed by Coastal Conservation and Research (Moss Landing, CA). Appendix 1 provides a cruise report with details on the collection of all samples.

Sediment and water samples were collected in August 2016. Thirty sediment sites and three water sites were sampled. Sample dates, collection type, and latitude and longitude coordinates for these samples are presented in Appendix A at the end of Appendix 1. Benthic infauna samples were collected along with the sediment samples, but funding for analysis of these samples has not been obtained at the time of writing of this report.

Water samples were collected using a stainless-steel pole sampler with a 1-L amber glass jar inserted at the end of the pole. The pole was dunked into the water quickly about 1 m under the surface. When the bottle was pulled out of the water, a quick shake was administered to remove the top layer of water. Due to the rectangular shape of the SSC and bottles used for filtering for DOC/POC analyses, the 1-liter amber jar was used to fill these jars. The jars for PCB analyses were filled, quickly shaken, and capped.

Sediment was collected using a modified Van Veen grab of either 0.05 or 0.1 m<sup>2</sup> area depending on whether all 5 cm (former) or two depth layers (latter) were sampled. For the 10 two-depth layer sites (Figures 2-4), the upper 0-1 cm sediment was collected by carefully scraping the surface and scooping sediment into a 2 L polycarbonate tub. The lower 1-5 cm sediment was scooped in roughly the same total volume as the upper layer into a separate 2 L polycarbonate tub. Three sites were pre-selected for a duplicate sample to be collected. In these situations, a portion of each grab sample was left undisturbed for a full 0-5 cm sediment collection into a third 2-liter polycarbonate tub. Tub were kept on wet ice during the week until brought back to the laboratory for processing. Samples were stored in a -20° C freezer except for grain size, which was refrigerated and stored at 4-6° C, until shipment to the analytical laboratories. Benthic infauna samples were collected using the 0.05 m<sup>2</sup> area Van Veen grab and processed through a 0.5 mm sieve before preservation with a 10% buffered formalin solution.

Fish samples were collected in August 2016. Fish collection sites are shown in Figure 5. Fish tissue samples were collected using an otter trawl, cast net, or beach seine depending on the location and target fish. All fish samples were placed immediately on wet ice on the boat and then placed on dry ice at the end of each day

before storage in a -20° C freezer upon return to the laboratory. For each species (topsmelt and shiner surfperch) composite samples with 20 fish were prepared for analysis. Topsmelt were analyzed as whole body tissue, and shiner surfperch were analyzed whole body with skin on and viscera removed.

### Sample Preparation and Analysis

PCB concentrations in sediment and water were measured by AXYS Analytical Services Ltd. (Sidney, British Columbia, Canada). The analytical method (USEPA Method 1668C) used determines the concentration of 209 PCB congeners. Samples are spiked with <sup>13</sup>C<sub>12</sub>-labelled surrogate standards prior to analysis. Samples are extracted, the extracts cleaned up by column chromatography and analyzed by high-resolution gas chromatography with high-resolution mass spectrometric detection (HRGC/HRMS).

PCB concentrations in fish were measured by California Department of Fish and Wildlife's Water Pollution Control Laboratory in Rancho Cordova, CA. USEPA Method 1668C was also used for these analyses. The lab reported results for 51 congeners.

Total organic carbon and grain size in sediment were analyzed by ALS in Kelso, WA. Total organic carbon was determined using a method that references ASTM Method D4129-05 and USEPA Method 9060. Samples are combusted in an oxygen atmosphere to convert organic and inorganic forms of carbon to CO<sub>2</sub>. The CO<sub>2</sub> is then detected by coulometric titration, with coulometric end point indication, or using an infrared detector. Grain size was determined using a modification of ASTM D 422. Course particle size fractions are determined by using sieves, and the silt/clay portion of the sample is determined by pipette extraction.

Dissolved organic carbon, particulate organic carbon, suspended solids concentration, and total suspended solids were analyzed by ALS in Kelso, WA.

Dissolved organic carbon was determined using USEPA Method 9060A. The organic carbon in a filtered sample is determined by measuring carbon dioxide released by chemical oxidation of the non-purgeable organic carbon in the sample. After the sample has been acidified and purged of inorganic carbon, sodium persulfate, a strong oxidizer, is added. This oxidant quickly reacts with non-purgeable organic carbon in the sample at 100 °C to form carbon dioxide. The carbon dioxide is then purged from the solution, concentrated by trapping, then thermally desorbed (200° C) and carried into a non-dispersive infrared detector.

Particulate organic carbon was determined using USEPA Method 440.0. The sediment fraction of water was separated from the water through filtration using glass fiber filters. The sediment on the filter was then exposed to fuming HCl and then analyzing the filter for total carbon using a CHN elemental analyzer.

Suspended solids concentrations were determined using ASTM Method D3977 – 97. Various size fractions of sediment are separated using evaporation, filtration, or wet-sieving and filtration, and the fractions are dried and weighed.

Total suspended solids were determined using USEPA method 160.3. A well-mixed aliquot of the sample is quantitatively transferred to a pre-weighed evaporating dish and evaporated to dryness at 103-105°C.

### Quality Assurance Summary

Detailed information on quality assurance results is presented in Appendix 2. Quality assurance testing and assessment was performed in accordance with the RMP Quality Assurance Program Plan (Yee et al. 2017).

Sediment ancillary measurements were reportable for TOC and 9 of the 10 grain size fractions, with 91% of all results (10 of the 11 analytes) reportable for all samples. One very coarse size fraction (Granule+Pebble 2 to 64 mm) was not measured consistently (69% RSD), but very coarse fractions are difficult to distribute homogeneously enough among subsamples to get good agreement.

Water ancillary samples were 100% reportable for POC and SSC, but concentrations of DOC found in lab blanks constituted a significant portion (greater than 1/3) of the total measured signal in field samples, and all DOC results were therefore rejected and not reported (0% reportable).

Sediment PCBs analyses yielded results that were 99% reportable. All non-detects were seen for minor congeners, and low levels of blank contamination for minor congeners accounted for >1/3 of the overall concentrations measured in field samples (with results for those congeners in those field samples censored, i.e., rejected and not reported). However, the rejected results accounted for only about 1% of all the results reported.

Water PCBs analyses yielded 97% acceptable results, aside from blank concentrations accounting for >1/3 of the total signal for 11 congeners – these results were censored. For 84 of the 209 congeners reported, over 50% of samples were non-detects.

All (100%) of the fish PCB data were reportable. A dozen of the reported congeners were non-detects (below detection limits) in 50 to 100% of the samples.

## Results

### Fish

Results for PCB congener concentrations in fish are presented in Appendix 3.

Sum of PCB (51 congeners reported by the lab) concentrations in 24 composite samples of topsmelt from eight stations ranged from 107 ng/g to 304 ng/g. The median concentration was 177 ng/g, and the mean was 182 ng/g. Station means ranged from 111 ng/g at San Leandro Channel Road to 244 ng/g at Alameda Channel (Figure 6).

Sum of PCB concentrations in 6 composite samples of shiner surfperch from two stations ranged from 119 ng/g to 208 ng/g. The median concentration was 161 ng/g, and the mean was 164 ng/g. Station means were 145 ng/g at Airport Lagoon and 183 ng/g at San Leandro Main Bay (Figure 6).

### Sediment

Results for PCB congener concentrations in sediment are presented in Figure 7 and Appendix 4. Results for ancillary sediment measurements are presented in Appendix 7.

Sum of PCB (208 congeners) concentrations in 43 sediment samples from 30 stations (including both 0-1 cm and 2-5 cm layers, and field replicates) ranged from 29 ng/g to 1136 ng/g. The median concentration was 108 ng/g, and the mean was 193 ng/g. The maximum concentration (1146 ng/g) was observed at the mouth of East Creek Channel (station ECM20m, 0-1 cm layer). The second highest concentration (942 ng/g) was observed at the adjacent station (ECM100m, 0-5 cm layer). These two values were much higher than the rest of the dataset – the third highest concentration was 517 ng/g near the mouth of Elmhurst Creek (station ELMFF).

### Water

Results for PCB congener concentrations in water are presented in Appendix 5. Results for ancillary water measurements are presented in Appendix 6.

The sum of PCB (208 congeners) concentrations in individual grab water samples from 3 stations were 857 pg/L (station B5g in the northern open water of San Leandro Bay), 1011 pg/L (station SLBsub1 near the mouth of Damon Slough), and 1860 pg/L (E6g at the northern end of Airport Channel).

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## Figures

Figure 1. San Leandro Bay study area.

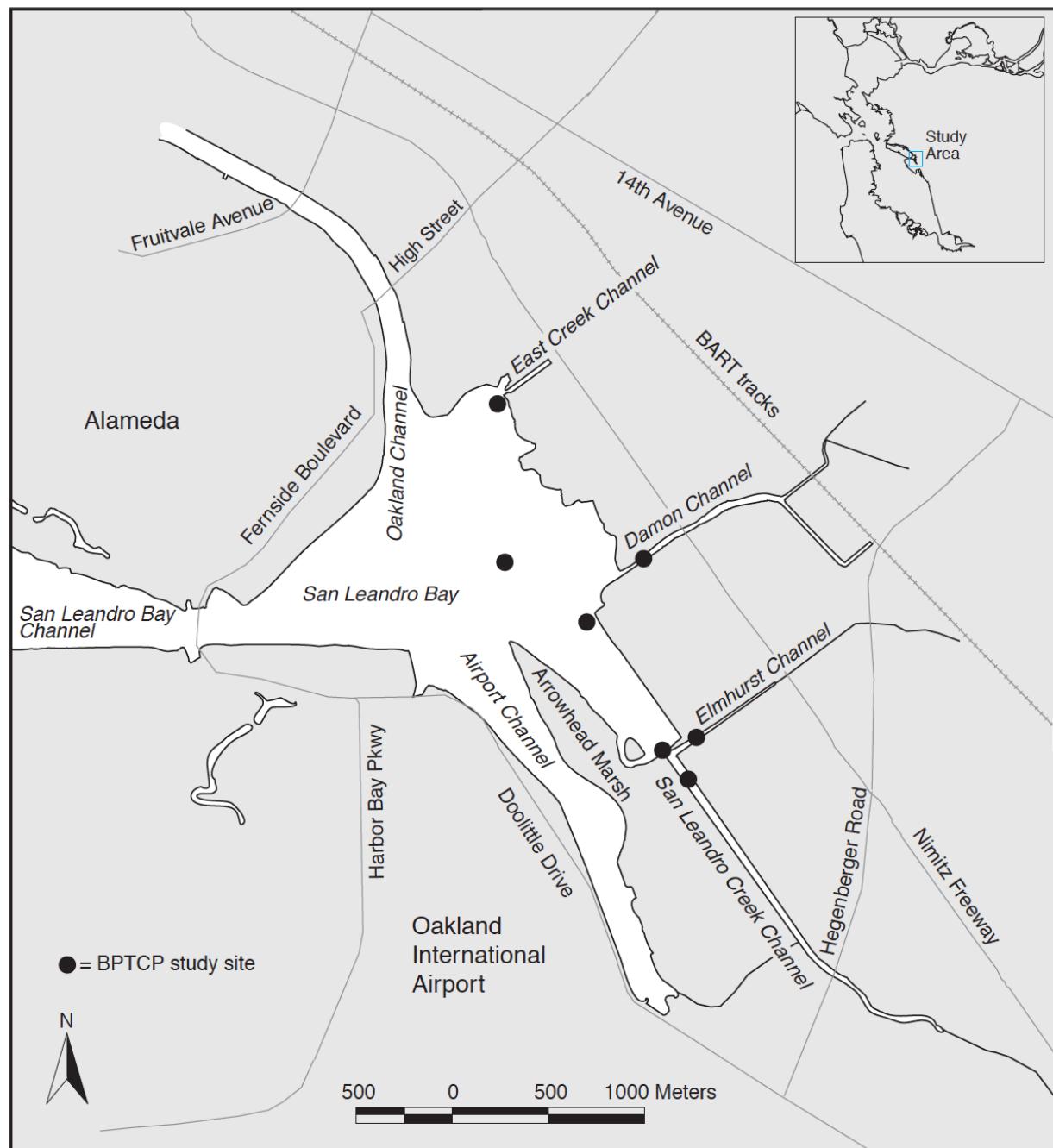


Figure 2. Study area with sampling locations for sediment and water.

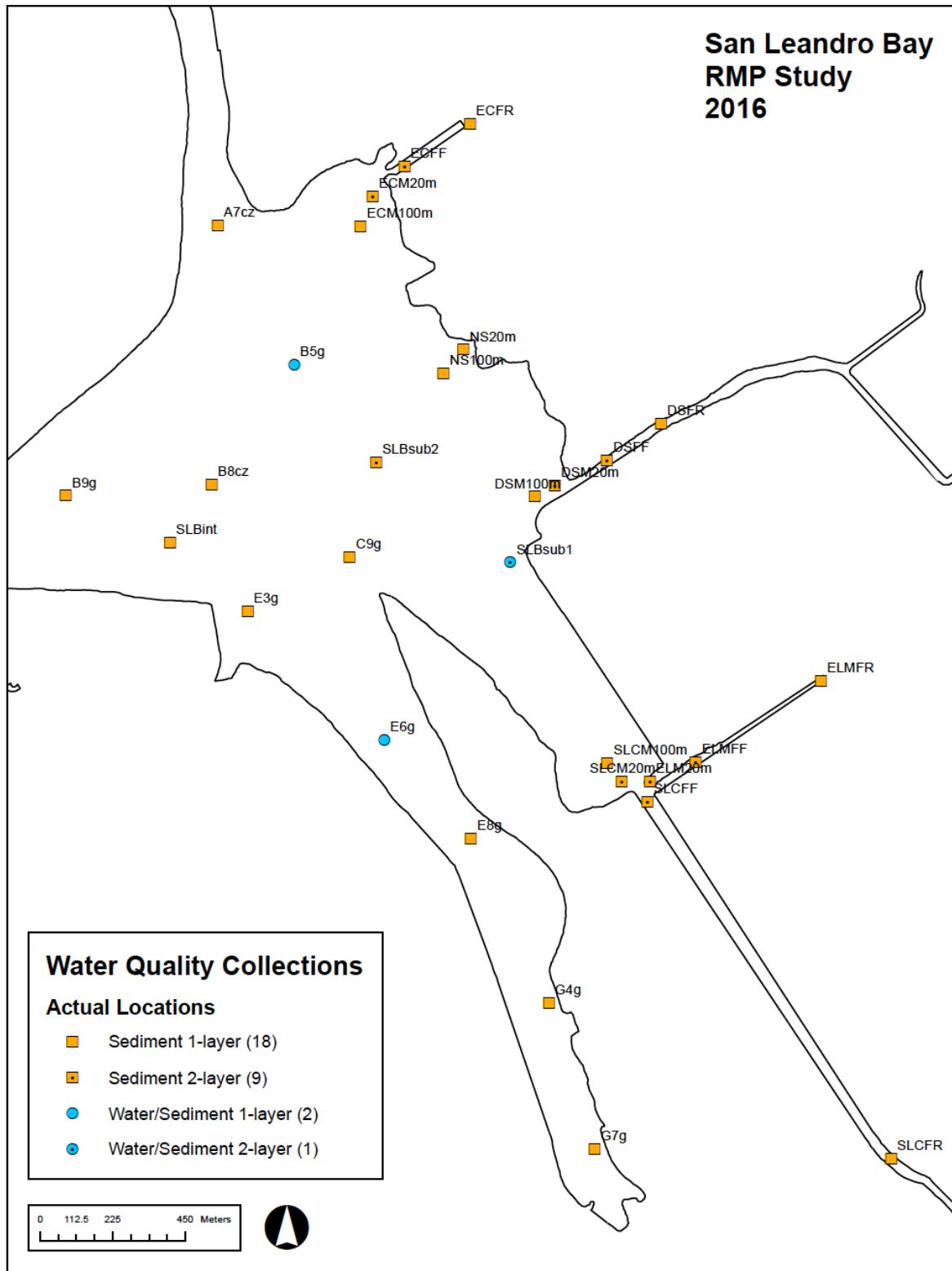


Figure 3. Study area with sampling locations for sediment and water, detail for Damon Channel.

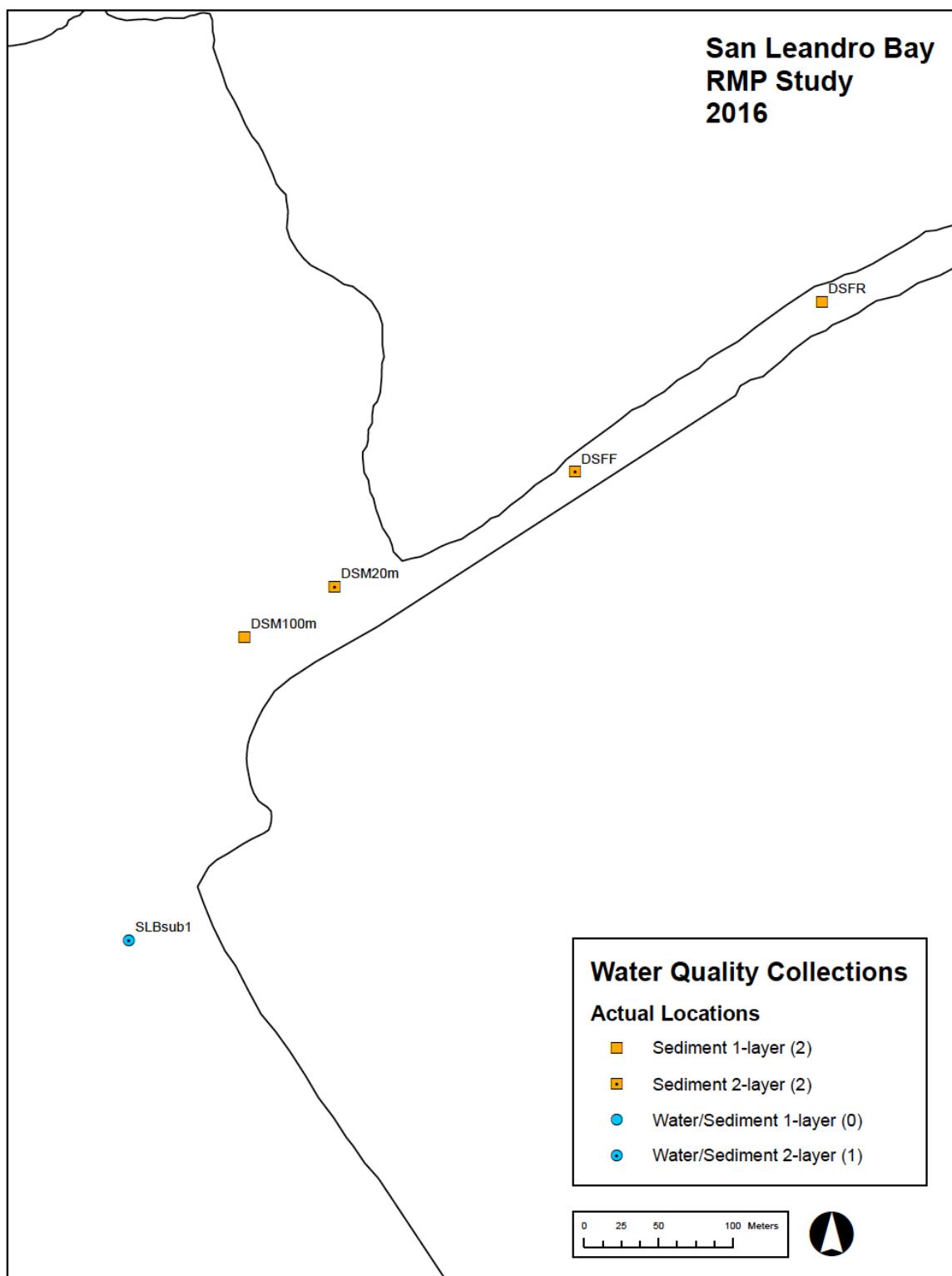


Figure 4. Study area with sampling locations for sediment and water, detail for Elmhurst Channel and San Leandro Creek Channel.



Figure 5. Study area with sampling locations and catch information for fish.

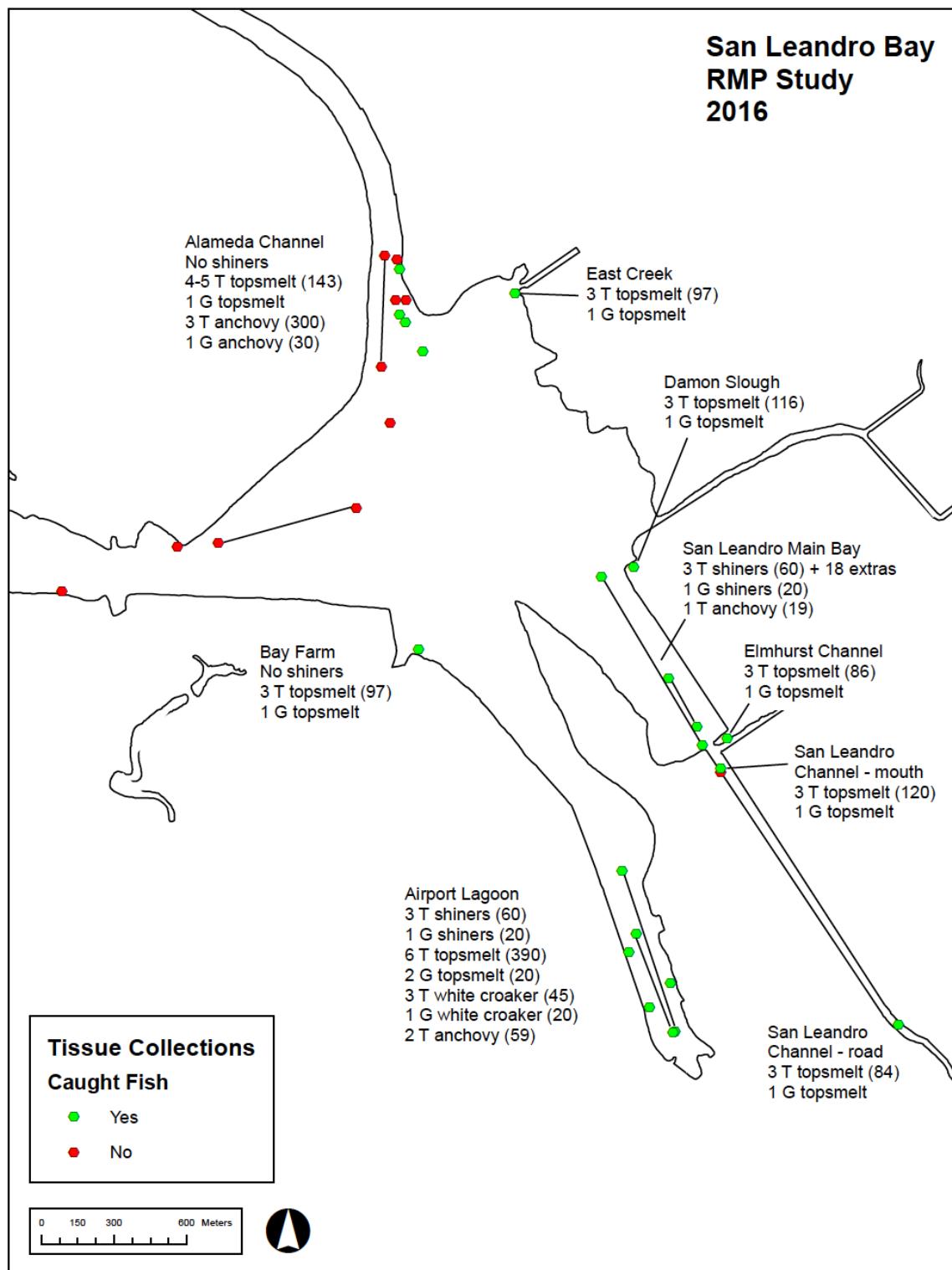


Figure 6. Sum of PCBs (51 congeners reported by the lab) in fish in San Leandro Bay, 2016. Bars show means, error bars show  $\pm 2$  SE. Topsmelt in blue; shiner surfperch in orange.

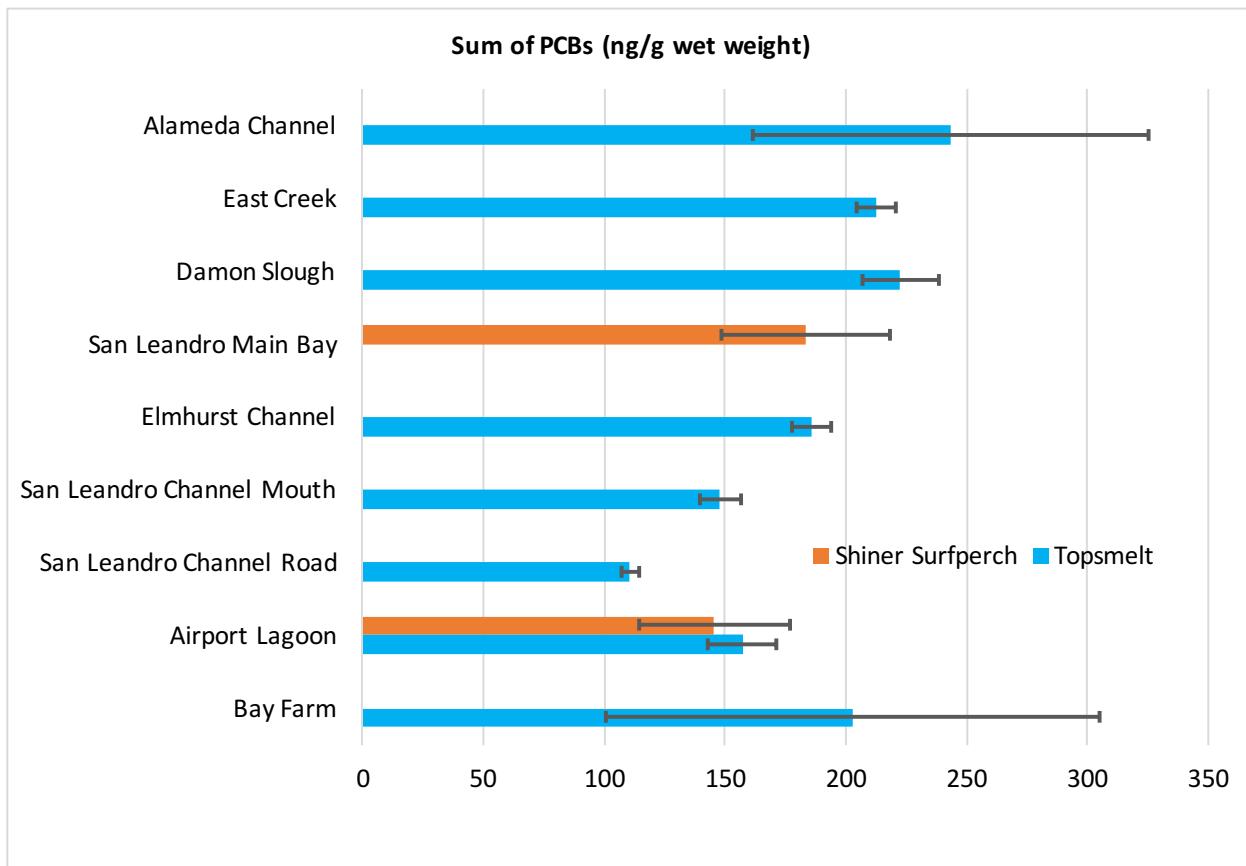
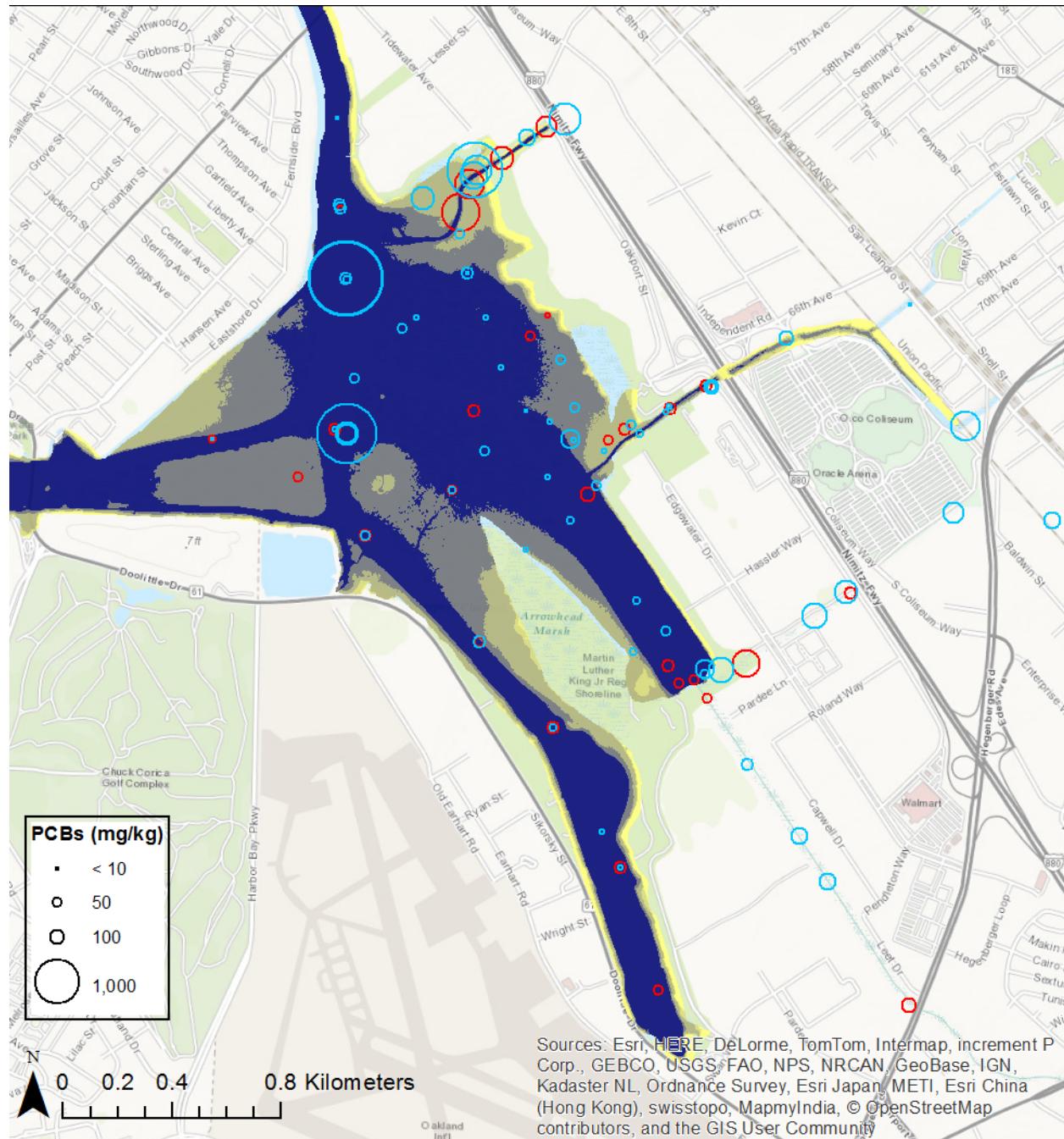


Figure 7. Sum of PCB (40 congeners) concentrations (ng/g dry weight) in sediment in the San Leandro Bay study area. Blue circles from 1998 (Daum et al. 2000), including surface grabs and deeper layers. Red circles from 2016 (the present study), with results for stations with two-layer sampling converted into a 0-5 cm value.



## Appendix 1: Cruise Report

# **Contaminant Concentrations In San Leandro Bay Water, Sediment, and Fish Tissue**



## **CRUISE REPORT Regional Monitoring Program 2016**



**Prepared for the  
San Francisco Estuary Institute**

**by  
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## Introduction

This report contains information on the summer field sampling efforts conducted by Coastal Conservation & Research (CC&R) in support of the Regional Monitoring Program's (RMP) San Leandro Bay study. The work was contracted through the San Francisco Estuary Institute (SFEI) to collect water, sediment, benthic infauna, fish tissue, and fish gut content samples.

This report includes sample collections over a three week period (August 8<sup>th</sup> through 24<sup>th</sup>) encompassing two trips. A total of 3 water and 30 sediment sites were sampled, three of which included collecting duplicate sediment samples. Benthic infauna samples were collected at 26 of the 30 sediment sites. At each site, habitat observations were recorded for water and sediment clarity, odor, color, and composition. Water samples were collected using a stainless steel pole sampler with a 1-liter amber glass jar inserted at the end of the pole. The pole was dunked into the water quickly about 1 meter under the surface. When the bottle was pulled out of the water, a quick shake was administered to remove the top layer of water. Due to the rectangular shape of the SSC and bottles used for filtering for DOC/POC analyses, the 1-liter amber jar was used to fill these jars. The jars for PCB analyses were filled, quickly shaken, and capped. Sediment was collected using a modified VanVeen grab of either 0.05 or 0.1 m<sup>2</sup> area depending on whether all 5 cm (former) or two depth layers (latter) were sampled. For two depth layer sites, the upper 0-1 cm sediment was collected by carefully scraping the surface and scooping sediment into a 2-liter polycarbonate tub. The lower 1-5 cm sediment was scooped in roughly the same total volume as the upper layer into a separate 2-liter polycarbonate tub. Three sites were pre-selected by SFEI for a duplicate sample to be collected. In these situations, a portion of each grab sample was left undisturbed for a full 0-5 cm sediment collection into a third 2-liter polycarbonate tub. Tubbs were kept on wet ice during the week until brought back to the laboratory for processing. Samples were stored in a -20°C freezer except for grain size, which was refrigerated and stored at 4-6°C, until shipment to the analytical laboratories. Benthic infauna samples were collected using the 0.05 m<sup>2</sup> area Van Veen grab and processed through a 0.5 mm sieve before preservation with a 10% buffered formalin solution. Fish tissue samples were collected using an otter trawl, cast net, or beach seine depending on the location and target fish. All fish samples were placed immediately on wet ice on the boat and then placed on dry ice at the end of each day before storage in a -20 degree freezer upon return to the laboratory. Detailed protocols can be found in the 2016 San Leandro Bay Study Plan prepared by SFEI.

This report details weekly synopses of sampling efforts and provides figures for sampling locations (see Figures 1-4). Target and actual latitude and longitude coordinates, sample dates, and type of collections are listed in Appendix A.

Copies of field data sheets, photographs, and CEDEN templates for field, chemistry, taxonomy, and tissue collections were provided to SFEI.

### Trip 1 - Sampling Dates: August 8-12, 2016

Sampling Crew: Rusty Fairey, Marco Sigala

The main objective of this cruise was to target sediment and fish tissue sites using afternoon high tides to access shallow areas. Twenty-one sites were successfully sampled for sediment and benthic infauna and four sites were sampled for fish tissue.

Monday, August 8<sup>th</sup>

The sampling crew started the week launching the vessel out of the East Bay Park's Martin Luther King Jr. Regional Shoreline (MLK) boat launch off Doolittle Drive. Nine 1-layer (G7g, G4g, E8g, E6g, E3g, SLBint, B9g, C9g, DSM100m) and one 2-layer (DSFF) sites were sampled. Most sites were shallow (<2 meter depth). Station G7g was deeper (5.7 m) with sediment composed of a black very fine silt/clay flocculent. Site DSM100m had some shell debris in the brown silt/clay sediment. All sites had silt/clay mud bottoms. All samples were collected and immediately placed on wet ice. The crew ended the day at 1800 hours.

Tuesday, August 9<sup>th</sup>

The sampling crew started the day at 0700 launching the vessel out of the MLK boat launch and targeted prey fish in Airport Lagoon using a cast net. More than 300 juvenile topsmelt (34-90 mm TL) were kept for tissue chemistry and 20 for gut content analyses. The crew then transited to Alameda Channel and set a 1" monofilament gill net along the channel edge. The net soaked for almost 7 hours without any fish caught. The crew then ran a 12 minute trawl along the channel catching >20 juvenile halibut and a lot of algae but no shiner surfperch. The crew then moved to the San Leandro Bay main bay area and ran 11 trawls along the channel. Sixty shiner surfperch (71-92 mm TL) and 19 northern anchovy (56-70 mm TL) were collected for tissue analyses and five shiner surfperch were kept for gut content analyses. The fish were immediately processed and put on wet ice after collection and then placed on dry ice at the end of the day. A 10% formalin solution was placed in a 1 liter jar with the shiner surfperch set aside for gut content analyses. The crew ended the day using the high tide to access site SLCM100m where sediment chemistry and benthic infauna samples were collected. No clear channel existed in the target location with a consistent depth of 4.5 m in the vicinity. The crew moved the site so the marsh was about 100 ft away. A lot of leaf litter and debris were found in the sediment samples. All samples were collected and processed accordingly.

Wednesday, August 10<sup>th</sup>

The sampling crew started the morning at the San Leandro Channel parking in a nearby parking lot and walking the bank to throw cast nets looking for prey fish. After an hour of working the bank, the crew did not end up with any fish since they appeared to be in the middle of the channel where the crew was unable to reach them with their cast nets. The crew then drove to the MLK boat launch to put the boat in the water and then transited to the main channel of Airport Lagoon. Ten trawl tracks were run along the channel with the better tracks run along the side near the road. Forty shiner surfperch (78-120 mm TL) and 45 juvenile white croaker (100-140 mm TL) were kept for tissue analyses and an additional 20 white croaker were kept for possible gut content analyses. All samples were processed immediately and placed on wet ice. The crew then transited to the Bay Farm area and ran two trawls along the channel. A lot of algae filled the trawl but no fish. The crew then moved to the San Leandro Bay main channel and ran four trawls. Eighteen shiner surfperch (78-100 mm TL) were kept for tissue analyses and an additional 15 were kept for gut content analyses. The crew ended the day sampling two sediment sites (SLCM20m and ELMFF). Site SLCM20m was moved a little to match the target specifications. Two sediment depths (0-1 and 1-5 cm) were collected along with a benthic infauna sample. Site ELMFF was chosen by SFEI as a duplicate site so two sediment depths were sampled as well as the full 0-5 cm depth. Clams and amphipods as well as trash were found in every grab. All samples were collected and processed accordingly.

Thursday, August 11<sup>th</sup>

The sampling crew launched the boat from the MLK boat launch and started with sediment collections at site SLBsub2. The surface was covered with algae making it difficult to scoop the top 1 cm of sediment to fill the tub. This day was pre-selected to collect water samples on a mid, outgoing tide at three sites. Site SLBsub1 was first sampled for sediment at 0930 with a duplicate collected and then water was collected at 1030. The crew then went to site B5g to collect water at 1055. Sediment was collected later in the day at 1535. The last water site (E6g) was sampled at 1110 and then the crew transited back to the boat launch to give water samples to Alicia Gilbreath for processing at SFEI. The crew returned to the water and switched gears to focus on tissue sampling in Airport Lagoon. Five trawls were run along the main channel in which 20 shiner surfperch (100-110 mm TL) and 59 northern anchovy (58-68 mm TL) were kept for tissue chemistry analyses and 20 shiner surfperch were kept for gut content analyses. The crew finished the day sampling four sediment sites. Site A7cz had a lot of shell hash present while site B5g had green filamentous algae on the sediment surface. A duplicate sediment sample was collected at site DSM20m. The sediment surface was covered with Corbicula clams in every grab. All samples were collected and processed accordingly with sediment samples placed on wet ice and tissue samples placed on dry ice. Benthic infauna and gut content samples were fixed in formalin.

Friday, August 12<sup>th</sup>

The sampling crew finished the week beginning with two sediment sites. Site ELM20m was relocated from the target location to the east to be closer to the sand spit and Elmhurst Channel. The sediment consisted of silt/clay with shell hash with green filamentous algae present on the surface. Site SLCFF was located fairly close to site ELM20m (Figure 3) and had a similar sediment composition with red and green filamentous algae and Ulva present on the sediment surface. Two depth layers were collected at each station. The sediment tubs were immediately placed on wet ice. The crew then transited to Alameda Channel to target fish. A trawl was run along the main channel filling the net with a lot of red and green algae plus the invasive Bugula bryozoan but no shiner surfperch or topsmelt. The crew switched to throwing a cast net along the eastern slope and bank of the channel. Forty-three topsmelt (50-100 mm TL) and 300 northern anchovy (60-80 mm TL) were kept for chemistry analyses and an additional 30 anchovy were kept for gut content analyses. Fish samples were immediately processed.

The sediment tubs from this trip were processed in the lab on August 15, 2016. Homogenized sediment for each site was aliquoted into analytical jars and then placed in a refrigerator (grain size/TOC) or in a -20°C freezer (PCBs and archives).

## Trip 2 - Sampling Dates: August 22-24, 2016

Sampling Crew: Rusty Fairey, Marco Sigala

The main objective of this cruise was to complete sampling for sediment and to target topsmelt at the prey fish locations. RV MSB1 was used to access sites the first day while a smaller aluminum skiff was used the remaining days to access shallower sites and creek channels under bridges. A Ponar grab was used to sample sediment for chemistry analyses (not benthic infauna) at four channel sites near road crossings (DSFR, ECFR, ELMFR, SLCFR). Nine sites were sampled for sediment and seven sites for fish tissue.

Monday, August 22<sup>nd</sup>

The sampling crew launched the boat and began tissue sampling mid-morning at Bay Farm. The crew used a cast net along the shoreline and near the boat marina without success. The crew then transited to Alameda Channel to throw the cast net along the channel slope and bank where they were successful the previous trip. Another 100 topsmelt (75-112 mm TL) for tissue chemistry and 20 for gut content analyses were kept, processed, and immediately placed on wet ice. The crew switched gears to focus on sediment sampling the rest of the day successfully sampling five sites – NS100m, NS20m, ECM100m, ECM20m, and ECFF. Site ECM100m had filamentous algae present in the grabs while the sediment composition at site ECFF contained some fines as well as sand and rock. Site ECM20m was moved slightly to get out of the channel according to the concept behind the target location. All samples were processed and placed on either wet or dry ice depending on the analyses.

Tuesday, August 23<sup>rd</sup>

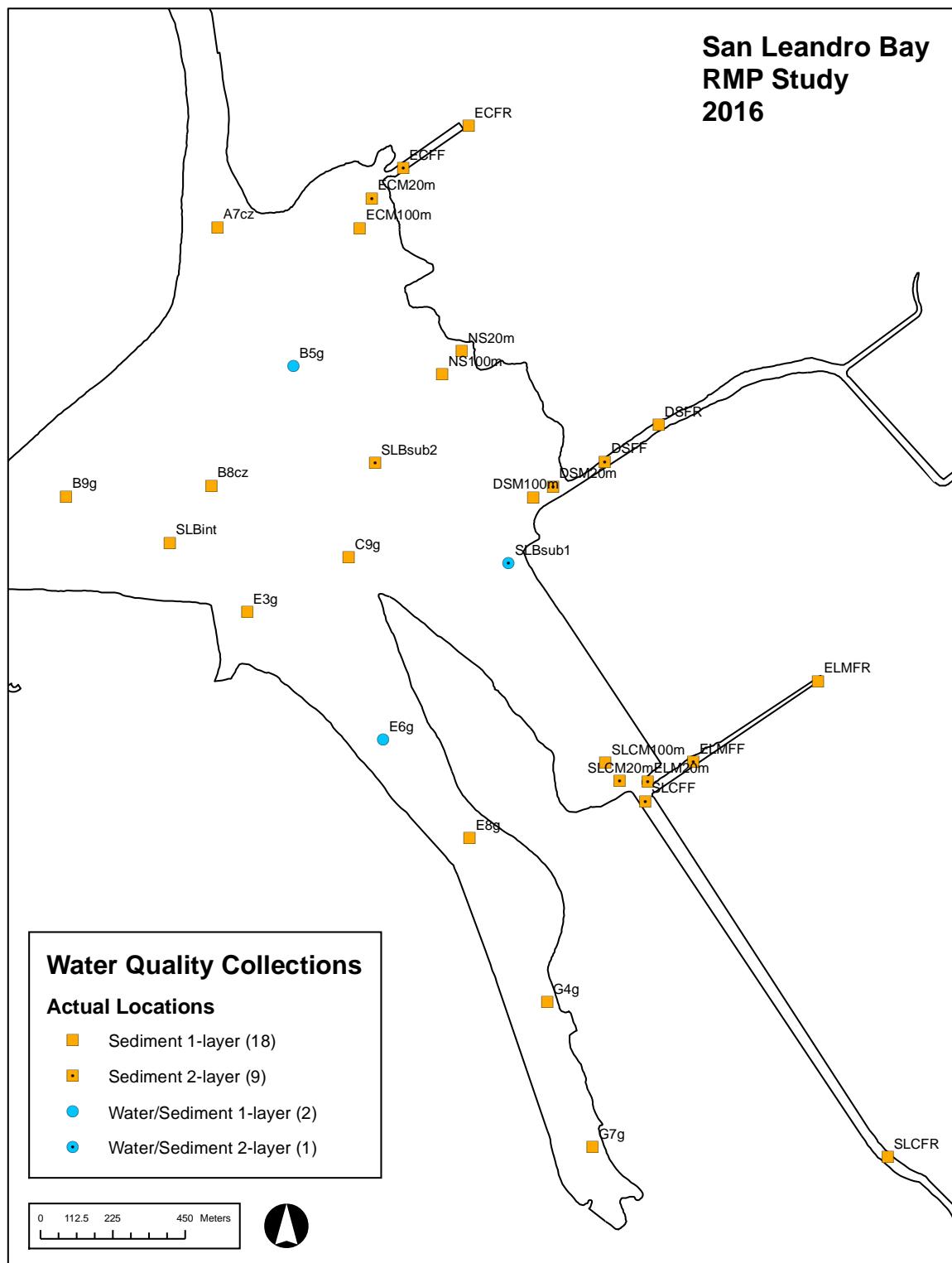
The sampling crew launched the aluminum skiff from the MLK boat launch and transited to Bay Farm. The crew was unable to beach seine around the main channel because the sediment was too soft. The crew moved to a location west of the bridge crossing without any fish caught in the seine. The crew then moved to the southern edge of Bay Farm near a little cove where a beach seine successfully caught 97 topsmelt (54-110 mm TL) for tissue chemistry and 20 for gut content analyses. The crew then transited back to Airport Lagoon and used the low tide to successfully seine the bank to catch an additional 90 topsmelt (54-112 mm TL) for tissue chemistry and 20 for gut content analyses. After closing out Bay Farm and Airport Lagoon, the crew moved to San Leandro Channel to seine. A seine (BN1) was used at the mouth of the channel as it enters San Leandro Bay, and 120 topsmelt (76-108 mm TL) for tissue chemistry and 23 for gut content analyses were kept. A second netting event (BN2) occurred at the back of the channel near Hegenberger Road where a cast net was used to catch 84 topsmelt (74-110 mm TL) for tissue chemistry and 20 for gut content analyses. The fish were kept separate in case SFEI wanted to analyze the samples individually. The crew finished the day sampling sediment at site SLCFR in the middle of the channel. Each grab contained algae. All samples were processed accordingly and placed on either wet or dry ice.

Wednesday, August 24<sup>th</sup>

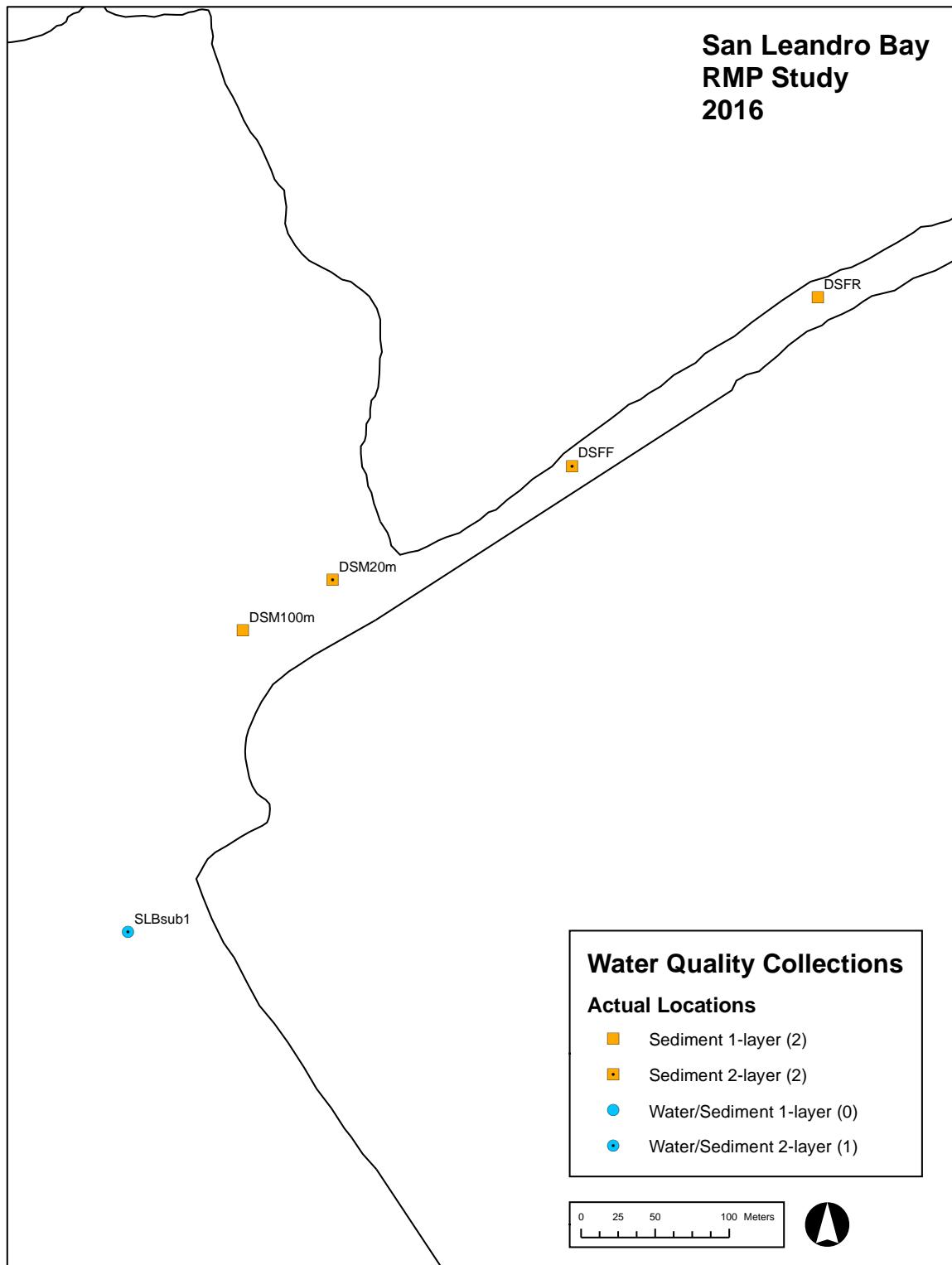
The sampling crew started the morning working in Elmhurst Channel looking for prey fish. Only small fish were seen and none were caught in the cast net. The crew collected sediment next to and on the downstream side of a storm drain concrete structure. All other locations in the channel were hard surfaces and the grab could not dig into the sediment. The crew then moved to Damon Slough to collect sediment at site DSFR. The crew attempted a beach seine along the channel but was unsuccessful because the fish were too small. The crew moved out of the channel to a nearby cove where it ran a seine from about 75 yards in the water towards the shore. The crew successfully caught 116 topsmelt (54-118 mm TL) for tissue chemistry and 21 for gut content analyses. The crew then transited to East Creek where it collected sediment at the back of the channel between multiple bridges in shallow water. Trash was present all along the channel and on the exposed mud flats. Only small prey fish were seen at the back of the channel so the crew moved toward the mouth as it opened into the bay. A beach seine was run on each bank pulling fish onto the mud flats. Ninety-seven topsmelt (80-124 mm TL) for tissue chemistry and 20 for gut content analyses were kept. The crew then transited back to Elmhurst Channel. Only small fish in low numbers were seen in the channel once again so the crew moved back to the mouth and worked the small spit of land with a beach seine. After five seine runs, the crew successfully caught 86 topsmelt (45-105 mm TL) for

tissue chemistry and 22 for gut content analyses. All samples were immediately processed after collection and placed either wet or dry ice.

The sediment tubs from this trip were processed in the lab on August 25, 2016. Homogenized sediment for each site was aliquoted into the remaining analytical jars and then placed in a refrigerator (grain size/TOC) or in a -20°C freezer (PCBs and archives).



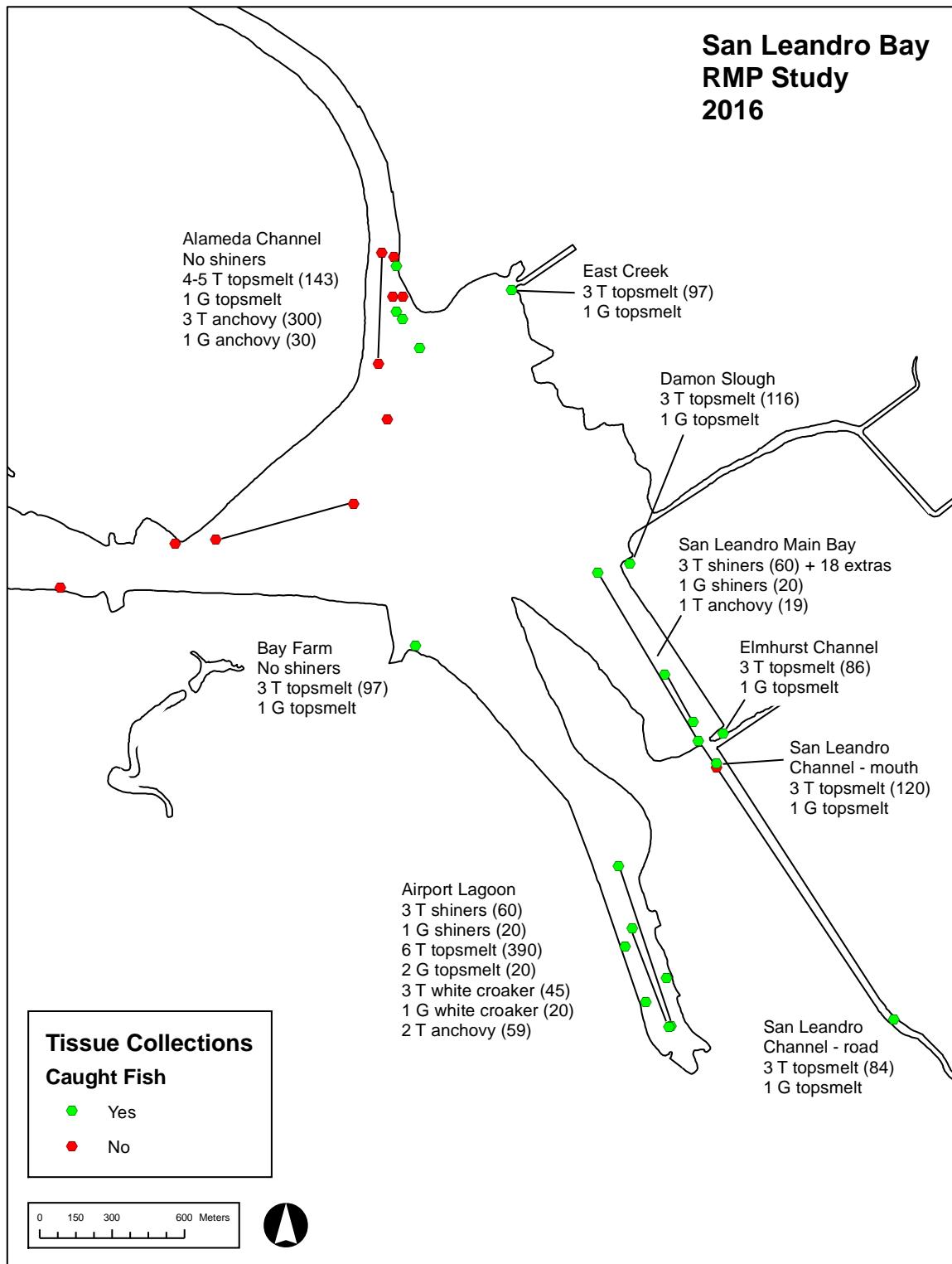
**Figure 1: Locations of all 30 sediment and 3 water sites sampled under the San Leandro Bay Study in 2016.**



**Figure 2: Locations of sediment sites sampled in Damon Slough under the San Leandro Bay Study in 2016.**



**Figure 3: Locations of sediment sites sampled in Elmhurst Channel and San Leandro Channel under the San Leandro Bay Study in 2016.**



**Figure 4: Locations of tissue sites sampled under the San Leandro Bay Study in 2016. Number of fish composites for tissue (T) and gut content (G) analyses are listed for each area.**

**Appendix A: Sample date, collection type, and target and actual latitude and longitude coordinates for sites sampled in the San Leandro Bay Study. S = sediment, B = benthic infauna, W = water**

Station Code	Station Name	Sample Date	Type	Latitude	Longitude	Actual Latitude	Actual Longitude
A7cz	alameda channel ~500m interval subtidal A7cz repeat	8/11/16	SB	37.75838	-122.22367	37.75830	-122.22365
B5g	500m interval subtidal B5g repeat	8/11/16	SBW	37.75447	-122.22095	37.75447	-122.22085
B8cz	500m interval subtidal B8cz repeat	8/11/16	SB	37.75107	-122.22365	37.75107	-122.22365
B9g	bay farm inlet 500m interval subtidal B9g repeat	8/8/16	SB	37.75065	-122.22877	37.75067	-122.22878
C9g	intertidal C9g repeat	8/8/16	SB	37.74915	-122.21872	37.74915	-122.21873
DSFF	Damon Slough First Road - channel settling zone of pillar/support	8/8/16	SB	37.75202	-122.20965	37.75200	-122.20975
DSM100m	Damon Slough mouth 100m	8/8/16	SB	37.75093	-122.21224	37.75095	-122.21225
DSM20m	Damon Slough mouth 20m	8/11/16	SB	37.75128	-122.21160	37.75127	-122.21157
E3g	500m interval subtidal E3g repeat	8/8/16	SB	37.74757	-122.22230	37.74757	-122.22228
E6g	500m interval subtidal E6g repeat	8/8/16 (S), 8/11/16 (W)	SBW	37.74415	-122.21745	37.74408	-122.21737
E8g	500m interval subtidal E8g repeat	8/8/16	SB	37.74140	-122.21427	37.74138	-122.21423
ECFF	East Creek First Road	8/22/16	SB	37.76011	-122.21699	37.76007	-122.21713
ECM100m	East Creek Mouth 100m	8/22/16	SB	37.75835	-122.21863	37.75838	-122.21862
ECM20m	East Creek Mouth 20m	8/22/16	SB	37.75928	-122.21830	37.75922	-122.21822
ELM20m	Elmhurst Channel 20m from mouth	8/12/16	SB	37.74306	-122.20842	37.74308	-122.20798
ELMFF	Elmhurst Cr First Road - channel settling zone of pillar/support	8/10/16	SB	37.74369	-122.20632	37.74367	-122.20638
G4g	500m interval subtidal G4g repeat	8/8/16	SB	37.73682	-122.21133	37.73683	-122.21135
G7g	500m interval subtidal sites G7g repeat	8/8/16	SB	37.73278	-122.20963	37.73282	-122.20963
NS100m	no source transect intertidal 100m shore	8/22/16	SB	37.75431	-122.21559	37.75433	-122.21558
NS20m	No source transect 20m	8/22/16	SB	37.75501	-122.21489	37.75500	-122.21490
SLBint	new intertidal	8/8/16	SB	37.74945	-122.22514	37.74945	-122.22507
SLBsub1	500m interval subtidal repeat past site 1	8/11/16	SBW	37.74912	-122.21306	37.74910	-122.21308

<b>Station Code</b>	<b>Station Name</b>	<b>Sample Date</b>	<b>Type</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Actual Latitude</b>	<b>Actual Longitude</b>
SLBsub2	500m interval subtidal repeat past site 2	8/11/16	SB	37.75180	-122.21788	37.75182	-122.21788
SLCFF	SLC First Road - channel settling zone of pillar/support	8/12/16	SB	37.74254	-122.20799	37.74253	-122.20805
SLCM100m	San Leandro Creek Mouth 100m	8/9/16	SB	37.74352	-122.20954	37.74357	-122.20950
SLCM20m	San Leandro Cr mouth 20m	8/10/16	SB	37.74297	-122.20908	37.74308	-122.20897
DSFR	Damon Slough First Road - channel settling zone of pillar/support	8/24/16	S	37.75280	-122.20824	37.75306	-122.20789
ECFR	East Creek First Road - channel in pillar/support eddy zone	8/24/16	S	37.76125	-122.21512	37.76131	-122.21486
ELMFR	Elmhurst Cr First Road - channel settling zone of pillar/support	8/24/16	S	37.74607	-122.20201	37.74599	-122.20204
SLCFR	SLC First Road - channel settling zone of pillar/support	8/24/16	S	37.73248	-122.19916	37.73273	-122.19918

## **Appendix 2: 2016 San Leandro Bay Special Study Quality Assurance Report**



4911 Central Ave, Richmond, CA 94804, p: (510) 746-7334, f: (510) 746-7300 [www.sfei.org](http://www.sfei.org)

To: Philip Trowbridge, RMP Manager  
Jay Davis, RMP Lead Scientist  
From: Don Yee, Quality Assurance Officer  
Date: December 13, 2017  
Re: 2016 San Leandro Bay Special Study Quality Assurance Report

### Introduction

In 2016, water, sediment, and fish tissue samples were collected in areas within San Leandro Bay and adjoining small tributaries. All samples were analyzed for PCBs, and ancillary parameters that could help explain their concentrations and partitioning behavior. The details of the monitoring plan and sample collection methods are described in the 2016 San Leandro Bay Study Plan.

The samples were analyzed for the following compounds by the laboratories indicated:

- *ALS – Sediment grain size, TOC, total solids*
- *ALS – Water DOC, POC, SSC*
- *AXYS – Sediment and water PCBs*
- *DFW-WPCL – Fish PCBs*

This review was conducted by SFEI scientists and technical staff under the supervision of QA officer Dr. Donald Yee. The SFEI Data Services Team checked the laboratory results using the methods and data quality objectives in the RMP Quality Assurance Project Plan (QAPP). Overall, over 95% of the results were determined to be acceptable for use in RMP reports and calculations.

This memo provides a high-level summary of the quality assurance assessment for each dataset. Non-conformances with the RMP QAPP and corrective actions needed for the next round of monitoring are highlighted in gray shading. The details of the quality assurance assessment of each dataset are provided in Appendix A.

Once approved by the RMP Manager and Lead Scientist, all uncensored results are uploaded to the San Francisco Regional Data Center and CEDEN.

Summary statistics are shown for individual reported analytes (Table 1), aside from PCBs, where due to the large number of congeners, the range of results for individual congeners (i.e., minimum and maximum) are provided instead of a summary line for each congener.

Table 1. QA Summary for chemical analytical results (RPD = relative percent difference)

Analyte	% Exceeding hold time	% Non-detects	% Result <3xBlank	Average % Recovery	Average % RPD or RSD	% Results Reported
<b>Water</b>						
PCBs Avg	0%	9.3%	3.3%	95%	3.7%	97%
Min <sup>1</sup>		0%	0%	88%	0.3%	0%
Max <sup>1</sup>		100%	100%	100%	11%	100%
DOC	0%	8.3%	100%	98%	47%	0%
POC	0%	33%	0%	100%	3.3%	100%
SSC	100%	0%	0%	96%	1.1%	100%
<b>Sediment</b>						
PCBs Avg	0%	12%	0.6%	105%	5.6%	99%
Min <sup>1</sup>		0%	0%	72%	0.4%	70%
Max <sup>1</sup>		100%	18.31%	156%	18%	100%
TOC	52%	0%	0%	100%	0.8%	100%
Grain size Avg	0%	3.3%	NA	NA	12%	90%
Min <sup>2</sup>		0%			2.3%	0%
Max <sup>2</sup>		28%			69%	100%
<b>Fish</b>						
PCBs Avg	0%	22%	0%	87%	4.6%	100%
Min <sup>1</sup>		0%	0%	65%	0.8%	100%
Max <sup>1</sup>		100%	0%	115%	7.9%	100%
Lipid	NA	0%	NA	NA	4.2%	100%

<sup>1</sup> Min and Max are aggregate statistics for each PCB congener individually

<sup>2</sup> Min and Max are aggregate statistics for each grain size bin individually

NA = not analyzed typically for grain size samples

### General summary and future recommendations

#### ALS – Sediment grain size, TOC

Sediment ancillary measurements were reportable for TOC and 9 of the 10 grain size fractions, with 91% of all results (10 of the 11 analytes) reportable for all samples. One very coarse size fraction (Granule+Pebble 2 to 64 mm) was not measured consistently (69% RSD), but very coarse fractions are difficult to distribute homogeneously enough among subsamples to get good agreement. We suggest that future replicate grain size analyses should also be performed through repeat analyses of fractionated subsamples after recombination, to determine if the same size distribution result is re-obtained for a particular subsample, in addition to variation among different analyzed subsamples of the same collected sample already conducted. Interpretation of results focusing on the more consistently distributed smaller size fractions should also be considered for future rounds, e.g., presorting to only 2mm and finer material, or adjusting fraction percentages for grain size data to the percent of total sediment mass in 2 mm and smaller fractions. The lab also continues to report grain size fractions as a percent of mass determination for a separately analyzed subsample used for moisture determination, which is often smaller (and thus likely less precise and accurate) in total mass than the subsample used for sieving separation. Although SFEI data management staff can continue to recalculate/normalize fractions based on mass relative to the sum of separated fractions, this should be an unnecessary step if the lab reported fractions as requested (i.e., for the actually fractionated subsample, as opposed to assuming that all subsamples would have the same bulk density and moisture content).

*ALS – Water DOC, POC, SSC*

Water ancillary samples were 100% reportable for POC and SSC, but concentrations of DOC found in lab blanks constituted a significant portion (greater than 1/3) of the total measured signal in field samples, and all DOC results were therefore rejected and not reported (0% reportable). Future analyses should consider collection of more or larger samples for DOC, to allow repeated analyses, perhaps using different methods if blank contamination by the selected analytical method is significant. Furthermore, the DOC results for RMP open Bay sites are typically >1 mg/L, so results from San Leandro Bay largely below 0.2 mg/L (even without censoring for blank contamination) seem suspect. Censoring and not reporting the current DOC data therefore seems appropriate.

## AXYS – Sediment PCBs

Sediment PCBs analyses yielded results similar to those seen for open Bay samples, with 99% of results reportable. All non-detects were seen for minor congeners, and low levels of blank contamination for minor congeners accounted for >1/3 of the overall concentrations measured in field samples (with results for those congeners in those field samples censored, i.e., rejected and not reported). However, the rejected results accounted for only about 1% of all the results reported. Recoveries on certified reference materials (CRMs) and spiked blank (laboratory control samples) were within 35% of their target values, aside from PCBs 87 and 151 at about 150% of their targets. Precision on lab replicates was within 35% RSD for all congeners, so no analytes were flagged for poor precision. Concentrations were higher than typically found in open Bay sites, but such results were expected given the enclosed nature of San Leandro Bay and past results with high concentrations.

## AXYS - Water PCBs

Water PCBs analyses yielded 97% acceptable results, aside from blank concentrations accounting for >1/3 of the total signal for 11 congeners – these results were censored. For 84 of the 209 congeners reported, over 50% of samples were non-detects. Accuracy was evaluated using laboratory control samples, with average recovery ranging from 88 to 100%, well within the desired 35% of the target concentration. Precision on congeners found at least 3x over their respective MDLs had average RSDs 11% or lower, meeting the target 35%. Average water column concentrations varied widely relative to past open Bay RMP data for individual congeners, in part due to the small (4L) grab samples collected, compared to past RMP efforts using high volume integrated solid phase extraction. Solid phase extraction tends to bias low for heavier congeners with slow partitioning kinetics relative to grab samples, but also yields more consistent results within sites due to the long collection time, which tends to smooth out momentary changes in SSC and other characteristics affected by tides and currents.

## DFW-WPCL – Fish PCBs

All (100%) of the fish PCB data were reportable. A dozen of the reported congeners were non-detects (below detection limits) in 50 to 100% of the samples. PCB congeners were not found in the method blanks at concentrations above the method detection limits. Accuracy in a certified reference material (NIST 1946) was within the target MQO of <35% error, ranging from 65% to 115% recovery. Precision on laboratory replicates of the composites had average RSDs from 4% to 8% for congeners found at least 3x over their MDLs. A change that should be considered for the future (in the RMP QAPP and in analyses to be performed by a different lab, as DFW-WPCL will no longer perform contract analysis) is to treat lipid analysis more like a chemical result (with recovery samples, and precision from replicate analyses)

rather than as an ancillary measure like moisture %, where a single result is obtained for all samples just to convert reporting units, and no recovery for samples with known/expected results are tested.

## Appendix A: QA Narratives for Individual Datasets

### ALS

#### Sediment

##### Grainsize

###### QA Issues for Project Manager to Review

Should consider requesting reanalyses of recombined subsamples as replicates, in addition to replicate splits of different subsamples from a larger sample. The latter characterizes sample heterogeneity, while recombination and reanalysis of a given subsample tests the repeatability of sieving fractionation (e.g. tendencies to aggregate or break up particles in processing, shifting size distribution). This may only be possible on the coarser (>63um?) fractions, if they use pipet method on finer fractions, a portion of the sample after drying and weighing may be lost.

###### Reporting Issues for Lab to Review

We would very much prefer reporting mass percent relative to the subsample actually being analyzed (all percentages sum to 100%), as opposed to relative to the expected dry mass determined from the subsample taken for moisture (or total solids) content. The same crosschecks can be made, just that we see the mass of the actual subsample fractionated as being primary/more reliable, rather than that mass estimated from a different subsample. I.e. Sum of fractionated masses should be used as the denominator for the grain size percent.

(sum of fraction masses)/(original wet subsample mass for fractionation) = total solids % for fractionated subsample.

Then the total solids of your usual method becomes a crosscheck

(dried mass of total solids subsample)/wet mass to total solids subsample = total solids % for that subsample

Algebraically all the results are the same, since the weighed fraction masses are all the same, just the denominator used for all changing. Alternatively you could initially determine all your fractions the usual way (dividing by the hypothetical expected dry mass of the fractionated subsample) and then do the conversion on each fraction at the end before reporting to us e.g.:

%fine sand (SFEI) = %fine sand (ALS) \* 100%/(sum of %fractions).... etc for all the fractions.

Thus if all the fractions by the usual ALS reporting convention add up to >100%, this scales them down, or if <100%, this scales them up.

###### Formatting Issues for Data Manager to Review

Same as above. It is a pain to always have to renormalize the data to get the fractions to sum to 100%

###### Hold time review (especially desired by stormwater programs)

Samples were analyzed between 12 and 28 days after collection well within the 6 month holding time specified in the 2016 RMP QAPP for grain size analysis.

###### QA Review

###### *Dataset completeness*

Results were reported for 43 sediment field sample for 10 analyte/fraction combinations (Clay/<0.005 mm; Silt/0.0039 to <0.0625 mm; Fine/<0.0625 mm; Sand/V. Fine 0.0625 to <0.125 mm; Sand/Fine 0.125 to <0.25 mm; Sand/Medium 0.25 to <0.5 mm; Sand/Coarse 0.5 to <1.0 mm; Sand/V. Coarse 1.0 to <2.0

mm; Sand/0.0625 to <2.0 mm and Granule + Pebble/2.0 to <64 mm) analyzed in one lab batch. Data were reported not blank corrected.

Analyte/fraction combinations were rescaled so that they added to 100% for each sample.

#### *Overall acceptability*

Data were generally acceptable. No MDLs were reported, but the majority of the analyte/fraction combinations had results. The exceptions were 12 Granule + Pebble/2.0 to <64 mm and 2 Sand/V. Coarse 1.0 to <2.0 mm results which were reported as zero (0).

No method blanks or spiked samples were analyzed.

Precision was evaluated using the laboratory replicates. The average RSD for the analyte/fraction combinations ranged from 2.27% to 68.89%, with the coarser analyte/fraction combinations having larger average RSDs. The target MQO of 20% was exceeded for only the Granule + Pebble/2.0 to <64 mm combination and those results were flagged with the censoring qualifier of VRIL for poor precision (average RSD was 68.89%).

Grain size results were compared to the average results for the 1993-2015 RMP Status and Trends sediment samples with the same analyte/matrix combinations and units. San Leandro Bay sediments were dominated by Fines (~62%) similar to the RMP (~71%) with the difference being due to the increased percent of Clay in the RMP samples (44% compared to 29%). The San Leandro Bay samples were sandier than the RMP samples (36.5% compared to 26.5%). Granule + Pebble results were similar (1.6% versus 3.2%).

#### *MDLs sensitivity*

No MDLs were reported, but the majority of the analyte/fraction combinations had results. The exceptions were 12 Granule + Pebble/2.0 to <64 mm and 2 Sand/V. Coarse 1.0 to <2.0 mm results which were reported as zero (0).

#### *QB averages (procedural, field blank)*

No method blanks were analyzed.

#### *Accuracy (using a variety of SRMs or Matrix spike QRECs)*

No spiked samples were analyzed.

#### *Average precision from replicate field sample*

Precision was evaluated using the laboratory replicates. The average RSD for the analyte/fraction combinations ranged from 2.27% to 68.89%, with the coarser analyte/fraction combinations having larger average RSDs. The target MQO of 20% was exceeded for only the Granule + Pebble/2.0 to <64 mm combination and those results were flagged with the censoring qualifier of VRIL for poor precision (average RSD was 68.89%).

#### *Comparison of dissolved and total phases*

Not applicable.

#### *Comparison to previous years*

Grain size results were compared to the average results for the 1993-2015 RMP Status and Trends sediment samples with the same analyte/matrix combinations and units. San Leandro Bay sediments were dominated by Fines (~62%) similar to the RMP (~71%) with the difference being due to the increased percent of Clay in the RMP samples (44% compared to 29%). The San Leandro Bay samples were sandier than the RMP samples (36.5% compared to 26.5%). Granule + Pebble results were similar (1.6% versus 3.2%).

#### Ratio Checking Summary

Not Applicable

#### Sums Summary

Not applicable

ALS

### **Sediment**

#### *TOC and Total Solids*

#### QA Issues for Project Manager to Review

None

#### Reporting Issues for Lab to Review

None

#### Formatting Issues for Data Manager to Review

None

#### Hold time review (especially desired by stormwater programs)

Samples were analyzed for TOC between 9 and 36 days after collection; in some cases outside the 28 day holding time specified in the RMP QAPP. Results for samples not analyzed within 28 days were flagged with the code "VH" for a hold time violation.

No holding time requirements are listed in the QAPP for Total Solids.

#### QA Review

##### *Dataset completeness*

Results were reported for Total Organic Carbon (TOC) in 43 sediment samples analyzed in three lab batches. Lab replicates, matrix spike/matrix spike duplicates, method blanks, and laboratory control samples (LCSs) were also analyzed. Data were reported blank corrected.

Results were reported for Total Solids in 43 sediment samples analyzed in two lab batches. Lab replicates were also analyzed. Data were not blank corrected.

##### *Overall acceptability*

Over all the data were acceptable. TOC was not measured in the method blanks at levels above the method detection limits. No method detection limits were reported for Total Solids

TOC was not found in the method blanks and no method blanks were analyzed for Total Solids.

Accuracy was measured for TOC using the matrix spike samples with the average %error of 0.80% well below the 10% target MQO. The average %error of 1.43% for the LCS samples was also below the target MQO. No spiked samples were analyzed for Total Solids. No qualifiers were needed.

Precision was evaluated using the laboratory replicates. The average RSD for TOC of 0.79% was below the target MQO of 10%. The matrix spike and LCS samples were examined, but not used for the evaluation, with average RSDs below the target MQO (1.13% and 2.19%, respectively). The average RSD for the Total Solids lab replicates was 0.83%. No qualifiers were needed.

Average TOC concentration was 196% (~2x greater) than the average RMP Status and Trends sediment sample concentration from previous years (1993-2015). Average Total Solid results were similar; 45% compared to 52%.

#### MDLs sensitivity

TOC was not measured in the method blanks at levels above the method detection limits. No method detection limits were reported for Total Solids

#### QB averages (procedural, field blank)

TOC was not found in the method blanks and no method blanks were analyzed for Total Solids.

#### Accuracy (using a variety of SRMs or Matrix spike QRECs)

Accuracy was measured for TOC using the matrix spike samples with the average %error of 0.80% well below the 10% target MQO. The average %error of 1.43% for the LCS samples was also below the target MQO. No spiked samples were analyzed for Total Solids. No qualifiers were needed.

#### Average precision from replicate field sample

Precision was evaluated using the laboratory replicates. The average RSD for TOC of 0.79% was below the target MQO of 10%. The matrix spike and LCS samples were examined, but not used for the evaluation, with average RSDs below the target MQO (1.13% and 2.19%, respectively). The average RSD for the Total Solids lab replicates was 0.83%. No qualifiers were needed.

#### Comparison of dissolved and total phases

Not applicable.

#### Comparison to previous years

Average TOC concentration was 196% (~2x greater) than the average RMP Status and Trends sediment sample concentration from previous years (1993-2015). Average Total Solid results were similar; 45% compared to 52%.

#### Ratio Checking Summary

Not Applicable

#### Sums Summary

Not Applicable

## ALS

### Water

DOC, POC, and SSC

#### QA Issues for Project Manager to Review

Extra sample should be collected for future to allow reanalysis by a different method if needed if blank contamination impacts many results.

#### Reporting Issues for Lab to Review

None

#### Formatting Issues for Data Manager to Review

None

#### Hold time review (especially desired by stormwater programs)

DOC samples were analyzed 7 days after collection within the 28 day hold time specified in the RMP QAPP. POC samples were analyzed 21 days after collection well within the 100 day hold time specified in the QAPP. All SSC samples were flagged with the QA code “VH” for hold time violation as they were analyzed 13 days after collection; outside of the 7 day hold time specified in the QAPP.

#### QA Review

##### *Dataset completeness*

Dissolved Organic Carbon (DOC) results were reported for 3 water samples analyzed in one lab batch. Lab replicates, one method blank and one Laboratory control sample (LCS) were also analyzed. Data were reported not blank corrected.

Results for Particulate Organic Carbon (POC) were reported for 3 water samples analyzed in one lab batch. In addition method blanks and laboratory control samples were also analyzed. Data were reported not blank corrected.

Suspended Sediment Concentration (SSC) results were reported for 3 water samples analyzed in one lab batch. In addition method blanks and laboratory control samples were also analyzed. Data were reported not blank corrected.

##### *Overall acceptability*

Overall the data were marginally acceptable. MDLs were generally sufficient with non-detects reported for both DOC (1 out of 12; 8% of samples) and POC (1 out of 3; 33% of samples).

DOC was measured in the method blank at concentrations above the method detection limit (0.17 mg/l compared to a MDL of 0.07 mg/l). Average field sample result for DOC (0.15 mg/l) was less than 3x the average method blank concentration (method blank concentration was 0.17 mg/l); therefore, all DOC results were flagged with the censoring qualifier “VRIP”. No method blank contamination was found for POC or SSC.

Accuracy was evaluated using the laboratory control samples (LCSs). The average %error for DOC (2.08%), POC (2.35%), and SSC (4.26%) were all below the target MQO of 10%. No qualifiers were needed.

Precision was evaluated using the laboratory control sample replicates, except for DOC which was evaluated using laboratory replicates. Average RSD for POC (RSD 3.32%) and SSC (RSD 1.05%) was well below the 10% target MQO, however, the average RSD for DOC at 46.9% was above the MQO target and were flagged with the censoring qualifier of "VRIL" for poor precision.

Average results were compared to the average results for the available 1993-2015 RMP Status and Trends water samples. DOC, POC, and SSC concentrations were 5.8% (0.06x times), 26% (~0.3x times), and 22% (~0.2x times) of the previous RMP water samples, respectively.

#### *MDLs sensitivity*

MDLs were generally sufficient with non-detects reported for both DOC (1 out of 12; 8% of samples) and POC (1 out of 3; 33% of samples).

#### *QB averages (procedural, field blank)*

DOC was measured in the method blank at concentrations above the method detection limit (0.17 mg/l compared to a MDL of 0.07 mg/l). Average field sample result for DOC (0.15 mg/l) was less than 3x the average method blank concentration (method blank concentration was 0.17 mg/l); therefore, all DOC results were flagged with the censoring qualifier "VRIP". No method blank contamination was found for POC or SSC.

#### *Accuracy (using a variety of SRMs or Matrix spike QRECs)*

Accuracy was evaluated using the laboratory control samples (LCSs). The average %error for DOC (2.08%), POC (2.35%), and SSC (4.26%) were all below the target MQO of 10%. No qualifiers were needed.

#### *Average precision from replicate field sample*

Precision was evaluated using the laboratory control sample replicates, except for DOC which was evaluated using laboratory replicates. Average RSD for POC (RSD 3.32%) and SSC (RSD 1.05%) was well below the 10% target MQO, however, the average RSD for DOC at 46.9% was above the MQO target and were flagged with the censoring qualifier of "VRIL" for poor precision.

#### *Comparison of dissolved and total phases*

Not applicable.

#### *Comparison to previous years*

Average results were compared to the average results for the available 1993-2015 RMP Status and Trends water samples. DOC, POC, and SSC concentrations were 5.8% (0.06x times), 26% (~0.3x times), and 22% (~0.2x times) of the previous RMP water samples, respectively.

#### *Ratio Checking Summary*

Not Applicable

#### *Sums Summary*

Not Applicable

## AXYS

### Sediment

*PCBs, total solids*

#### QA Issues for Project Manager to Review

None

Reporting Issues for Lab to Review

None

#### Formatting Issues for Data Manager to Review

None

#### Hold time review (especially desired by stormwater programs)

All samples were analyzed within 155 days or less, well within the EPA 1668 recommended 1 year.

### QA Review

#### *Dataset completeness*

The dataset included results for 46 samples from 40 stations, reported for 209 PCB congeners. Total solids were also reported.

#### *Percent usable (non-reject) field data*

99% of the data were not censored and are reportable. Only minor issues were found.

#### *Overall acceptability*

Overall the data are acceptable. There were some NDs, and blank contamination for minor congeners, with a few results censored, but not impacting sum of PCBs much. Precision on lab replicates was good, averaging <20% RSD. Recoveries were good for most congeners, within 35% of CRM or LCS targets, with only a few minor congeners with ~50% error (biased high). Concentrations were in a range to be expected for a more contaminated than average margin area.

#### *MDLs sensitivity*

Methods were sensitive enough for most congeners in all the sediment samples, with only 14 congeners that were non-detect in 50% or more of the samples.

#### *QB averages (procedural, field blank)*

Most congeners were not detected or found at very low concentrations in blank samples. Only a few minor congeners were detected at concentrations a third or more of those in field samples, with those individual field sample congeners censored. This did not appreciably change sum of PCBs for any samples.

#### *Average precision from replicate field sample*

Precision on replicate field samples was generally good, with lab replicates for congeners at least 3x MDL all showing average RSDs <20%, well within the target 35%..

*Accuracy (using a variety of SRMs or Matrix spike QRECs)*

Recoveries on target analytes were generally good in reported CRM and LCS samples, with recoveries within 35% of target values except for PCB 87 and 151 with recovery errors of around 50%, biased high, flagged (VIU) but not censored.

*Comparison of upper and lower layers*

Surface upper layer (0-1cm) and lower layer (1-5cm) concentrations were inconsistently higher and lower than each other among sites (although within a site individual congeners typically differed in the same direction as the sum PCBs. A calculated 0-5cm composite equivalent (80% lower layer conc + 20% upper layer conc) was pretty much identical (within ~10%) to the whole 0-5cm composite analyzed at sites where both were done.

*Comparison to previous years*

Average concentrations were high compared to open Bay results but in a fairly typical about upper quartile range for Central Bay margins.

*Ratio Checking Summary*

The following email thread documents issues raised and resolved during the ratio review.

[3/22/2017 email from Jay Davis](#)

Hi John;

These data look great. I don't see any suspicious values. They are good to go.

There are some very interesting spatial patterns in the congener profiles.

There is a strong signal for Aroclor 1254 at ECM100m.

There is a strong signal for Aroclor 1260 at ECM20m, along with a distinct signal of 1260 at ECFF and ECFR.

There is a distinct signal for 1254 at ELMFF.

There is a strong signal for PCB 209 at ELMFR.

If anyone wants to see my colorized spreadsheets just let me know.

Thanks,

Jay

*Sums Summary*

Not applicable

## AXYS

### Water

#### PCBs

##### QA Issues for Project Manager to Review

One of the two laboratory control samples that were analyzed in the same batch was run for samples from other contracts. This LCS was included in the evaluation as no other duplicate samples were analyzed.

##### Reporting Issues for Lab to Review

None

##### Formatting Issues for Data Manager to Review

None

##### Hold time review (especially desired by stormwater programs)

All samples were analyzed within 72 days after collection well within the one year hold time specified in the RMP QAPP.

#### QA Review

##### *Dataset completeness*

Results were reported for 209 PCB congeners in 3 water samples (Total) analyzed in 1 lab batch. One field blank (Total), and two laboratory control samples (LCS) (Total), were also analyzed. The second LCS with normal spiking levels was run for samples from other contracts in the same analytical batch. All results were reported not blank corrected.

##### *Percent usable (non-reject) field data*

97% of the data were not censored and are reportable. Only minor issues were found.

##### *Overall acceptability*

Overall the data were acceptable. MDLs were generally sufficient. Fifty-seven percent (119 out of 209) of the PCB congeners measured for the total fraction contained non-detects (NDs), with extensive non-detects (>50% NDs) reported for approximately 40% (84 out of 209) congeners.

Some blank contamination was found in at least one of the total fraction method blanks for PCB 001, PCB 002, PCB 003, PCB 011, PCB 015, PCB 018, PCB 026, PCB 028, PCB 031, PCB 032, PCB 033, PCB 037, PCB 044, PCB 045, PCB 049, PCB 052, PCB 066, PCB 068, PCB 070, PCB 099, PCB 101, PCB 105, PCB 110, and PCB 153. Three PCB 001, PCB 003, PCB 011, and PCB 015 (100%), two PCB 002 and PCB 033 (66%), and one PCB 037, PCB 044, PCB 045, PCB 068, and PCB 153 (33%) results were flagged with the censoring qualifier VRIP, the remaining congener results were flagged by the laboratory with the non-censoring qualifier "IP".

Accuracy was evaluated using the laboratory control samples. The average %error in the total fraction was good, ranging from 1.4% to 11.8%, well below the target MQO of 35%.

Precision was evaluated for the total fraction samples using the replicates of the laboratory control samples. Average RSDs for the congeners measured in the LCS's (PCB 001, 003, 004, 015, 019, 037, 054, 077, 081, 104, 105, 114, 118, 123, 126, 155, 156, 167, 169, 188, 189, 202, 205, 206, 208, and 209) ranged from 0.32% to 10.99%; well below the 35% target MQO.

Average PCB concentrations in the total fractions of the water samples were compared to the average RMP Status and Trend concentrations from previous years (2006 - 2011) and ranged from 19% to 7764% (0.2x to ~80x greater), depending on the congener.

#### *MDLs sensitivity*

MDLs were generally sufficient. Fifty-seven percent (119 out of 209) of the PCB congeners measured for the total fraction contained non-detects (NDs), with extensive non-detects (>50% NDs) reported for approximately 40% (84 out of 209) congeners.

#### *QB averages (procedural, field blank)*

Some blank contamination was found in at least one of the total fraction method blanks for PCB 001, PCB 002, PCB 003, PCB 011, PCB 015, PCB 018, PCB 026, PCB 028, PCB 031, PCB 032, PCB 033, PCB 037, PCB 044, PCB 045, PCB 049, PCB 052, PCB 066, PCB 068, PCB 070, PCB 099, PCB 101, PCB 105, PCB 110, and PCB 153. Three PCB 001, PCB 003, PCB 011, and PCB 015 (100%), two PCB 002 and PCB 033 (66%), and one PCB 037, PCB 044, PCB 045, PCB 068, and PCB 153 (33%) results were flagged with the censoring qualifier VRIP, the remaining congener results were flagged by the laboratory with the non-censoring qualifier "IP".

#### *Average precision from replicate field sample*

Precision was evaluated for the total fraction samples using the replicates of the laboratory control samples. Average RSDs for the congeners measured in the LCS's (PCB 001, 003, 004, 015, 019, 037, 054, 077, 081, 104, 105, 114, 118, 123, 126, 155, 156, 167, 169, 188, 189, 202, 205, 206, 208, and 209) ranged from 0.32% to 10.99%; well below the 35% target MQO.

#### *Accuracy (using a variety of SRMs or Matrix spike QRECs)*

Accuracy was evaluated using the laboratory control samples. The average %error in the total fraction was good, ranging from 1.4% to 11.8%, well below the target MQO of 35%.

#### *Comparison to previous years*

Average PCB concentrations in the total fractions of the water samples were compared to the average RMP Status and Trend concentrations from previous years (2006 - 2011) and ranged from 19% to 7764% (0.2x to ~80x greater), depending on the congener.

#### *Ratio Checking Summary*

1/26/17 email from Jay Davis

Hi John;

Thanks for the files.

For this dataset and going forward I would also like to see the results for PCB11 as a separate column (not included in the totals) in the "PCB208" spreadsheet.

PCB44 is anomalously high in the two samples where it was reported, and qualified for the third sample, and high in the blank. I don't have confidence in the results for PCB44.

What is the reason that PCB153 is qualified for station B5g? PCB153 is consistently a major contributor.

Interestingly, there is a pretty good signal for PCB209 at SLBsub1. This is possibly real though - 209 was used on its own in metal fabrication.

I attached my versions of the files in case you want to look at them.

Jay

2/3/2017 email from Jay Davis

Correct - thanks

On Thu, Feb 2, 2017 at 12:28 PM, John Ross <johnr@sfei.org> wrote:

Jay,

I assume you want the PCB 44 results flagged as being rejects with the code VRVQ - Data rejected - Based on professional judgement QA/QC protocols were not met, flagged by QAO. Is that correct?

John

On Wed, Feb 1, 2017 at 12:37 PM, Jay Davis <jay@sfei.org> wrote:

So, regarding the dataset as a whole, this results remains as is. I would like to qualify the results for PCB 44.

With those issues resolved, I will sign off on the dataset.

Thanks,Jay

On Wed, Feb 1, 2017 at 9:48 AM, Don Yee <donald@sfei.org> wrote:

OK, thanks John, sounds like everything is in concordance with that standard handling, this one (PCB153) got flagged as an ND, which we at SFEI substitute as 0 and is what caught Jay's attention since he was expecting a relatively high concentration for 153 relative to other congeners.

#### Sums Summary

Not applicable

## DFG-WPCL

### Sport fish

PCBs

#### QA Issues for Project Manager to Review

Should consider QAPP & contract update for future lab to include recovery and precision (lab replicate) samples for lipid ancillary data, not just PCBs

#### Reporting Issues for Lab to Review

None

#### Formatting Issues for Data Manager to Review

None

#### Hold time review (especially desired by stormwater programs)

All samples were analyzed between 139 and 282 days of collection well within the one year hold time specified in the RMP QAPP.

#### QA Review

##### *QA Issues for Project Manager to Review*

##### *Dataset completeness*

Results were reported for lipid, moisture, and 51 PCB congeners (including coelutions) in 30 fish composites that were analyzed in 3 lab batches. Laboratory replicates, matrix spike/matrix spike replicates (MS/MSD), certified reference materials (CRM), method blanks, and laboratory control samples (LCS) were also analyzed. All results were reported not blank corrected.

##### *Percent usable (non-reject) field data*

100% usable

##### *Overall acceptability*

Overall the data were acceptable. MDLs were generally sufficient but extensive non-detects (> 50% NDs) were reported for PCB 008 (94%), PCB 018 (88%), PCB 027 (94%), PCB 029 (100%), PCB 033 (85%), PCB 077 (85%), PCB 126 (100%), PCB 169 (100%), PCB 189 (85%), PCB 198 (94%), PCB 200 (100%), and PCB 209 (70%). Other congeners with less extensive non-detects were PCB 114 (49%) and PCB 201 (3%).

PCB congeners were not found in the method blanks at concentrations above the method detection limits.

Accuracy was evaluated using the certified reference material (NIST 1946). The average %error was below the target MQO of 35% ranging from 4% to 34.72%. The matrix spike and laboratory control samples were examined, but not used for evaluation purposes, with an average %error ranging from 6% to 25%, and 7% to 37%, respectively. No qualifiers were added.

Precision was evaluated using the laboratory replicates of the composites. Average RSDs for the congeners ranged from 4% to 8%; well below the 35% target MQO. The certified reference material replicates, matrix spike replicates, and replicate laboratory control samples were examined, but not used for the evaluation, with the average RSDs ranging from 5% to 12%, 0.75% to 3.2%, and 6% to 31%, respectively. No qualifiers were needed.

Average PCB concentrations were compared to the average 2014 RMP sportfish concentrations and ranged from 5% to 292% (~0.1x to ~2.9x greater), depending on the congener.

#### *MDLs sensitivity*

MDLs were generally sufficient but extensive non-detects (> 50% NDs) were reported for PCB 008 (94%), PCB 018 (88%), PCB 027 (94%), PCB 029 (100%), PCB 033 (85%), PCB 077 (85%), PCB 126 (100%), PCB 169 (100%), PCB 189 (85%), PCB 198 (94%), PCB 200 (100%), and PCB 209 (70%). Other congeners with less extensive non-detects were PCB 114 (49%) and PCB 201 (3%).

#### *QB averages (procedural, field blank)*

PCB congeners were not found in the method blanks at concentrations above the method detection limits.

#### *Accuracy (using a variety of SRMs or Matrix spike QRECs)*

Accuracy was evaluated using the certified reference material (NIST 1946). The average %error was below the target MQO of 35% ranging from 4% to 34.72%. The matrix spike and laboratory control samples were examined, but not used for evaluation purposes, with an average %error ranging from 6% to 25%, and 7% to 37%, respectively. No qualifiers were added.

#### *Average precision from replicate field sample*

Precision was evaluated using the laboratory replicates of the composites. Average RSDs for the congeners ranged from 4% to 8%; well below the 35% target MQO. The certified reference material replicates, matrix spike replicates, and replicate laboratory control samples were examined, but not used for the evaluation, with the average RSDs ranging from 5% to 12%, 0.75% to 3.2%, and 6% to 31%, respectively. No qualifiers were needed.

#### *Comparison of dissolved and total phases*

Not Applicable

#### *Comparison to previous years*

Average PCB concentrations were compared to the average 2014 RMP sportfish concentrations and ranged from 5% to 292% (~0.1x to ~2.9x greater), depending on the congener.

#### *Ratio Checking Summary*

From Jay Davis, 9/11/17

SLB Fish Data

The dataset looks good. Nothing suspicious. Interesting lack of variation in congener profiles in the fish.

#### *Sums Summary*

Not applicable

**Appendix 3: PCB Concentrations in Fish (ng/g wet weight, NDs set to zero), Lipid and Moisture in Fish**

SampleID	StationCode	Species	SampleDate	SampleReplicate	LabReplicate	Sum of PCBs (SFII)																														
						PCB 008	PCB 018	PCB 027	PCB 028	PCB 029	PCB 033	PCB 044	PCB 049	PCB 052	PCB 056	PCB 064	PCB 066	PCB 070	PCB 077	PCB 087	PCB 095	PCB 097	PCB 099	PCB 101	PCB 118	PCB 126	PCB 128	PCB 137	PCB 138	PCB 141						
16SLB-AC-TTS2	AC	Atherinops affinis	8/12/16	1	1	293	0.0	0.0	0.0	1.2	0.0	0.0	1.7	6.2	8.5	0.7	1.0	3.7	3.9	1.7	0.0	4.8	10.1	4.2	16.5	25.1	4.3	16.1	0.3	20.2	0.0	4.3	0.9	23.5	2.9	
16SLB-AC-TTS3	AC	Atherinops affinis	8/12/16	1	1	276	0.0	0.0	0.0	1.2	0.0	0.0	1.7	6.0	8.3	0.7	0.9	3.5	3.7	1.6	0.0	4.6	9.4	4.0	15.5	23.4	4.2	15.2	0.2	19.8	0.0	4.1	0.9	21.7	2.7	
16SLB-AC-TTS1	AC	Atherinops affinis	8/12/16	1	1	147	0.0	0.0	0.0	1.2	0.0	0.0	1.2	4.0	5.7	0.6	7.3	2.5	1.1	0.0	2.7	5.4	2.2	7.8	1.7	0.0	11.0	1.1	0.0	2.1	0.5	11.4	1.4			
16SLB-AC-TTS1	AC	Atherinops affinis	8/12/16	1	2	177	0.0	0.0	0.0	1.4	0.0	0.0	1.4	4.6	6.9	0.8	2.6	2.9	1.3	0.0	3.2	6.2	2.7	9.6	15.4	2.8	10.3	0.0	13.4	0.0	2.5	0.0	14.4	2.1		
16SLB-AL-TTS1	AL	Atherinops affinis	8/9/16	1	1	171	0.0	0.0	0.0	0.9	0.0	0.0	1.1	3.8	5.9	0.5	0.6	2.6	2.5	1.2	0.0	2.8	6.3	5.3	2.6	10.9	15.6	3.0	10.0	0.0	14.1	0.0	3.0	0.5	13.5	1.3
16SLB-AL-TTS3	AL	Atherinops affinis	8/9/16	1	1	152	0.0	0.0	0.0	0.8	0.0	0.0	0.9	3.0	4.8	0.5	0.5	2.2	2.1	1.0	0.0	2.3	5.1	2.2	9.5	13.3	2.7	8.3	0.0	12.7	0.0	2.7	0.4	12.1	1.2	
16SLB-AL-TTS2	AL	Atherinops affinis	8/9/16	1	1	148	0.0	0.0	0.0	0.8	0.0	0.0	1.0	3.1	4.9	0.5	0.5	2.4	2.2	1.1	0.0	2.3	5.2	2.2	9.7	13.6	2.5	8.5	0.0	12.4	0.0	2.5	0.4	11.3	1.1	
16SLB-AL-TSS2	AL	Cymatogaster aggregata	8/10/16	1	1	173	0.0	0.0	0.0	0.9	0.0	0.0	0.9	3.3	5.8	0.4	0.5	1.8	1.9	1.4	0.3	2.8	3.9	1.5	11.4	15.6	4.0	6.8	0.2	17.3	0.0	3.1	0.7	17.1	1.4	
16SLB-AL-TSS1	AL	Cymatogaster aggregata	8/10/16	1	1	145	0.0	0.0	0.0	0.8	0.0	0.0	0.8	2.9	5.1	0.3	0.5	1.5	1.7	1.2	0.2	2.5	3.6	1.3	9.3	13.4	3.2	6.0	0.0	14.4	0.0	2.4	0.6	13.7	1.1	
16SLB-AL-TSS3	AL	Cymatogaster aggregata	8/10/16	1	1	119	0.0	0.0	0.0	0.6	0.0	0.0	0.6	2.3	4.0	0.3	0.4	1.4	1.4	0.8	0.0	1.9	3.2	1.1	7.7	10.9	2.4	5.4	0.0	11.2	0.0	2.0	0.4	14.4	1.1	
16SLB-BF-TTS1	BF	Atherinops affinis	8/23/16	1	1	304	0.0	0.0	0.0	1.4	0.0	0.0	1.8	5.9	8.9	0.7	1.0	4.0	4.1	1.8	0.0	4.8	10.5	4.2	16.8	25.5	4.6	16.3	0.2	21.6	0.0	4.5	1.0	21.5	1.1	
16SLB-BF-TTS2	BF	Atherinops affinis	8/23/16	1	1	165	0.0	0.0	0.0	1.3	0.0	0.0	1.3	4.6	6.6	0.6	0.7	2.4	2.7	1.2	0.0	3.0	5.9	2.4	8.8	14.2	2.5	9.6	0.0	12.2	0.0	2.3	0.5	13.1	1.6	
16SLB-BF-TTS3	BF	Atherinops affinis	8/23/16	1	1	140	0.0	0.0	0.0	1.1	0.0	0.0	1.1	3.9	5.8	0.6	0.6	2.1	2.4	1.1	0.0	2.6	5.1	2.1	7.7	12.3	2.3	8.5	0.0	11.0	0.0	2.0	0.5	11.3	1.3	
16SLB-DS-TTS2	DS	Atherinops affinis	8/24/16	1	1	232	0.0	0.0	0.0	1.7	0.0	0.0	1.8	4.5	7.7	0.8	1.0	3.7	4.5	1.8	0.0	4.9	9.6	3.6	15.1	23.4	3.5	16.1	0.3	21.4	0.0	3.5	1.0	21.5	2.6	
16SLB-DS-TTS1	DS	Atherinops affinis	8/24/16	1	1	228	0.0	0.0	0.0	1.7	0.0	0.2	1.8	4.3	7.5	0.8	0.3	4.5	4.1	1.6	0.0	4.9	9.3	3.4	12.3	20.4	3.3	14.3	0.2	17.9	0.0	3.5	0.7	19.4	2.5	
16SLB-DS-TTS3	DS	Atherinops affinis	8/24/16	1	1	207	0.0	0.0	0.0	1.3	0.0	0.0	1.4	4.1	6.6	0.7	0.7	2.8	3.1	1.4	0.0	3.8	7.1	3.1	10.9	17.2	3.3	12.0	0.2	15.8	0.0	3.3	0.6	18.7	2.3	
16SLB-EC-TTS3	EC	Atherinops affinis	8/24/16	1	1	219	0.0	0.3	0.2	0.2	0.0	0.2	1.8	4.5	8.2	0.8	1.0	3.5	4.0	1.8	0.0	4.2	8.4	3.3	11.8	19.4	3.2	12.9	0.2	16.6	0.0	3.0	0.6	17.7	2.5	
16SLB-EC-TTS2	EC	Atherinops affinis	8/24/16	1	1	213	0.2	0.3	0.2	2.5	0.0	0.3	2.0	4.0	7.8	0.9	0.7	3.7	4.3	1.9	0.0	4.5	8.8	3.2	11.2	20.4	2.7	13.8	0.1	17.0	0.2	3.5	0.7	19.4	2.3	
16SLB-EC-TTS1	EC	Atherinops affinis	8/24/16	1	1	206	0.0	0.3	0.1	1.9	0.0	0.2	1.7	5.2	7.5	0.7	0.9	3.1	3.6	1.6	0.0	14.7	7.8	3.0	10.4	17.7	2.9	11.5	0.0	14.6	0.0	2.7	0.6	16.3	2.5	
16SLB-EC-TTS2	EC	Atherinops affinis	8/24/16	1	2	204	0.2	0.3	0.2	2.3	0.0	0.2	1.9	4.0	7.5	0.9	0.5	3.0	4.5	1.8	0.0	4.1	8.4	3.0	10.4	18.4	2.8	12.3	0.3	15.3	0.0	2.7	0.5	16.0	2.3	
16SLB-ELM-TTS3	ELM	Atherinops affinis	8/24/16	1	1	190	0.0	0.0	0.0	1.3	0.0	0.0	1.5	4.4	7.2	0.7	0.8	3.1	3.2	1.5	0.0	3.6	7.6	3.1	11.0	15.9	3.4	11.5	0.2	15.7	0.0	3.3	0.7	17.0	2.7	
16SLB-ELM-TTS2	ELM	Atherinops affinis	8/24/16	1	1	184	0.0	0.0	0.0	1.3	0.0	0.0	1.5	3.9	6.9	0.7	0.7	3.0	3.5	1.0	0.0	3.6	7.2	3.1	11.1	16.2	3.5	11.6	0.2	16.1	0.0	3.2	0.7	16.7	2.0	
16SLB-ELM-TTS1	ELM	Atherinops affinis	8/24/16	1	1	183	0.0	0.0	0.0	1.2	0.0	0.0	1.4	4.0	6.7	0.7	0.7	3.1	2.9	1.5	0.0	3.4	7.1	3.1	11.0	16.3	3.0	12.6	0.0	3.3	0.7	16.6	1.8			
16SLB-SLB-TS1	SLB	Cymatogaster aggregata	8/9/16	1	1	208	0.0	0.0	0.0	1.2	0.0	0.0	1.1	4.4	7.6	0.6	0.5	2.5	2.4	1.6	0.3	3.1	5.6	1.5	13.7	19.1	4.1	8.6	0.2	19.0	0.0	3.5	0.7	19.0	1.9	
16SLB-SLB-TS2	SLB	Cymatogaster aggregata	8/9/16	1	1	191	0.0	0.0	0.0	1.1	0.0	0.0	1.1	4.2	7.5	0.4	0.6	2.4	2.3	1.4	0.3	2.8	5.7	1.7	12.4	17.5	3.6	8.2	0.2	17.0	0.0	3.2	0.6	16.3	1.4	
16SLB-SLB-TS3	SLB	Cymatogaster aggregata	8/9/16	1	1	150	0.0	0.0	0.0	0.9	0.0	0.0	0.8	2.8	5.1	0.4	0.5	1.5	1.7	1.3	0.2	2.5	3.4	1.2	10.0	13.5	3.3	6.1	0.2	15.3	0.0	2.7	0.6	14.6	1.1	
16SLB-SLC-TTS3	SLC	Atherinops affinis	8/23/16	1	1	155	0.0	0.0	0.0	1.3	0.0	0.0	1.2	2.9	5.5	0.6	0.5	2.5	2.2	1.3	0.0	2.6	4.9	2.3	9.3	13.1	3.2	8.7	0.2	13.8	0.0	2.9	0.6	13.4	1.3	
16SLB-SLC-TTS1	SLC	Atherinops affinis	8/23/16	1	1	149	0.0	0.0	0.0	1.1	0.0	0.0	1.0	2.7	5.0	0.6	0.4	2.4	2.1	1.2	0.0	2.4	5.0	2.1	9.1	12.6	2.8	8.4	0.0	13.0	0.0	2.7	0.5	13.4	1.3	
16SLB-SLC-TTS2	SLC	Atherinops affinis	8/23/16	1	1	140	0.0	0.0	0.0	1.1	0.0	0.0	0.9	2.4	4.9	0.5	0.5	2.4	2.0	1.2	0.0	2.2	4.7	1.9	8.7	11.7	2.8	7.9	0.0	13.2	0.0	2.7	0.5	12.5	1.3	
16SLB-SLR-TTS3	SLR	Atherinops affinis	8/23/16	1	1	114	0.0	0.0	0.0	1.1	0.0	0.0	0.7	3.7	5.0	0.4	1.9	1.6	1.0	0	1.9	3.6	1.4	6.6	9.7	2.4	6.2	0.0	10.6	0.0	2.3	0.4	9.9	1.1		
16SLB-SLR-TTS1	SLR	Atherinops affinis	8/23/16	1	1	110	0.0	0.0	0.0	1.2	0.0	0.0	1.5	3.7	6.0	0.4	1.9	1.8	1.0	0	1.8	3.6	1.4	5.8	8.9	2.5	5.8	0.0	9.6	0.0	2.2	0.4	9.1	1.9		
16SLB-SLR-TTS2	SLR	Atherinops affinis	8/23/16	1	1	107	0.0	0.0	0.0	1.1	0.0	0.0	1.5	3.6	5.0	0.4	1.8	1.7	1.0	0	1.8	3.5	1.4	5.8	8.9	2.2	5.8	0.0	9.2	0.0	2.1	0.4	9.4	1.1		
16SLB-SLR-TTS1	SLR	Atherinops affinis	8/23/16	1	2	108	0.0	0.0	0.0	1.3	0.0	0.0	1.5	3.8	6.0	0.5	1.2	1.1	0.0	1.8	3.7	1.4	5.9	9.0	2.4	5.8	0.0	9.3	0.0	2.0	0.4	9.5	1.1			



## Appendix 4: PCB Concentrations in Sediment (ng/g dry weight, NDs set to zero)

Sample ID	Sample Type	Fraction	Station Code	Sample Date	Sample Replicate	Lab Replicate	Sum of 208 PCBs (SFEI)	PCB 001	PCB 002	PCB 003	PCB 004	PCB 005	PCB 006	PCB 007	PCB 008	PCB 009	PCB 010	PCB 012	PCB 013	PCB 014	PCB 015	PCB 016	PCB 017	PCB 018	PCB 019	PCB 020	PCB 021	PCB 022	PCB 023	PCB 024	PCB 025	PCB 026
16SLB-A7cz-SA-PCB1	Integrated	Total	A7cz	8/11/16	1	1	29	0	0	0	0	0	0	0	0	0	0	D0013	0	0	0	0	0	0	D0028	D0033	0	0	0	0	0	
16SLB-B5g-SA-PCB1	Integrated	Total	B5g	8/11/16	1	1	66	0	0	0	0	0	0	0	0	0	0	D0013	0	0	0	0	0	0	D0028	D0033	0	0	0	0	1	
16SLB-B8cz-SA-PCB1	Integrated	Total	B8cz	8/11/16	1	1	96	0	0	0	0	0	0	0	0	0	0	D0013	0	0	0	0	0	0	D0028	D0033	0	0	0	0	1	
16SLB-B9g-SA-PCB1	Integrated	Total	B9g	8/8/16	1	1	43	0	0	0	0	0	0	0	0	0	D0013	0	0	0	0	0	0	D0028	D0033	0	0	0	0	0		
16SLB-C9g-SA-PCB1	Integrated	Total	C9g	8/8/16	1	2	71	0	0	0	0	0	0	0	0	0	D0013	0	0	0	0	0	0	D0028	D0033	0	0	0	0	0		
16SLB-C9g-SA-PCB1	Integrated	Total	C9g	8/8/16	1	1	68	0	0	0	0	0	0	0	0	0	D0013	0	0	0	0	0	0	D0028	D0033	0	0	0	0	0		
16SLB-DSFF-SU-PCB1	Integrated	Total	DSFF	8/8/16	1	1	114	0	0	0	0	0	0	0	0	0	D0013	0	0	0	0	0	0	D0028	D0033	0	0	0	0	0		
16SLB-DSFF-SL-PCB1	Integrated	Total	DSFF	8/8/16	1	1	108	0	0	0	0	0	0	0	0	0	D0013	0	0	0	0	0	0	D0028	D0033	0	0	0	0	0		
16SLB-DSFR-SA-PCB1	Integrated	Total	DSFR	8/24/16	1	1	102	0	0	0	0	0	0	0	0	0	D0013	0	0	0	0	0	0	D0028	D0033	0	0	0	0	0		
16SLB-DSM100m-SA-PCB1	Integrated	Total	DSM100m	8/8/16	1	1	81	0	0	0	0	0	0	0	0	0	D0013	0	0	0	0	0	0	D0028	D0033	0	0	0	0	0		
16SLB-DSM20m-SA-PCB1	Integrated	Total	DSM20m	8/11/16	1	1	125	0	0	0	0	0	0	0	0	0	D0013	0	0	0	0	0	0	D0028	D0033	0	0	0	0	0		
16SLB-DSM20m-SU-PCB1	Integrated	Total	DSM20m	8/11/16	2	1	121	0	0	0	0	0	0	0	0	0	D0013	0	0	0	0	0	1	D0028	D0033	0	0	0	0	0		
16SLB-DSM20m-SU-PCB1	Integrated	Total	DSM20m	8/11/16	1	1	93	0	0	0	0	0	0	0	0	0	D0013	0	0	0	0	0	0	D0028	D0033	0	0	0	0	0		
16SLB-E3g-SA-PCB1	Integrated	Total	E3g	8/8/16	1	1	98	0	0	0	0	0	0	0	0	0	D0013	0	0	0	0	0	0	D0028	D0033	0	0	0	0	1		
16SLB-E6g-SA-PCB1	Integrated	Total	E6g	8/8/16	1	1	82	0	0	0	0	0	0	0	0	0	D0013	0	0	0	0	0	0	D0028	D0033	0	0	0	0	0		
16SLB-E8g-SA-PCB1	Integrated	Total	E8g	8/8/16	1	1	118	0	0	0	0	0	0	0	0	0	D0013	0	0	0	0	0	0	D0028	D0033	0	0	0	0	1		
16SLB-ECFF-SL-PCB1	Integrated	Total	ECFF	8/22/16	1	1	396	0	0	0	0	0	0	0	1	0	D0013	0	0	1	1	1	1	D0028	D0033	1	0	0	1	1		
16SLB-ECFF-SU-PCB1	Integrated	Total	ECFF	8/22/16	1	1	396	0	0	0	0	0	0	0	1	0	D0013	0	0	1	0	1	1	D0028	D0033	1	0	0	0	1		
16SLB-ECFR-SA-PCB1	Integrated	Total	ECFR	8/24/16	1	1	318	0	0	0	0	0	0	0	1	0	D0013	0	0	1	0	1	1	D0028	D0033	1	0	0	0	1		
16SLB-ECM100m-SA-PCB1	Integrated	Total	ECM100m	8/22/16	1	1	942	0	0	0	0	0	0	0	0	0	D0013	0	0	0	0	0	0	D0028	D0033	0	0	0	0	0		
16SLB-ECM20m-SU-PCB1	Integrated	Total	ECM20m	8/22/16	1	1	1136	0	0	0	0	0	0	0	1	0	D0013	0	0	1	0	1	1	D0028	D0033	0	0	0	0	0		
16SLB-ECM20m-SL-PCB1	Integrated	Total	ECM20m	8/22/16	1	1	447	0	0	0	0	0	0	0	0	0	D0013	0	0	0	0	0	0	D0028	D0033	0	0	0	0	0		
16SLB-ELM20m-SU-PCB1	Integrated	Total	ELM20m	8/12/16	1	1	150	.	1	0	0	0	0	0	0	0	D0013	0	0	1	0	0	0	D0028	D0033	0	0	0	0	0		
16SLB-ELM20m-SL-PCB1	Integrated	Total	ELM20m	8/12/16	1	1	46	0	0	0	0	0	0	0	0	0	D0013	0	0	0	0	0	0	D0028	D0033	0	0	0	0	0		
16SLB-ELMFF-SA-PCB1	Integrated	Total	ELMFF	8/10/16	2	1	517	4	1	2	1	0	1	0	2	0	D0013	1	0	2	1	1	1	D0028	D0033	1	0	0	0	1		
16SLB-ELMFF-SL-PCB1	Integrated	Total	ELMFF	8/10/16	1	1	470	0	0	0	0	0	0	0	1	0	D0013	0	0	2	1	1	1	D0028	D0033	1	0	0	0	1		
16SLB-ELMFF-SU-PCB1	Integrated	Total	ELMFF	8/10/16	1	1	426	0	0	0	0	0	0	0	1	0	D0013	0	0	2	0	1	1	D0028	D0033	1	0	0	0	1		
16SLB-ELMFR-SA-PCB1	Integrated	Total	ELMFR	8/24/16	1	1	135	0	0	0	0	0	0	0	0	0	D0013	0	0	0	0	0	0	D0028	D0033	0	0	0	0	0		
16SLB-G4g-SA-PCB1	Integrated	Total	G4g	8/8/16	1	1	107	.	.	.	0	0	0	0	0	0	D0013	0	0	0	0	0	0	D0028	D0033	0	0	0	0	1		
16SLB-G7g-SA-PCB1	Integrated	Total	G7g	8/8/16	1	1	61	.	.	.	0	0	0	0	0	0	D0013	0	0	0	0	0	0	D0028	D0033	0	0	0	0	0		
16SLB-NS100m-SA-PCB1	Integrated	Total	NS100m	8/22/16	1	1	67	.	.	.	0	0	0	0	0	0	D0013	0	0	0	0	0	0	D0028	D0033	0	0	0	0	0		
16SLB-NS20m-SA-PCB1	Integrated	Total	NS20m	8/22/16	1	2	35	0	0	0	0	0	0	0	0	0	D0013	0	0	0	0	0	0	D0028	D0033	0	0	0	0	0		
16SLB-NS20m-SA-PCB1	Integrated	Total	NS20m	8/22/16	1	1	32	0	0	0	0	0	0	0	0	0	D0013	0	0	0	0	0	0	D0028	D0033	0	0	0	0	0		
16SLB-SLBint-SA-PCB1	Integrated	Total	SLBint	8/8/16	1	1	81	.	.	.	0	0	0	0	0	0	D0013	0	0	0	0	0	0	D0028	D0033	0	0	0	0	0		
16SLB-SLBsub1-SU-PCB1	Integrated	Total	SLBsub1	8/11/16	1	1	174	.	.	.	0	0	0	0	0	0	D0013	0	0	0	0	0	0	D0028	D0033	0	0	0	0	1		
16SLB-SLBsub1-SL-PCB1	Integrated	Total	SLBsub1	8/11/16	1	1	134	0	0	0	0	0	0	0	0	0	D0013	0	0	0	0	0	0	D0028	D0033	0	0	0	0	1		
16SLB-SLBsub1-SA-PCB1	Integrated	Total	SLBsub1	8/11/16	2	1	130	0	0	0	0	0	0	0	0	0	D0013	0	0	0	0	0	0	D0028	D0033	0	0	0	0	1		
16SLB-SLBsub2-SL-PCB1	Integrated	Total	SLBsub2	8/11/16	1	1	91	0	0	0	0	0	0	0	0	0	D0013	0	0	0	0	0	0	D0028	D0033	0	0	0	0	1		
16SLB-SLBsub2-SU-PCB1	Integrated	Total	SLBsub2	8/11/16	1	2	85	0	0	0	0	0	0	0	0	0	D0013	0	0	0	0	0	0	D0028	D0033	0	0	0	0	1		
16SLB-SLBsub2-SU-PCB1	Integrated	Total	SLBsub2	8/11/16	1	1	82	0	0	0	0	0	0	0	0	0	D0013	0	0	0	0	0	0	D0028	D0033	0	0	0	0	1		
16SLB-SLCFF-SU-PCB1	Integrated	Total	SLCFF	8/12/16	1	1	109	1	0	0	0	0	0	0	0	0	D0013	0	0	1	0	0	0	D0028	D0033	0	0	0	0	0		
16SLB-SLCFF-SL-PCB1	Integrated	Total	SLCFF	8/12/16	1	1	85	0	0	0	0	0	0	0	0	0	D0013	0	0	0	0	0	0	D0028	D0033	0	0	0	0	0		
16SLB-SLCFR-SA-PCB1	Integrated	Total	SLCFR	8/23/16	1	1	140	0	0	0	0	0	0	0	0	0	D0013	0	0	1	0	0	1	D0028	D0033	0	0	0	0	0		
16SLB-SLCM100m-SA-PCB1	Integrated	Total	SLCM100m	8/9/16	1	1	127	0	0	0	0	0	0	0	0	0	D0013	0	0	0	0	0	0	D0028	D0033	0	0	0	0	1		
16SLB-SLCM20m-SA-PCB1	Integrated	Total	SLCM20m	8/10/16	1	1	73	0	0	0	0	0	0	0	0	0	D0013	0	0	0	0	0	0	D0028	D0033	0	0	0	0	0		
16SLB-SLCM20m-SU-PCB1	Integrated	Total	SLCM20m	8/10/16	1	1	61	0	0	0	0	0	0	0	0	0	D0013	0	0	0	0	0	0	D0028	D0033	0	0	0	0	0		



Sample ID	Sample Type	Fraction	Station Code	Sample Date	Sample Replicate	Lab Replicate	Sum of 208 PCBs (SFEI)	PCB 051	PCB 052	PCB 053	PCB 054	PCB 055	PCB 056	PCB 057	PCB 058	PCB 059	PCB 060	PCB 061	PCB 062	PCB 063	PCB 064	PCB 065	PCB 066	PCB 067	PCB 068	PCB 069	PCB 070	PCB 071	PCB 072	PCB 073	
16SLB-A7cz-SA-PCB1	Integrated	Total	A7cz	8/11/16	1	1	29	D0045	1	0	0	0	0	0	0	0	0	0	D0070	D0059	0	0	D0044	1	0	0	D0049	1	D0040	0	0
16SLB-B5g-SA-PCB1	Integrated	Total	B5g	8/11/16	1	1	66	D0045	2	0	0	0	0	0	0	0	0	0	D0070	D0059	0	0	D0044	1	0	0	D0049	2	D0040	0	0
16SLB-B8cz-SA-PCB1	Integrated	Total	B8cz	8/11/16	1	1	96	D0045	3	0	0	0	0	0	0	0	0	0	D0070	D0059	0	0	D0044	2	0	0	D0049	3	D0040	0	0
16SLB-B9g-SA-PCB1	Integrated	Total	B9g	8/8/16	1	1	43	D0045	1	0	0	0	0	0	0	0	0	0	D0070	D0059	0	0	D0044	1	0	0	D0049	1	D0040	0	0
16SLB-C9g-SA-PCB1	Integrated	Total	C9g	8/8/16	1	2	71	D0045	2	0	0	0	0	0	0	0	0	0	D0070	D0059	0	0	D0044	1	0	0	D0049	2	D0040	0	0
16SLB-C9g-SA-PCB1	Integrated	Total	C9g	8/8/16	1	1	68	D0045	1	0	0	0	0	0	0	0	0	0	D0070	D0059	0	0	D0044	1	0	0	D0049	2	D0040	0	0
16SLB-DSFF-SU-PCB1	Integrated	Total	DSFF	8/8/16	1	1	114	D0045	2	0	0	0	0	0	0	0	0	0	D0070	D0059	0	0	D0044	2	0	0	D0049	3	D0040	0	0
16SLB-DSFF-SL-PCB1	Integrated	Total	DSFF	8/8/16	1	1	108	D0045	2	0	0	0	0	0	0	0	0	0	D0070	D0059	0	0	D0044	2	0	0	D0049	3	D0040	0	0
16SLB-DSFR-SA-PCB1	Integrated	Total	DSFR	8/24/16	1	1	102	D0045	3	0	0	0	1	0	0	0	0	0	D0070	D0059	0	0	D0044	2	0	0	D0049	3	D0040	0	0
16SLB-DSM100m-SA-PCB1	Integrated	Total	DSM100m	8/8/16	1	1	81	D0045	2	0	0	0	0	0	0	0	0	0	D0070	D0059	0	0	D0044	1	0	0	D0049	2	D0040	0	0
16SLB-DSM20m-SA-PCB1	Integrated	Total	DSM20m	8/11/16	1	1	125	D0045	2	0	0	0	1	0	0	0	0	0	D0070	D0059	0	0	D0044	2	0	0	D0049	4	D0040	0	0
16SLB-DSM20m-SA-PCB1	Integrated	Total	DSM20m	8/11/16	2	1	121	D0045	4	0	0	0	1	0	0	0	0	0	D0070	D0059	0	1	D0044	2	0	0	D0049	5	D0040	0	0
16SLB-DSM20m-SU-PCB1	Integrated	Total	DSM20m	8/11/16	1	1	93	D0045	2	0	0	0	1	0	0	0	0	0	D0070	D0059	0	0	D0044	2	0	0	D0049	3	D0040	0	0
16SLB-E3g-SA-PCB1	Integrated	Total	E3g	8/8/16	1	1	98	D0045	2	0	0	0	0	0	0	0	0	0	D0070	D0059	0	0	D0044	2	0	0	D0049	2	D0040	0	0
16SLB-E6g-SA-PCB1	Integrated	Total	E6g	8/8/16	1	1	82	D0045	2	0	0	0	0	0	0	0	0	0	D0070	D0059	0	0	D0044	1	0	0	D0049	2	D0040	0	0
16SLB-E8g-SA-PCB1	Integrated	Total	E8g	8/8/16	1	1	118	D0045	3	0	0	0	0	0	0	0	0	0	D0070	D0059	0	0	D0044	2	0	0	D0049	3	D0040	0	0
16SLB-ECFF-SL-PCB1	Integrated	Total	ECFF	8/22/16	1	1	396	D0045	7	1	0	0	1	0	0	0	1	0	D0070	D0059	0	1	D0044	4	0	0	D0049	6	D0040	0	0
16SLB-ECFF-SU-PCB1	Integrated	Total	ECFF	8/22/16	1	1	396	D0045	7	1	0	0	1	1	0	0	1	0	D0070	D0059	0	1	D0044	4	0	0	D0049	8	D0040	0	0
16SLB-ECFR-SA-PCB1	Integrated	Total	ECFR	8/24/16	1	1	318	D0045	6	1	0	0	1	0	0	0	0	0	D0070	D0059	0	1	D0044	2	0	0	D0049	4	D0040	0	0
16SLB-ECM100m-SA-PCB1	Integrated	Total	ECM100m	8/22/16	1	1	942	D0045	33	1	0	0	3	0	0	0	2	0	D0070	D0059	0	5	D0044	9	0	0	D0049	35	D0040	0	0
16SLB-ECM20m-SU-PCB1	Integrated	Total	ECM20m	8/22/16	1	1	1136	D0045	11	1	0	0	1	0	0	0	0	0	D0070	D0059	0	1	D0044	3	0	0	D0049	7	D0040	0	0
16SLB-ECM20m-SL-PCB1	Integrated	Total	ECM20m	8/22/16	1	1	447	D0045	4	0	0	0	1	0	0	0	0	0	D0070	D0059	0	0	D0044	2	0	0	D0049	3	D0040	0	0
16SLB-ELM20m-SU-PCB1	Integrated	Total	ELM20m	8/12/16	1	1	150	D0045	3	0	0	0	1	0	0	0	0	0	D0070	D0059	0	1	D0044	2	0	0	D0049	4	D0040	0	0
16SLB-ELM20m-SL-PCB1	Integrated	Total	ELM20m	8/12/16	1	1	46	D0045	1	0	0	0	0	0	0	0	0	0	D0070	D0059	0	0	D0044	1	0	0	D0049	1	D0040	0	0
16SLB-ELMFF-SA-PCB1	Integrated	Total	ELMFF	8/10/16	2	1	517	D0045	12	1	0	0	3	0	0	0	1	0	D0070	D0059	0	2	D0044	7	0	0	D0049	16	D0040	0	0
16SLB-ELMFF-SL-PCB1	Integrated	Total	ELMFF	8/10/16	1	1	470	D0045	12	1	0	0	3	0	0	0	1	0	D0070	D0059	0	2	D0044	7	0	0	D0049	15	D0040	0	0
16SLB-ELMFF-SU-PCB1	Integrated	Total	ELMFF	8/10/16	1	1	426	D0045	10	1	0	0	2	0	0	0	1	0	D0070	D0059	0	2	D0044	6	0	0	D0049	13	D0040	0	0
16SLB-ELMFR-SA-PCB1	Integrated	Total	ELMFR	8/24/16	1	1	135	D0045	3	0	0	0	1	0	0	0	0	0	D0070	D0059	0	1	D0044	2	0	0	D0049	3	D0040	0	0
16SLB-G4g-SA-PCB1	Integrated	Total	G4g	8/8/16	1	1	107	D0045	2	0	0	0	0	0	0	0	0	0	D0070	D0059	0	0	D0044	2	0	0	D0049	2	D0040	0	0
16SLB-G7g-SA-PCB1	Integrated	Total	G7g	8/8/16	1	1	61	D0045	2	0	0	0	0	0	0	0	0	0	D0070	D0059	0	0	D0044	1	0	0	D0049	1	D0040	0	0
16SLB-NS100m-SA-PCB1	Integrated	Total	NS100m	8/22/16	1	1	67	D0045	2	0	0	0	0	0	0	0	0	0	D0070	D0059	0	0	D0044	1	0	0	D0049	2	D0040	0	0
16SLB-NS20m-SA-PCB1	Integrated	Total	NS20m	8/22/16	1	2	35	D0045	1	0	0	0	0	0	0	0	0	0	D0070	D0059	0	0	D0044	1	0	0	D0049	1	D0040	0	0
16SLB-NS20m-SA-PCB1	Integrated	Total	NS20m	8/22/16	1	1	32	D0045	1	0	0	0	0	0	0	0	0	0	D0070	D0059	0	0	D0044	0	0	0	D0049	1	D0040	0	0
16SLB-SLBint-SA-PCB1	Integrated	Total	SLBint	8/8/16	1	1	81	D0045	2	0	0	0	0	0	0	0	0	0	D0070	D0059	0	0	D0044	1	0	0	D0049	2	D0040	0	0
16SLB-SLBsub1-SU-PCB1	Integrated	Total	SLBsub1	8/11/16	1	1	174	D0045	4	0	0	0	1	0	0	0	0	0	D0070	D0059	0	1	D0044	2	0	0	D0049	4	D0040	0	0
16SLB-SLBsub1-SL-PCB1	Integrated	Total	SLBsub1	8/11/16	1	1	134	D0045	3	0	0	0	1	0	0	0	0	0	D0070	D0059	0	0	D0044	2	0	0	D0049	3	D0040	0	0
16SLB-SLBsub1-SA-PCB1	Integrated	Total	SLBsub1	8/11/16	2	1	130	D0045	3	0	0	0	1	0	0	0	0	0	D0070	D0059	0	0	D0044	2	0	0	D0049	3	D0040	0	0
16SLB-SLBsub2-SL-PCB1	Integrated	Total	SLBsub2	8/11/16	1	1	91	D0045	2	0	0	0	0	0	0	0	0	0	D0070	D0059	0	0	D0044	1	0	0	D0049	2	D0040	0	0
16SLB-SLBsub2-SU-PCB1	Integrated	Total	SLBsub2	8/11/16	1	2	85	D0045	2	0	0	0	0	0	0	0	0	0	D0070	D0059	0	0	D0044	1	0	0	D0049	2	D0040	0	0
16SLB-SLBsub2-SU-PCB1	Integrated	Total	SLBsub2	8/11/16	1	1	82	D0045	2	0	0	0	0	0	0	0	0	0	D0070	D0059	0	0	D0044	1	0	0	D0049	2	D0040	0	0
16SLB-SLCFF-SU-PCB1	Integrated	Total	SLCFF	8/12/16	1	1	109	D0045	3	0	0	0	1	0	0	0	0	0	D0070	D0059	0	1	D0044	2	0	0	D0049	3	D0040	0	0
16SLB-SLCFF-SL-PCB1	Integrated	Total	SLCFF	8/12/16	1	1	85	D0045	2	0	0	0	0	0	0	0	0	0	D0070	D0059	0	0	D0044	1	0	0	D0049	2	D0040	0	0
16SLB-SLCFR-SA-PCB1	Integrated	Total	SLCFR	8/23/16	1	1	140	D0045	4	0	0	0	1	0	0	0	0	0	D0070	D0059	0	1	D0044	2	0	0	D0049	3	D0040	0	0
16SLB-SLCM100m-SA-PCB1	Integrated	Total	SLCM100m	8/9/16	1	1	127	D0045	3	0	0	0	1	0	0	0	0	0	D0070	D0059	0	1	D0044	2	0	0	D0049	3	D0040	0	0
16SLB-SLCM20m-SA-PCB1	Integrated	Total	SLCM20m	8/10/16	1	1	73	D0045	2	0</																					

Sample ID	Sample Type	Fraction	Station Code	Sample Date	Sample Replicate	Lab Replicate	Sum of 208 PCBs (SFEI)	PCB 074	PCB 075	PCB 076	PCB 077	PCB 078	PCB 079	PCB 080	PCB 081	PCB 082	PCB 083	PCB 084	PCB 085	PCB 086	PCB 087	PCB 088	PCB 089	PCB 090	PCB 091	PCB 092	PCB 093	PCB 094	PCB 095	PCB 096
16SLB-A7cz-SA-PCB1	Integrated	Total	A7cz	8/11/16	1	1	29	D0070	D0059	D0070	0	0	0	0	0	0	D0099	0	0	D0087	1	D0091	0	D0101	0	0	D0095	0	1	0
16SLB-B5g-SA-PCB1	Integrated	Total	B5g	8/11/16	1	1	66	D0070	D0059	D0070	0	0	0	0	0	0	D0099	0	0	D0087	2	D0091	0	D0101	0	1	D0095	0	2	0
16SLB-B8cz-SA-PCB1	Integrated	Total	B8cz	8/11/16	1	1	96	D0070	D0059	D0070	0	0	0	0	0	0	D0099	1	1	D0087	2	D0091	0	D0101	1	1	D0095	0	3	0
16SLB-B9g-SA-PCB1	Integrated	Total	B9g	8/8/16	1	1	43	D0070	D0059	D0070	0	0	0	0	0	0	D0099	0	0	D0087	1	D0091	0	D0101	0	0	D0095	0	1	0
16SLB-C9g-SA-PCB1	Integrated	Total	C9g	8/8/16	1	2	71	D0070	D0059	D0070	0	0	0	0	0	0	D0099	1	1	D0087	2	D0091	0	D0101	0	1	D0095	0	2	0
16SLB-C9g-SA-PCB1	Integrated	Total	C9g	8/8/16	1	1	68	D0070	D0059	D0070	0	0	0	0	0	0	D0099	1	1	D0087	2	D0091	0	D0101	0	1	D0095	0	2	0
16SLB-DSFF-SU-PCB1	Integrated	Total	DSFF	8/8/16	1	1	114	D0070	D0059	D0070	0	0	0	0	0	0	D0099	1	1	D0087	3	D0091	0	D0101	1	1	D0095	0	4	0
16SLB-DSFF-SL-PCB1	Integrated	Total	DSFF	8/8/16	1	1	108	D0070	D0059	D0070	0	0	0	0	0	0	D0099	1	1	D0087	3	D0091	0	D0101	1	1	D0095	0	3	0
16SLB-DSFR-SA-PCB1	Integrated	Total	DSFR	8/24/16	1	1	102	D0070	D0059	D0070	0	0	0	0	0	0	D0099	1	1	D0087	3	D0091	0	D0101	1	1	D0095	0	4	0
16SLB-DSM100m-SA-PCB1	Integrated	Total	DSM100m	8/8/16	1	1	81	D0070	D0059	D0070	0	0	0	0	0	0	D0099	1	1	D0087	2	D0091	0	D0101	0	1	D0095	0	3	0
16SLB-DSM20m-SA-PCB1	Integrated	Total	DSM20m	8/11/16	1	1	125	D0070	D0059	D0070	0	0	0	0	0	1	D0099	1	1	D0087	4	D0091	0	D0101	1	1	D0095	0	4	0
16SLB-DSM20m-SA-PCB1	Integrated	Total	DSM20m	8/11/16	2	1	121	D0070	D0059	D0070	0	0	0	0	0	1	D0099	2	1	D0087	4	D0091	0	D0101	1	1	D0095	0	5	0
16SLB-DSM20m-SU-PCB1	Integrated	Total	DSM20m	8/11/16	1	1	93	D0070	D0059	D0070	0	0	0	0	0	0	D0099	1	1	D0087	3	D0091	0	D0101	1	1	D0095	0	3	0
16SLB-E3g-SA-PCB1	Integrated	Total	E3g	8/8/16	1	1	98	D0070	D0059	D0070	0	0	0	0	0	0	D0099	1	1	D0087	3	D0091	0	D0101	1	1	D0095	0	3	0
16SLB-E6g-SA-PCB1	Integrated	Total	E6g	8/8/16	1	1	82	D0070	D0059	D0070	0	0	0	0	0	0	D0099	1	1	D0087	2	D0091	0	D0101	1	1	D0095	0	2	0
16SLB-E8g-SA-PCB1	Integrated	Total	E8g	8/8/16	1	1	118	D0070	D0059	D0070	0	0	0	0	0	1	D0099	1	1	D0087	3	D0091	0	D0101	1	1	D0095	0	4	0
16SLB-ECFF-SL-PCB1	Integrated	Total	ECFF	8/22/16	1	1	396	D0070	D0059	D0070	1	0	0	0	0	1	D0099	2	2	D0087	7	D0091	0	D0101	2	3	D0095	0	12	0
16SLB-ECFF-SU-PCB1	Integrated	Total	ECFF	8/22/16	1	1	396	D0070	D0059	D0070	0	0	0	0	0	2	D0099	3	2	D0087	9	D0091	0	D0101	2	3	D0095	0	14	0
16SLB-ECFR-SA-PCB1	Integrated	Total	ECFR	8/24/16	1	1	318	D0070	D0059	D0070	0	0	0	0	0	1	D0099	2	1	D0087	6	D0091	0	D0101	1	2	D0095	0	11	0
16SLB-ECM100m-SA-PCB1	Integrated	Total	ECM100m	8/22/16	1	1	942	D0070	D0059	D0070	1	0	1	0	0	8	D0099	17	12	D0087	48	D0091	1	D0101	8	10	D0095	0	48	0
16SLB-ECM20m-SU-PCB1	Integrated	Total	ECM20m	8/22/16	1	1	1136	D0070	D0059	D0070	0	0	0	0	0	1	D0099	3	1	D0087	7	D0091	0	D0101	2	3	D0095	0	21	0
16SLB-ECM20m-SL-PCB1	Integrated	Total	ECM20m	8/22/16	1	1	447	D0070	D0059	D0070	0	0	0	0	0	0	D0099	1	1	D0087	4	D0091	0	D0101	1	2	D0095	0	9	0
16SLB-ELM20m-SU-PCB1	Integrated	Total	ELM20m	8/12/16	1	1	150	D0070	D0059	D0070	0	0	0	0	0	1	D0099	1	1	D0087	4	D0091	0	D0101	1	1	D0095	0	4	0
16SLB-ELM20m-SL-PCB1	Integrated	Total	ELM20m	8/12/16	1	1	46	D0070	D0059	D0070	0	0	0	0	0	0	D0099	0	0	D0087	2	D0091	0	D0101	0	0	D0095	0	2	0
16SLB-ELMFF-SA-PCB1	Integrated	Total	ELMFF	8/10/16	2	1	517	D0070	D0059	D0070	1	0	0	0	0	3	D0099	7	5	D0087	21	D0091	0	D0101	4	5	D0095	0	22	0
16SLB-ELMFF-SL-PCB1	Integrated	Total	ELMFF	8/10/16	1	1	470	D0070	D0059	D0070	1	0	0	0	0	3	D0099	6	5	D0087	18	D0091	0	D0101	3	5	D0095	0	20	0
16SLB-ELMFF-SU-PCB1	Integrated	Total	ELMFF	8/10/16	1	1	426	D0070	D0059	D0070	1	0	0	0	0	2	D0099	5	4	D0087	16	D0091	0	D0101	3	4	D0095	0	17	0
16SLB-ELMFR-SA-PCB1	Integrated	Total	ELMFR	8/24/16	1	1	135	D0070	D0059	D0070	0	0	0	0	0	1	D0099	1	1	D0087	4	D0091	0	D0101	1	1	D0095	0	5	0
16SLB-G4g-SA-PCB1	Integrated	Total	G4g	8/8/16	1	1	107	D0070	D0059	D0070	0	0	0	0	0	0	D0099	1	1	D0087	3	D0091	0	D0101	1	1	D0095	0	3	0
16SLB-G7g-SA-PCB1	Integrated	Total	G7g	8/8/16	1	1	61	D0070	D0059	D0070	0	0	0	0	0	0	D0099	0	0	D0087	2	D0091	0	D0101	0	1	D0095	0	2	0
16SLB-NS100m-SA-PCB1	Integrated	Total	NS100m	8/22/16	1	1	67	D0070	D0059	D0070	0	0	0	0	0	0	D0099	0	0	D0087	2	D0091	0	D0101	0	1	D0095	0	2	0
16SLB-NS20m-SA-PCB1	Integrated	Total	NS20m	8/22/16	1	2	35	D0070	D0059	D0070	0	0	0	0	0	0	D0099	0	0	D0087	1	D0091	0	D0101	0	0	D0095	0	1	0
16SLB-NS20m-SA-PCB1	Integrated	Total	NS20m	8/22/16	1	1	32	D0070	D0059	D0070	0	0	0	0	0	0	D0099	0	0	D0087	1	D0091	0	D0101	0	0	D0095	0	1	0
16SLB-SLBint-SA-PCB1	Integrated	Total	SLBint	8/8/16	1	1	81	D0070	D0059	D0070	0	0	0	0	0	0	D0099	1	1	D0087	2	D0091	0	D0101	1	1	D0095	0	3	0
16SLB-SLBsub1-SU-PCB1	Integrated	Total	SLBsub1	8/11/16	1	1	174	D0070	D0059	D0070	0	0	0	0	0	1	D0099	2	2	D0087	6	D0091	0	D0101	1	2	D0095	0	6	0
16SLB-SLBsub1-SL-PCB1	Integrated	Total	SLBsub1	8/11/16	1	1	134	D0070	D0059	D0070	0	0	0	0	0	1	D0099	1	1	D0087	4	D0091	0	D0101	1	1	D0095	0	4	0
16SLB-SLBsub1-SA-PCB1	Integrated	Total	SLBsub1	8/11/16	2	1	130	D0070	D0059	D0070	0	0	0	0	0	1	D0099	1	1	D0087	4	D0091	0	D0101	1	1	D0095	0	4	0
16SLB-SLBsub2-SL-PCB1	Integrated	Total	SLBsub2	8/11/16	1	1	91	D0070	D0059	D0070	0	0	0	0	0	0	D0099	1	1	D0087	3	D0091	0	D0101	1	1	D0095	0	3	0
16SLB-SLBsub2-SU-PCB1	Integrated	Total	SLBsub2	8/11/16	1	2	85	D0070	D0059	D0070	0	0	0	0	0	0	D0099	1	1	D0087	2	D0091	0	D0101	1	1	D0095	0	3	0
16SLB-SLBsub2-SU-PCB1	Integrated	Total	SLBsub2	8/11/16	1	1	82	D0070	D0059	D0070	0	0	0	0	0	0	D0099	1	1	D0087	2	D0091	0	D0101	1	1	D0095	0	3	0
16SLB-SLCFF-SU-PCB1	Integrated	Total	SLCFF	8/12/16	1	1	109	D0070	D0059	D0070	0	0	0	0	0	0	D0099	1	1	D0087	3	D0091	0	D0101	1	1	D0095	0	3	0
16SLB-SLCFF-SL-PCB1	Integrated	Total	SLCFF	8/12/16	1	1	85	D0070	D0059	D0070	0	0	0	0	0	0	D0099	1	1	D0087	2	D0091	0	D0101	0	1	D0095	0	3	0
16SLB-SLCFR-SA-PCB1	Integrated	Total	SLCFR	8/23/16	1	1	140	D0070	D0059	D0070	0	0	0	0	0	1	D0099	1	1	D0087	4	D0091	0	D0101	1	1	D0095	0	5	0
16SLB-SLCM100m-SA-PCB1	Integrated	Total	SLCM100m	8/9/16	1	1	127	D0070	D0059	D0070	0	0	0	0	0	0	D0099	1	1	D0087	4	D0091	0	D0101	1	1	D0095	0	4	0
16SLB-SLCM20m-SA-PCB1	Integrated	Total	SLCM20m	8/10/16	1	1	73	D0070	D00																					

Sample ID	Sample Type	Fraction	Station Code	Sample Date	Sample Replicate	Lab Replicate	Sum of 208 PCBs (SFEI)	PCB 097	PCB 098	PCB 099	PCB 100	PCB 101	PCB 102	PCB 103	PCB 104	PCB 105	PCB 106	PCB 107	PCB 108	PCB 109	PCB 110	PCB 111	PCB 112	PCB 113	PCB 114	PCB 115	PCB 116	PCB 117	PCB 118
16SLB-A7cz-SA-PCB1	Integrated	Total	A7cz	8/11/16	1	1	29	D0087	D0095	1	D0095	2	D0095	0	0	1	0	D0124	D0087	0	2	0	0	D0101	0	D0110	D0085	D0085	2
16SLB-B5g-SA-PCB1	Integrated	Total	B5g	8/11/16	1	1	66	D0087	D0095	2	D0095	3	D0095	0	0	1	0	D0124	D0087	0	3	0	0	D0101	0	D0110	D0085	D0085	4
16SLB-B8cz-SA-PCB1	Integrated	Total	B8cz	8/11/16	1	1	96	D0087	D0095	3	D0095	4	D0095	0	0	2	0	D0124	D0087	1	5	0	0	D0101	0	D0110	D0085	D0085	6
16SLB-B9g-SA-PCB1	Integrated	Total	B9g	8/8/16	1	1	43	D0087	D0095	2	D0095	2	D0095	0	0	1	0	D0124	D0087	0	2	0	0	D0101	0	D0110	D0085	D0085	3
16SLB-C9g-SA-PCB1	Integrated	Total	C9g	8/8/16	1	2	71	D0087	D0095	3	D0095	4	D0095	0	0	1	0	D0124	D0087	0	4	0	0	D0101	0	D0110	D0085	D0085	4
16SLB-C9g-SA-PCB1	Integrated	Total	C9g	8/8/16	1	1	68	D0087	D0095	3	D0095	3	D0095	0	0	1	0	D0124	D0087	0	4	0	0	D0101	0	D0110	D0085	D0085	4
16SLB-DSFF-SU-PCB1	Integrated	Total	DSFF	8/8/16	1	1	114	D0087	D0095	3	D0095	6	D0095	0	0	2	0	D0124	D0087	0	6	0	0	D0101	0	D0110	D0085	D0085	5
16SLB-DSFF-SL-PCB1	Integrated	Total	DSFF	8/8/16	1	1	108	D0087	D0095	3	D0095	4	D0095	0	0	2	0	D0124	D0087	0	5	0	0	D0101	0	D0110	D0085	D0085	5
16SLB-DSFR-SA-PCB1	Integrated	Total	DSFR	8/24/16	1	1	102	D0087	D0095	4	D0095	6	D0095	0	0	2	0	D0124	D0087	0	6	0	0	D0101	0	D0110	D0085	D0085	6
16SLB-DSM100m-SA-PCB1	Integrated	Total	DSM100m	8/8/16	1	1	81	D0087	D0095	2	D0095	4	D0095	0	0	1	0	D0124	D0087	0	4	0	0	D0101	0	D0110	D0085	D0085	3
16SLB-DSM20m-SA-PCB1	Integrated	Total	DSM20m	8/11/16	1	1	125	D0087	D0095	4	D0095	6	D0095	0	0	2	0	D0124	D0087	1	6	0	0	D0101	0	D0110	D0085	D0085	6
16SLB-DSM20m-SA-PCB1	Integrated	Total	DSM20m	8/11/16	2	1	121	D0087	D0095	4	D0095	6	D0095	0	0	3	0	D0124	D0087	0	7	0	0	D0101	0	D0110	D0085	D0085	7
16SLB-DSM20m-SU-PCB1	Integrated	Total	DSM20m	8/11/16	1	1	93	D0087	D0095	3	D0095	4	D0095	0	0	1	0	D0124	D0087	0	4	0	0	D0101	0	D0110	D0085	D0085	4
16SLB-E3g-SA-PCB1	Integrated	Total	E3g	8/8/16	1	1	98	D0087	D0095	4	D0095	5	D0095	0	0	1	0	D0124	D0087	0	5	0	0	D0101	0	D0110	D0085	D0085	5
16SLB-E6g-SA-PCB1	Integrated	Total	E6g	8/8/16	1	1	82	D0087	D0095	3	D0095	4	D0095	0	0	1	0	D0124	D0087	0	4	0	0	D0101	0	D0110	D0085	D0085	5
16SLB-E8g-SA-PCB1	Integrated	Total	E8g	8/8/16	1	1	118	D0087	D0095	3	D0095	5	D0095	0	0	2	0	D0124	D0087	1	6	0	0	D0101	0	D0110	D0085	D0085	6
16SLB-ECFF-SL-PCB1	Integrated	Total	ECFF	8/22/16	1	1	396	D0087	D0095	10	D0095	16	D0095	1	0	4	0	D0124	D0087	1	14	0	0	D0101	0	D0110	D0085	D0085	11
16SLB-ECFF-SU-PCB1	Integrated	Total	ECFF	8/22/16	1	1	396	D0087	D0095	10	D0095	16	D0095	1	0	5	0	D0124	D0087	1	14	0	0	D0101	0	D0110	D0085	D0085	13
16SLB-ECFR-SA-PCB1	Integrated	Total	ECFR	8/24/16	1	1	318	D0087	D0095	8	D0095	14	D0095	0	0	3	0	D0124	D0087	1	11	0	0	D0101	0	D0110	D0085	D0085	10
16SLB-ECM100m-SA-PCB1	Integrated	Total	ECM100m	8/22/16	1	1	942	D0087	D0095	44	D0095	65	D0095	0	0	30	0	D0124	D0087	5	80	0	0	D0101	2	D0110	D0085	D0085	67
16SLB-ECM20m-SU-PCB1	Integrated	Total	ECM20m	8/22/16	1	1	1136	D0087	D0095	8	D0095	24	D0095	0	0	4	0	D0124	D0087	1	16	0	0	D0101	0	D0110	D0085	D0085	12
16SLB-ECM20m-SL-PCB1	Integrated	Total	ECM20m	8/22/16	1	1	447	D0087	D0095	5	D0095	11	D0095	1	0	2	0	D0124	D0087	1	8	0	0	D0101	0	D0110	D0085	D0085	6
16SLB-ELM20m-SU-PCB1	Integrated	Total	ELM20m	8/12/16	1	1	150	D0087	D0095	5	D0095	7	D0095	0	0	3	0	D0124	D0087	1	8	0	0	D0101	0	D0110	D0085	D0085	8
16SLB-ELM20m-SL-PCB1	Integrated	Total	ELM20m	8/12/16	1	1	46	D0087	D0095	2	D0095	2	D0095	0	0	1	0	D0124	D0087	0	3	0	0	D0101	0	D0110	D0085	D0085	2
16SLB-ELMFF-SA-PCB1	Integrated	Total	ELMFF	8/10/16	2	1	517	D0087	D0095	18	D0095	31	D0095	0	0	11	0	D0124	D0087	2	35	0	0	D0101	1	D0110	D0085	D0085	27
16SLB-ELMFF-SL-PCB1	Integrated	Total	ELMFF	8/10/16	1	1	470	D0087	D0095	16	D0095	27	D0095	0	0	9	0	D0124	D0087	1	31	0	0	D0101	0	D0110	D0085	D0085	24
16SLB-ELMFF-SU-PCB1	Integrated	Total	ELMFF	8/10/16	1	1	426	D0087	D0095	14	D0095	25	D0095	0	0	8	0	D0124	D0087	1	27	0	0	D0101	0	D0110	D0085	D0085	21
16SLB-ELMFR-SA-PCB1	Integrated	Total	ELMFR	8/24/16	1	1	135	D0087	D0095	3	D0095	6	D0095	0	0	2	0	D0124	D0087	0	7	0	0	D0101	0	D0110	D0085	D0085	5
16SLB-G4g-SA-PCB1	Integrated	Total	G4g	8/8/16	1	1	107	D0087	D0095	5	D0095	6	D0095	0	0	2	0	D0124	D0087	0	6	0	0	D0101	0	D0110	D0085	D0085	6
16SLB-G7g-SA-PCB1	Integrated	Total	G7g	8/8/16	1	1	61	D0087	D0095	2	D0095	3	D0095	0	0	1	0	D0124	D0087	0	3	0	0	D0101	0	D0110	D0085	D0085	3
16SLB-NS100m-SA-PCB1	Integrated	Total	NS100m	8/22/16	1	1	67	D0087	D0095	3	D0095	3	D0095	0	0	1	0	D0124	D0087	0	3	0	0	D0101	0	D0110	D0085	D0085	3
16SLB-NS20m-SA-PCB1	Integrated	Total	NS20m	8/22/16	1	2	35	D0087	D0095	1	D0095	2	D0095	0	0	1	0	D0124	D0087	0	2	0	0	D0101	0	D0110	D0085	D0085	2
16SLB-NS20m-SA-PCB1	Integrated	Total	NS20m	8/22/16	1	1	32	D0087	D0095	1	D0095	2	D0095	0	0	0	0	D0124	D0087	0	2	0	0	D0101	0	D0110	D0085	D0085	2
16SLB-SLBint-SA-PCB1	Integrated	Total	SLBint	8/8/16	1	1	81	D0087	D0095	3	D0095	5	D0095	0	0	2	0	D0124	D0087	0	5	0	0	D0101	0	D0110	D0085	D0085	5
16SLB-SLBsub1-SU-PCB1	Integrated	Total	SLBsub1	8/11/16	1	1	174	D0087	D0095	7	D0095	10	D0095	0	0	4	0	D0124	D0087	1	11	0	0	D0101	0	D0110	D0085	D0085	11
16SLB-SLBsub1-SL-PCB1	Integrated	Total	SLBsub1	8/11/16	1	1	134	D0087	D0095	5	D0095	7	D0095	0	0	3	0	D0124	D0087	1	7	0	0	D0101	0	D0110	D0085	D0085	8
16SLB-SLBsub1-SA-PCB1	Integrated	Total	SLBsub1	8/11/16	2	1	130	D0087	D0095	5	D0095	7	D0095	0	0	2	0	D0124	D0087	1	7	0	0	D0101	0	D0110	D0085	D0085	8
16SLB-SLBsub2-SL-PCB1	Integrated	Total	SLBsub2	8/11/16	1	1	91	D0087	D0095	4	D0095	5	D0095	0	0	2	0	D0124	D0087	0	5	0	0	D0101	0	D0110	D0085	D0085	6
16SLB-SLBsub2-SU-PCB1	Integrated	Total	SLBsub2	8/11/16	1	2	85	D0087	D0095	4	D0095	5	D0095	0	0	2	0	D0124	D0087	0	5	0	0	D0101	0	D0110	D0085	D0085	5
16SLB-SLBsub2-SU-PCB1	Integrated	Total	SLBsub2	8/11/16	1	1	82	D0087	D0095	4	D0095	5	D0095	0	0	2	0	D0124	D0087	0	5	0	0	D0101	0	D0110	D0085	D0085	5
16SLB-SLCFF-SU-PCB1	Integrated	Total	SLCFF	8/12/16	1	1	109	D0087	D0095	4	D0095	5	D0095	0	0	2	0	D0124	D0087	0	5	0	0	D0101	0	D0110	D0085	D0085	5
16SLB-SLCFF-SL-PCB1	Integrated	Total	SLCFF	8/12/16	1	1	85	D0087	D0095	3	D0095	4	D0095	0	0	2	0	D0124	D0087	0	4	0	0	D0101	0	D0110	D0085	D0085	4
16SLB-SLCFR-SA-PCB1	Integrated	Total	SLCFR	8/23/16	1	1	140	D0087	D0095	4	D0095	7	D0095	0	0	3	0	D0124	D0087	0	8	0	0	D0101	0	D0110	D0085	D0085	6
16SLB-SLCM100m-SA-PCB1	Integrated	Total	SLCM100m	8/9/16	1	1	127	D0087	D0095	4	D0095	7	D0095	0	0	2	0	D0124	D0087	0	7	0	0	D0101	0	D0110	D0085	D0085	7
16SLB-SLCM20m-SA-PCB1	Integrated	Total	SLCM20m	8/10/16	1	1	73	D0087	D009																				

Sample ID	Sample Type	Fraction	Station Code	Sample Date	Sample Replicate	Lab Replicate	Sum of 208 PCBs (SFEI)	PCB 119	PCB 120	PCB 121	PCB 122	PCB 123	PCB 124	PCB 125	PCB 126	PCB 127	PCB 128	PCB 129	PCB 130	PCB 131	PCB 132	PCB 133	PCB 134	PCB 135	PCB 136	PCB 137	PCB 138	PCB 139	PCB 140	PCB 141	PCB 142
16SLB-A7cz-SA-PCB1	Integrated	Total	A7cz	8/11/16	1	1	29	D0087	0	0	0	0	0	D0087	0	0	0	D0138	0	0	1	0	0	D0151	0	0	2	0	D0139	0	0
16SLB-B5g-SA-PCB1	Integrated	Total	B5g	8/11/16	1	1	66	D0087	0	0	0	0	0	D0087	0	0	1	D0138	0	0	1	0	0	D0151	0	0	5	0	D0139	1	0
16SLB-B8cz-SA-PCB1	Integrated	Total	B8cz	8/11/16	1	1	96	D0087	0	0	0	0	0	D0087	0	0	1	D0138	0	0	2	0	0	D0151	1	0	7	0	D0139	1	0
16SLB-B9g-SA-PCB1	Integrated	Total	B9g	8/8/16	1	1	43	D0087	0	0	0	0	0	D0087	0	0	1	D0138	0	0	1	0	0	D0151	0	0	3	0	D0139	0	0
16SLB-C9g-SA-PCB1	Integrated	Total	C9g	8/8/16	1	2	71	D0087	0	0	0	0	0	D0087	0	0	1	D0138	0	0	2	0	0	D0151	0	0	6	0	D0139	1	0
16SLB-C9g-SA-PCB1	Integrated	Total	C9g	8/8/16	1	1	68	D0087	0	0	0	0	0	D0087	0	0	1	D0138	0	0	2	0	0	D0151	0	0	6	0	D0139	1	0
16SLB-DSFF-SU-PCB1	Integrated	Total	DSFF	8/8/16	1	1	114	D0087	0	0	0	0	0	D0087	0	0	1	D0138	1	0	3	0	0	D0151	1	0	10	0	D0139	1	0
16SLB-DSFF-SL-PCB1	Integrated	Total	DSFF	8/8/16	1	1	108	D0087	0	0	0	0	0	D0087	0	0	1	D0138	1	0	3	0	0	D0151	1	0	10	0	D0139	1	0
16SLB-DSFR-SA-PCB1	Integrated	Total	DSFR	8/24/16	1	1	102	D0087	0	0	0	0	0	D0087	0	0	1	D0138	0	0	2	0	0	D0151	1	0	8	0	D0139	1	0
16SLB-DSM100m-SA-PCB1	Integrated	Total	DSM100m	8/8/16	1	1	81	D0087	0	0	0	0	0	D0087	0	0	1	D0138	0	0	2	0	0	D0151	0	0	7	0	D0139	1	0
16SLB-DSM20m-SA-PCB1	Integrated	Total	DSM20m	8/11/16	1	1	125	D0087	0	0	0	0	0	D0087	0	0	2	D0138	1	0	4	0	1	D0151	1	1	12	0	D0139	2	0
16SLB-DSM20m-SA-PCB1	Integrated	Total	DSM20m	8/11/16	2	1	121	D0087	0	0	0	0	0	D0087	0	0	1	D0138	1	0	3	0	0	D0151	1	0	8	0	D0139	1	0
16SLB-DSM20m-SU-PCB1	Integrated	Total	DSM20m	8/11/16	1	1	93	D0087	0	0	0	0	0	D0087	0	0	1	D0138	1	0	2	0	0	D0151	1	0	8	0	D0139	1	0
16SLB-E3g-SA-PCB1	Integrated	Total	E3g	8/8/16	1	1	98	D0087	0	0	0	0	0	D0087	0	0	1	D0138	0	0	2	0	0	D0151	1	0	7	0	D0139	1	0
16SLB-E6g-SA-PCB1	Integrated	Total	E6g	8/8/16	1	1	82	D0087	0	0	0	0	0	D0087	0	0	1	D0138	0	0	2	0	0	D0151	0	0	7	0	D0139	1	0
16SLB-E8g-SA-PCB1	Integrated	Total	E8g	8/8/16	1	1	118	D0087	0	0	0	0	0	D0087	0	0	2	D0138	1	0	3	0	0	D0151	1	0	10	0	D0139	1	0
16SLB-ECFF-SL-PCB1	Integrated	Total	ECFF	8/22/16	1	1	396	D0087	0	0	0	0	0	D0087	0	0	4	D0138	1	0	9	0	1	D0151	4	1	29	0	D0139	5	0
16SLB-ECFF-SU-PCB1	Integrated	Total	ECFF	8/22/16	1	1	396	D0087	0	0	0	0	1	D0087	0	0	4	D0138	2	0	9	1	2	D0151	4	4	31	1	D0139	6	0
16SLB-ECFR-SA-PCB1	Integrated	Total	ECFR	8/24/16	1	1	318	D0087	0	0	0	0	0	D0087	0	0	3	D0138	1	0	7	0	1	D0151	3	1	24	0	D0139	5	0
16SLB-ECM100m-SA-PCB1	Integrated	Total	ECM100m	8/22/16	1	1	942	D0087	0	0	1	1	3	D0087	0	0	14	D0138	5	1	26	1	3	D0151	7	6	72	2	D0139	9	0
16SLB-ECM20m-SU-PCB1	Integrated	Total	ECM20m	8/22/16	1	1	1136	D0087	0	0	0	0	0	D0087	0	0	3	D0138	2	0	22	1	2	D0151	15	1	70	0	D0139	19	0
16SLB-ECM20m-SL-PCB1	Integrated	Total	ECM20m	8/22/16	1	1	447	D0087	0	0	0	0	0	D0087	0	0	2	D0138	1	0	8	0	1	D0151	5	0	27	0	D0139	7	0
16SLB-ELM20m-SU-PCB1	Integrated	Total	ELM20m	8/12/16	1	1	150	D0087	0	0	0	0	0	D0087	0	0	2	D0138	1	0	3	0	0	D0151	1	0	12	0	D0139	1	0
16SLB-ELM20m-SL-PCB1	Integrated	Total	ELM20m	8/12/16	1	1	46	D0087	0	0	0	0	0	D0087	0	0	0	D0138	0	0	1	0	0	D0151	0	0	3	0	D0139	0	0
16SLB-ELMFF-SA-PCB1	Integrated	Total	ELMFF	8/10/16	2	1	517	D0087	0	0	0	0	1	D0087	0	0	6	D0138	2	0	14	0	2	D0151	4	2	36	1	D0139	6	0
16SLB-ELMFF-SL-PCB1	Integrated	Total	ELMFF	8/10/16	1	1	470	D0087	0	0	0	0	1	D0087	0	0	5	D0138	2	0	12	0	2	D0151	4	2	32	1	D0139	5	0
16SLB-ELMFF-SU-PCB1	Integrated	Total	ELMFF	8/10/16	1	1	426	D0087	0	0	0	0	1	D0087	0	0	5	D0138	2	0	11	0	1	D0151	3	1	30	1	D0139	5	0
16SLB-ELMFR-SA-PCB1	Integrated	Total	ELMFR	8/24/16	1	1	135	D0087	0	0	0	0	0	D0087	0	0	1	D0138	1	0	3	0	0	D0151	1	0	9	0	D0139	1	0
16SLB-G4g-SA-PCB1	Integrated	Total	G4g	8/8/16	1	1	107	D0087	0	0	0	0	0	D0087	0	0	1	D0138	1	0	2	0	0	D0151	1	0	8	0	D0139	1	0
16SLB-G7g-SA-PCB1	Integrated	Total	G7g	8/8/16	1	1	61	D0087	0	0	0	0	0	D0087	0	0	1	D0138	0	0	1	0	0	D0151	0	0	5	0	D0139	0	0
16SLB-NS100m-SA-PCB1	Integrated	Total	NS100m	8/22/16	1	1	67	D0087	0	0	0	0	0	D0087	0	0	1	D0138	0	0	1	0	0	D0151	0	0	5	0	D0139	1	0
16SLB-NS20m-SA-PCB1	Integrated	Total	NS20m	8/22/16	1	2	35	D0087	0	0	0	0	0	D0087	0	0	0	D0138	0	0	1	0	0	D0151	0	0	3	0	D0139	0	0
16SLB-NS20m-SA-PCB1	Integrated	Total	NS20m	8/22/16	1	1	32	D0087	0	0	0	0	0	D0087	0	0	0	D0138	0	0	1	0	0	D0151	0	0	3	0	D0139	0	0
16SLB-SLBint-SA-PCB1	Integrated	Total	SLBint	8/8/16	1	1	81	D0087	0	0	0	0	0	D0087	0	0	1	D0138	0	0	2	0	0	D0151	1	0	6	0	D0139	1	0
16SLB-SLBsub1-SU-PCB1	Integrated	Total	SLBsub1	8/11/16	1	1	174	D0087	0	0	0	0	0	D0087	0	0	2	D0138	1	0	4	0	1	D0151	1	1	14	0	D0139	2	0
16SLB-SLBsub1-SL-PCB1	Integrated	Total	SLBsub1	8/11/16	1	1	134	D0087	0	0	0	0	0	D0087	0	0	2	D0138	1	0	3	0	0	D0151	1	0	11	0	D0139	1	0
16SLB-SLBsub1-SA-PCB1	Integrated	Total	SLBsub1	8/11/16	2	1	130	D0087	0	0	0	0	0	D0087	0	0	2	D0138	1	0	3	0	0	D0151	1	0	11	0	D0139	1	0
16SLB-SLBsub2-SL-PCB1	Integrated	Total	SLBsub2	8/11/16	1	1	91	D0087	0	0	0	0	0	D0087	0	0	1	D0138	0	0	2	0	0	D0151	1	0	8	0	D0139	1	0
16SLB-SLBsub2-SU-PCB1	Integrated	Total	SLBsub2	8/11/16	1	2	85	D0087	0	0	0	0	0	D0087	0	0	1	D0138	0	0	2	0	0	D0151	0	0	7	0	D0139	1	0
16SLB-SLBsub2-SU-PCB1	Integrated	Total	SLBsub2	8/11/16	1	1	82	D0087	0	0	0	0	0	D0087	0	0	1	D0138	0	0	2	0	0	D0151	1	0	7	0	D0139	1	0
16SLB-SLCFF-SU-PCB1	Integrated	Total	SLCFF	8/12/16	1	1	109	D0087	0	0	0	0	0	D0087	0	0	1	D0138	0	0	2	0	0	D0151	1	0	8	0	D0139	1	0
16SLB-SLCFF-SL-PCB1	Integrated	Total	SLCFF	8/12/16	1	1	85	D0087	0	0	0	0	0	D0087	0	0	1	D0138	0	0	1	0	0	D0151	0	0	6	0	D0139	1	0
16SLB-SLCFR-SA-PCB1	Integrated	Total	SLCFR	8/23/16	1	1	140	D0087	0	0	0	0	0	D0087	0	0	2	D0138	1	0	3	0	0	D0151	1	0	11	0	D0139	1	0
16SLB-SLCM100m-SA-PCB1	Integrated	Total	SLCM100m	8/9/16	1	1	127	D0087	0	0	0	0	0	D0087	0	0	1	D0138	1	0	2	0	0	D0151	1	0	10	0	D0139	1	0
16SLB-SLCM20m-SA-PCB1	Integrated	Total	SLCM20m	8/10/16	1	1	73	D0087	0	0	0	0	0	D0087	0	0	1	D0138	0	0	1	0	0	D0151							

Sample ID	Sample Type	Fraction	Station Code	Sample Date	Sample Replicate	Lab Replicate	Sum of 208 PCBs (SFEI)	PCB 143	PCB 144	PCB 145	PCB 146	PCB 147	PCB 148	PCB 149	PCB 150	PCB 151	PCB 152	PCB 153	PCB 154	PCB 155	PCB 156	PCB 157	PCB 158	PCB 159	PCB 160	PCB 161	PCB 162	PCB 163	PCB 164	PCB 165
16SLB-A7cz-SA-PCB1	Integrated	Total	A7cz	8/11/16	1	1	29	DO134	0	0	0	DO149	0	2	0	1	0	2	DO151	0	0	DO156	0	0	DO138	0	0	DO138	0	0
16SLB-B5g-SA-PCB1	Integrated	Total	B5g	8/11/16	1	1	66	DO134	0	0	1	DO149	0	4	0	1	0	4	DO151	0	1	DO156	0	0	DO138	0	0	DO138	0	0
16SLB-B8cz-SA-PCB1	Integrated	Total	B8cz	8/11/16	1	1	96	DO134	0	0	1	DO149	0	5	0	2	0	6	DO151	0	1	DO156	1	0	DO138	0	0	DO138	0	0
16SLB-B9g-SA-PCB1	Integrated	Total	B9g	8/8/16	1	1	43	DO134	0	0	1	DO149	0	2	0	1	0	3	DO151	0	0	DO156	0	0	DO138	0	0	DO138	0	0
16SLB-C9g-SA-PCB1	Integrated	Total	C9g	8/8/16	1	2	71	DO134	0	0	1	DO149	0	5	0	1	0	5	DO151	0	1	DO156	1	0	DO138	0	0	DO138	0	0
16SLB-C9g-SA-PCB1	Integrated	Total	C9g	8/8/16	1	1	68	DO134	0	0	1	DO149	0	4	0	1	0	5	DO151	0	1	DO156	0	0	DO138	0	0	DO138	0	0
16SLB-DSFF-SU-PCB1	Integrated	Total	DSFF	8/8/16	1	1	114	DO134	0	0	1	DO149	0	8	0	3	0	9	DO151	0	1	DO156	1	0	DO138	0	0	DO138	1	0
16SLB-DSFF-SL-PCB1	Integrated	Total	DSFF	8/8/16	1	1	108	DO134	0	0	2	DO149	0	8	0	2	0	9	DO151	0	1	DO156	1	0	DO138	0	0	DO138	1	0
16SLB-DSFR-SA-PCB1	Integrated	Total	DSFR	8/24/16	1	1	102	DO134	0	0	1	DO149	0	5	0	2	0	7	DO151	0	1	DO156	1	0	DO138	0	0	DO138	0	0
16SLB-DSM100m-SA-PCB1	Integrated	Total	DSM100m	8/8/16	1	1	81	DO134	0	0	1	DO149	0	6	0	2	0	6	DO151	0	1	DO156	1	0	DO138	0	0	DO138	0	0
16SLB-DSM20m-SA-PCB1	Integrated	Total	DSM20m	8/11/16	1	1	125	DO134	0	0	2	DO149	0	9	0	3	0	9	DO151	0	1	DO156	1	0	DO138	0	0	DO138	1	0
16SLB-DSM20m-SA-PCB1	Integrated	Total	DSM20m	8/11/16	2	1	121	DO134	0	0	1	DO149	0	5	0	2	0	6	DO151	0	1	DO156	1	0	DO138	0	0	DO138	1	0
16SLB-DSM20m-SU-PCB1	Integrated	Total	DSM20m	8/11/16	1	1	93	DO134	0	0	1	DO149	0	7	0	2	0	7	DO151	0	1	DO156	1	0	DO138	0	0	DO138	1	0
16SLB-E3g-SA-PCB1	Integrated	Total	E3g	8/8/16	1	1	98	DO134	0	0	1	DO149	0	6	0	2	0	7	DO151	0	1	DO156	1	0	DO138	0	0	DO138	0	0
16SLB-E6g-SA-PCB1	Integrated	Total	E6g	8/8/16	1	1	82	DO134	0	0	1	DO149	0	5	0	2	0	6	DO151	0	1	DO156	1	0	DO138	0	0	DO138	0	0
16SLB-E8g-SA-PCB1	Integrated	Total	E8g	8/8/16	1	1	118	DO134	0	0	2	DO149	0	8	0	3	0	9	DO151	0	1	DO156	1	0	DO138	0	0	DO138	1	0
16SLB-ECFF-SL-PCB1	Integrated	Total	ECFF	8/22/16	1	1	396	DO134	2	0	5	DO149	0	28	0	15	0	33	DO151	0	2	DO156	2	0	DO138	0	0	DO138	2	0
16SLB-ECFF-SU-PCB1	Integrated	Total	ECFF	8/22/16	1	1	396	DO134	1	0	5	DO149	0	28	0	11	0	30	DO151	0	3	DO156	3	0	DO138	0	0	DO138	2	0
16SLB-ECFR-SA-PCB1	Integrated	Total	ECFR	8/24/16	1	1	318	DO134	1	0	4	DO149	0	22	0	11	0	25	DO151	0	2	DO156	2	0	DO138	0	0	DO138	2	0
16SLB-ECM100m-SA-PCB1	Integrated	Total	ECM100m	8/22/16	1	1	942	DO134	3	0	7	DO149	0	44	0	16	0	50	DO151	0	10	DO156	7	0	DO138	0	0	DO138	4	0
16SLB-ECM20m-SU-PCB1	Integrated	Total	ECM20m	8/22/16	1	1	1136	DO134	7	0	10	DO149	0	88	0	49	0	96	DO151	0	3	DO156	5	0	DO138	0	1	DO138	4	0
16SLB-ECM20m-SL-PCB1	Integrated	Total	ECM20m	8/22/16	1	1	447	DO134	2	0	5	DO149	0	33	0	18	0	36	DO151	0	1	DO156	2	0	DO138	0	1	DO138	2	0
16SLB-ELM20m-SU-PCB1	Integrated	Total	ELM20m	8/12/16	1	1	150	DO134	0	0	2	DO149	0	8	0	4	0	10	DO151	0	1	DO156	1	0	DO138	0	0	DO138	1	0
16SLB-ELM20m-SL-PCB1	Integrated	Total	ELM20m	8/12/16	1	1	46	DO134	0	0	0	DO149	0	2	0	1	0	3	DO151	0	0	DO156	0	0	DO138	0	0	DO138	0	0
16SLB-ELMFF-SA-PCB1	Integrated	Total	ELMFF	8/10/16	2	1	517	DO134	2	0	5	DO149	0	25	0	11	0	30	DO151	0	4	DO156	4	0	DO138	0	0	DO138	2	0
16SLB-ELMFF-SL-PCB1	Integrated	Total	ELMFF	8/10/16	1	1	470	DO134	1	0	4	DO149	0	21	0	10	0	27	DO151	0	3	DO156	3	0	DO138	0	0	DO138	2	0
16SLB-ELMFF-SU-PCB1	Integrated	Total	ELMFF	8/10/16	1	1	426	DO134	1	0	4	DO149	0	20	0	9	0	25	DO151	0	3	DO156	3	0	DO138	0	0	DO138	2	0
16SLB-ELMFR-SA-PCB1	Integrated	Total	ELMFR	8/24/16	1	1	135	DO134	0	0	1	DO149	0	7	0	3	0	8	DO151	0	1	DO156	1	0	DO138	0	0	DO138	1	0
16SLB-G4g-SA-PCB1	Integrated	Total	G4g	8/8/16	1	1	107	DO134	0	0	1	DO149	0	6	0	3	0	8	DO151	0	1	DO156	1	0	DO138	0	0	DO138	0	0
16SLB-G7g-SA-PCB1	Integrated	Total	G7g	8/8/16	1	1	61	DO134	0	0	1	DO149	0	4	0	1	0	4	DO151	0	0	DO156	0	0	DO138	0	0	DO138	0	0
16SLB-NS100m-SA-PCB1	Integrated	Total	NS100m	8/22/16	1	1	67	DO134	0	0	1	DO149	0	4	0	2	0	5	DO151	0	0	DO156	0	0	DO138	0	0	DO138	0	0
16SLB-NS20m-SA-PCB1	Integrated	Total	NS20m	8/22/16	1	2	35	DO134	0	0	0	DO149	0	2	0	1	0	3	DO151	0	0	DO156	0	0	DO138	0	0	DO138	0	0
16SLB-NS20m-SA-PCB1	Integrated	Total	NS20m	8/22/16	1	1	32	DO134	0	0	0	DO149	0	2	0	1	0	3	DO151	0	0	DO156	0	0	DO138	0	0	DO138	0	0
16SLB-SLBint-SA-PCB1	Integrated	Total	SLBint	8/8/16	1	1	81	DO134	0	0	1	DO149	0	5	0	2	0	6	DO151	0	1	DO156	1	0	DO138	0	0	DO138	0	0
16SLB-SLBsub1-SU-PCB1	Integrated	Total	SLBsub1	8/11/16	1	1	174	DO134	0	0	2	DO149	0	10	0	4	0	12	DO151	0	2	DO156	1	0	DO138	0	0	DO138	1	0
16SLB-SLBsub1-SL-PCB1	Integrated	Total	SLBsub1	8/11/16	1	1	134	DO134	0	0	2	DO149	0	8	0	3	0	9	DO151	0	1	DO156	1	0	DO138	0	0	DO138	1	0
16SLB-SLBsub1-SA-PCB1	Integrated	Total	SLBsub1	8/11/16	2	1	130	DO134	0	0	2	DO149	0	7	0	3	0	9	DO151	0	1	DO156	1	0	DO138	0	0	DO138	1	0
16SLB-SLBsub2-SL-PCB1	Integrated	Total	SLBsub2	8/11/16	1	1	91	DO134	0	0	1	DO149	0	5	0	2	0	7	DO151	0	1	DO156	1	0	DO138	0	0	DO138	0	0
16SLB-SLBsub2-SU-PCB1	Integrated	Total	SLBsub2	8/11/16	1	2	85	DO134	0	0	1	DO149	0	5	0	2	0	6	DO151	0	1	DO156	1	0	DO138	0	0	DO138	0	0
16SLB-SLBsub2-SU-PCB1	Integrated	Total	SLBsub2	8/11/16	1	1	82	DO134	0	0	1	DO149	0	5	0	2	0	6	DO151	0	1	DO156	1	0	DO138	0	0	DO138	0	0
16SLB-SLCFF-SU-PCB1	Integrated	Total	SLCFF	8/12/16	1	1	109	DO134	0	0	1	DO149	0	5	0	2	0	7	DO151	0	1	DO156	1	0	DO138	0	0	DO138	1	0
16SLB-SLCFF-SL-PCB1	Integrated	Total	SLCFF	8/12/16	1	1	85	DO134	0	0	1	DO149	0	4	0	2	0	6	DO151	0	1	DO156	1	0	DO138	0	0	DO138	0	0
16SLB-SLCFR-SA-PCB1	Integrated	Total	SLCFR	8/23/16	1	1	140	DO134	0	0	1	DO149	0	7	0	3	0	9	DO151	0	1	DO156	1	0	DO138	0	0	DO138	1	0
16SLB-SLCM100m-SA-PCB1	Integrated	Total	SLCM100m	8/9/16	1	1	127	DO134	0	0	2	DO149	0	6	0	3	0	8	DO151	0	1	DO156	1	0	DO138	0	0	DO138	1	0
16SLB-SLCM20m-SA-PCB1	Integrated	Total	SLCM20m	8/10/16	1	1	73	DO134	0	0	1	DO149	0	4	0	2	0	5	DO151	0	1	DO156	0	0	DO138	0	0	DO138	0	0
16SLB-SLCM20m-SU-PCB1	Integrated	Total	SLCM20m	8/10/16	1	1	61	DO134	0	0	1																			

Sample ID	Sample Type	Fraction	Station Code	Sample Date	Sample Replicate	Lab Replicate	Sum of 208 PCBs (SFEI)	PCB 166	PCB 167	PCB 168	PCB 169	PCB 170	PCB 171	PCB 172	PCB 173	PCB 174	PCB 175	PCB 176	PCB 177	PCB 178	PCB 179	PCB 180	PCB 181	PCB 182	PCB 183	PCB 184	PCB 185	PCB 186	PCB 187	PCB 188	PCB 189	PCB 190
16SLB-A7cz-SA-PCB1	Integrated	Total	A7cz	8/11/16	1	1	29	DO128	0	DO153	0	0	0	0	DO171	0	0	0	0	0	0	0	1	0	0	0	DO183	0	1	0	0	0
16SLB-B5g-SA-PCB1	Integrated	Total	B5g	8/11/16	1	1	66	DO128	0	DO153	0	1	0	0	DO171	1	0	0	1	0	0	3	0	0	1	0	DO183	0	2	0	0	0
16SLB-B8cz-SA-PCB1	Integrated	Total	B8cz	8/11/16	1	1	96	DO128	0	DO153	0	2	0	0	DO171	1	0	0	1	0	1	4	0	0	1	0	DO183	0	2	0	0	0
16SLB-B9g-SA-PCB1	Integrated	Total	B9g	8/8/16	1	1	43	DO128	0	DO153	0	1	0	0	DO171	0	0	0	0	0	0	2	0	0	0	0	DO183	0	1	0	0	0
16SLB-C9g-SA-PCB1	Integrated	Total	C9g	8/8/16	1	2	71	DO128	0	DO153	0	1	0	0	DO171	1	0	0	1	0	0	2	0	0	1	0	DO183	0	2	0	0	0
16SLB-C9g-SA-PCB1	Integrated	Total	C9g	8/8/16	1	1	68	DO128	0	DO153	0	1	0	0	DO171	1	0	0	1	0	0	2	0	0	1	0	DO183	0	2	0	0	0
16SLB-DSFF-SU-PCB1	Integrated	Total	DSFF	8/8/16	1	1	114	DO128	0	DO153	0	2	1	0	DO171	1	0	0	1	0	1	4	0	0	1	0	DO183	0	3	0	0	0
16SLB-DSFF-SL-PCB1	Integrated	Total	DSFF	8/8/16	1	1	108	DO128	0	DO153	0	2	0	0	DO171	1	0	0	1	0	1	4	0	0	1	0	DO183	0	3	0	0	0
16SLB-DSFR-SA-PCB1	Integrated	Total	DSFR	8/24/16	1	1	102	DO128	0	DO153	0	1	0	0	DO171	1	0	0	1	0	1	4	0	0	1	0	DO183	0	2	0	0	0
16SLB-DSM100m-SA-PCB1	Integrated	Total	DSM100m	8/8/16	1	1	81	DO128	0	DO153	0	1	0	0	DO171	1	0	0	1	0	0	3	0	0	1	0	DO183	0	2	0	0	0
16SLB-DSM20m-SA-PCB1	Integrated	Total	DSM20m	8/11/16	1	1	125	DO128	0	DO153	0	2	0	0	DO171	1	0	0	1	0	1	4	0	0	1	0	DO183	0	2	0	0	0
16SLB-DSM20m-SA-PCB1	Integrated	Total	DSM20m	8/11/16	2	1	121	DO128	0	DO153	0	2	1	0	DO171	1	0	0	1	0	1	4	0	0	1	0	DO183	0	2	0	0	0
16SLB-DSM20m-SU-PCB1	Integrated	Total	DSM20m	8/11/16	1	1	93	DO128	0	DO153	0	1	0	0	DO171	1	0	0	1	0	1	3	0	0	1	0	DO183	0	2	0	0	0
16SLB-E3g-SA-PCB1	Integrated	Total	E3g	8/8/16	1	1	98	DO128	0	DO153	0	2	1	0	DO171	1	0	0	1	0	1	4	0	0	1	0	DO183	0	2	0	0	0
16SLB-E6g-SA-PCB1	Integrated	Total	E6g	8/8/16	1	1	82	DO128	0	DO153	0	1	0	0	DO171	1	0	0	1	0	1	3	0	0	1	0	DO183	0	2	0	0	0
16SLB-E8g-SA-PCB1	Integrated	Total	E8g	8/8/16	1	1	118	DO128	0	DO153	0	2	1	0	DO171	2	0	0	1	0	1	5	0	0	1	0	DO183	0	3	0	0	0
16SLB-ECFF-SL-PCB1	Integrated	Total	ECFF	8/22/16	1	1	396	DO128	1	DO153	0	9	3	1	DO171	9	0	1	5	2	5	23	0	0	7	0	DO183	0	15	0	0	2
16SLB-ECFF-SU-PCB1	Integrated	Total	ECFF	8/22/16	1	1	396	DO128	1	DO153	0	8	2	1	DO171	6	0	1	5	2	4	22	0	0	5	0	DO183	0	11	0	0	1
16SLB-ECFR-SA-PCB1	Integrated	Total	ECFR	8/24/16	1	1	318	DO128	1	DO153	0	7	2	1	DO171	7	0	1	5	2	4	20	0	0	6	0	DO183	0	12	0	0	2
16SLB-ECM100m-SA-PCB1	Integrated	Total	ECM100m	8/22/16	1	1	942	DO128	3	DO153	0	9	3	1	DO171	8	0	1	4	2	3	19	0	0	6	0	DO183	0	10	0	0	2
16SLB-ECM20m-SU-PCB1	Integrated	Total	ECM20m	8/22/16	1	1	1136	DO128	1	DO153	0	37	12	7	DO171	58	2	7	26	11	27	126	0	0	41	0	DO183	0	77	0	1	8
16SLB-ECM20m-SL-PCB1	Integrated	Total	ECM20m	8/22/16	1	1	447	DO128	1	DO153	0	14	4	2	DO171	21	1	3	10	4	9	48	0	0	14	0	DO183	0	28	0	0	3
16SLB-ELM20m-SU-PCB1	Integrated	Total	ELM20m	8/12/16	1	1	150	DO128	0	DO153	0	2	1	0	DO171	2	0	0	1	1	6	0	0	2	0	DO183	0	4	0	0	0	
16SLB-ELM20m-SL-PCB1	Integrated	Total	ELM20m	8/12/16	1	1	46	DO128	0	DO153	0	1	0	0	DO171	1	0	0	0	0	2	0	0	1	0	DO183	0	1	0	0	0	
16SLB-ELMFF-SA-PCB1	Integrated	Total	ELMFF	8/10/16	2	1	517	DO128	1	DO153	0	6	2	1	DO171	6	0	1	4	2	3	15	0	0	5	0	DO183	0	9	0	0	1
16SLB-ELMFF-SL-PCB1	Integrated	Total	ELMFF	8/10/16	1	1	470	DO128	1	DO153	0	6	2	1	DO171	6	0	1	4	2	3	16	0	0	5	0	DO183	0	9	0	0	1
16SLB-ELMFF-SU-PCB1	Integrated	Total	ELMFF	8/10/16	1	1	426	DO128	1	DO153	0	6	2	1	DO171	6	0	1	4	2	3	15	0	0	5	0	DO183	0	9	0	0	1
16SLB-ELMFR-SA-PCB1	Integrated	Total	ELMFR	8/24/16	1	1	135	DO128	0	DO153	0	2	1	0	DO171	2	0	0	1	0	1	5	0	0	2	0	DO183	0	3	0	0	0
16SLB-G4g-SA-PCB1	Integrated	Total	G4g	8/8/16	1	1	107	DO128	0	DO153	0	2	1	0	DO171	1	0	0	1	1	1	4	0	0	1	0	DO183	0	3	0	0	0
16SLB-G7g-SA-PCB1	Integrated	Total	G7g	8/8/16	1	1	61	DO128	0	DO153	0	1	0	0	DO171	1	0	0	1	0	1	3	0	0	1	0	DO183	0	2	0	0	0
16SLB-NS100m-SA-PCB1	Integrated	Total	NS100m	8/22/16	1	1	67	DO128	0	DO153	0	1	0	0	DO171	1	0	0	1	0	1	3	0	0	1	0	DO183	0	2	0	0	0
16SLB-NS20m-SA-PCB1	Integrated	Total	NS20m	8/22/16	1	2	35	DO128	0	DO153	0	1	0	0	DO171	1	0	0	0	0	0	2	0	0	0	0	DO183	0	1	0	0	0
16SLB-NS20m-SA-PCB1	Integrated	Total	NS20m	8/22/16	1	1	32	DO128	0	DO153	0	1	0	0	DO171	1	0	0	0	0	0	1	0	0	0	0	DO183	0	1	0	0	0
16SLB-SLBint-SA-PCB1	Integrated	Total	SLBint	8/8/16	1	1	81	DO128	0	DO153	0	1	0	0	DO171	1	0	0	1	0	1	3	0	0	1	0	DO183	0	2	0	0	0
16SLB-SLBsub1-SU-PCB1	Integrated	Total	SLBsub1	8/11/16	1	1	174	DO128	1	DO153	0	2	1	0	DO171	2	0	0	1	1	1	6	0	0	2	0	DO183	0	4	0	0	0
16SLB-SLBsub1-SL-PCB1	Integrated	Total	SLBsub1	8/11/16	1	1	134	DO128	0	DO153	0	2	1	0	DO171	2	0	0	1	1	1	5	0	0	1	0	DO183	0	3	0	0	0
16SLB-SLBsub1-SA-PCB1	Integrated	Total	SLBsub1	8/11/16	2	1	130	DO128	0	DO153	0	2	1	0	DO171	2	0	0	1	0	1	5	0	0	1	0	DO183	0	3	0	0	0
16SLB-SLBsub2-SL-PCB1	Integrated	Total	SLBsub2	8/11/16	1	1	91	DO128	0	DO153	0	1	0	0	DO171	1	0	0	1	0	1	4	0	0	1	0	DO183	0	2	0	0	0
16SLB-SLBsub2-SU-PCB1	Integrated	Total	SLBsub2	8/11/16	1	2	85	DO128	0	DO153	0	1	0	0	DO171	1	0	0	1	0	1	3	0	0	1	0	DO183	0	2	0	0	0
16SLB-SLBsub2-SU-PCB1	Integrated	Total	SLBsub2	8/11/16	1	1	82	DO128	0	DO153	0	1	0	0	DO171	1	0	0	1	0	1	3	0	0	1	0	DO183	0	2	0	0	0
16SLB-SLCFF-SU-PCB1	Integrated	Total	SLCFF	8/12/16	1	1	109	DO128	0	DO153	0	2	1	0	DO171	1	0	0	1	0	1	4	0	0	1	0	DO183	0	3	0	0	0
16SLB-SLCFF-SL-PCB1	Integrated	Total	SLCFF	8/12/16	1	1	85	DO128	0	DO153	0	1	0	0	DO171	1	0	0	1	0	1	4	0	0	1	0	DO183	0	2	0	0	0
16SLB-SLCFR-SA-PCB1	Integrated	Total	SLCFR	8/23/16	1	1	140	DO128	0	DO153	0	2	1	0	DO171	2	0	0	1	1	1	6	0	0	2	0	DO183	0	3	0	0	0
16SLB-SLCM100m-SA-PCB1	Integrated	Total	SLCM100m	8/9/16	1	1	127	DO128	0	DO153	0	2	1	0	DO171	2	0	0	1	1	1	6	0	0	1	0	DO183	0	3	0	0	0
16SLB-SLCM20m-SA-PCB1	Integrated	Total	SLCM20m																													



## Appendix 5: PCB Concentrations in Water (pg/L, NDs set to zero)

Sample ID	Sample Type	Fraction	Station Code	Sample Date	Sample Replicate	Lab Replicate	Sum of 208 PCBs (SFEI)	PCB 001	PCB 002	PCB 003	PCB 004	PCB 005	PCB 006	PCB 007	PCB 008	PCB 009	PCB 010	PCB 011	PCB 012	PCB 013	PCB 014	PCB 015	PCB 016	PCB 017	PCB 018	PCB 019	PCB 020	PCB 021	PCB 022	PCB 023	PCB 024	PCB 025	PCB 026	
16SLB-B5g-WA-PCB1	Grab	Total	B5g	8/11/16	1	1	857	.	.	.	0	0	0	0	4	0	0	.	D0013	0	0	.	0	0	13	5	D0028	D0033	3	0	0	7	21	
16SLB-E6g-WA-PCB1	Grab	Total	E6g	8/11/16	1	1	1860	.	13	.	4	0	0	0	7	0	0	.	D0013	5	0	.	3	7	10	0	D0028	D0033	0	0	0	7	15	
16SLB-SLBsub1-WA-PCB1	Grab	Total	SLBsub1	8/11/16	1	1	1011	.	.	.	4	0	0	0	0	0	0	0	.	D0013	0	0	.	3	5	10	0	D0028	D0033	4	0	0	5	14

Sample ID	Sample Type	Fraction	Station Code	Sample Date	Sample Replicate	Lab Replicate	Sum of 208 PCBs (SFEI)	PCB 027	PCB 028	PCB 029	PCB 030	PCB 031	PCB 032	PCB 033	PCB 034	PCB 035	PCB 036	PCB 037	PCB 038	PCB 039	PCB 040	PCB 041	PCB 042	PCB 043	PCB 044	PCB 045	PCB 046	PCB 047	PCB 048	PCB 049	PCB 050	PCB 051
16SLB-B5g-WA-PCB1	Grab	Total	B5g	8/11/16	1	1	857	0	14	D0026	D0018	10	7	.	0	0	0	.	0	0	14	D0040	0	0	86	21	0	D0044	2	43	D0045	
16SLB-E6g-WA-PCB1	Grab	Total	E6g	8/11/16	1	1	1860	6	17	D0026	D0018	11	6	8	0	0	0	3	0	0	13	D0040	6	1	330	65	2	D0044	3	48	D0053	D0045
16SLB-SLBsub1-WA-PCB1	Grab	Total	SLBsub1	8/11/16	1	1	1011	6	15	D0026	D0018	11	6	.	0	0	0	3	0	0	12	D0040	5	0	.	.	0	D0044	3	36	D0053	D0045

Sample ID	Sample Type	Fraction	Station Code	Sample Date	Sample Replicate	Lab Replicate	Sum of 208 PCBs (SFEI)	PCB 052	PCB 053	PCB 054	PCB 055	PCB 056	PCB 057	PCB 058	PCB 059	PCB 060	PCB 061	PCB 062	PCB 063	PCB 064	PCB 065	PCB 066	PCB 067	PCB 068	PCB 069	PCB 070	PCB 071	PCB 072	PCB 073	PCB 074	PCB 075
16SLB-B5g-WA-PCB1	Grab	Total	B5g	8/11/16	1	1	857	73	14	0	0	4	0	0	5	2	D0070	D0059	1	6	D0044	16	0	7	D0049	28	D0040	0	0	D0070	D0059
16SLB-E6g-WA-PCB1	Grab	Total	E6g	8/11/16	1	1	1860	77	11	1	0	0	0	0	5	2	D0070	D0059	1	0	D0044	25	0	48	D0049	37	D0040	2	1	D0070	D0059
16SLB-SLBsub1-WA-PCB1	Grab	Total	SLBsub1	8/11/16	1	1	1011	66	9	0	0	6	0	0	0	2	D0070	D0059	0	7	D0044	20	0	.	D0049	32	D0040	2	0	D0070	D0059

Sample ID	Sample Type	Fraction	Station Code	Sample Date	Sample Replicate	Lab Replicate	Sum of 208 PCBs (SFEI)	PCB 076	PCB 077	PCB 078	PCB 079	PCB 080	PCB 081	PCB 082	PCB 083	PCB 084	PCB 085	PCB 086	PCB 087	PCB 088	PCB 089	PCB 090	PCB 091	PCB 092	PCB 093	PCB 094	PCB 095	PCB 096	PCB 097	PCB 098	PCB 099	
16SLB-B5g-WA-PCB1	Grab	Total	B5g	8/11/16	1	1	857	DO070	2	0	0	0	0	0	0	DO099	10	0	DO087	26	DO091	0	DO101	8	0	DO095	0	44	0	DO087	DO095	41
16SLB-E6g-WA-PCB1	Grab	Total	E6g	8/11/16	1	1	1860	DO070	2	0	0	0	0	0	6	DO099	13	13	DO087	44	DO091	1	DO101	12	20	DO095	1	61	0	DO087	DO095	72
16SLB-SLBsub1-WA-PCB1	Grab	Total	SLBsub1	8/11/16	1	1	1011	DO070	2	0	1	0	0	0	0	DO099	9	7	DO087	28	DO091	0	DO101	0	12	DO095	0	42	0	DO087	DO095	46

Sample ID	Sample Type	Fraction	Station Code	Sample Date	Sample Replicate	Lab Replicate	Sum of 208 PCBs (SFEI)	PCB 100	PCB 101	PCB 102	PCB 103	PCB 104	PCB 105	PCB 106	PCB 107	PCB 108	PCB 109	PCB 110	PCB 111	PCB 112	PCB 113	PCB 114	PCB 115	PCB 116	PCB 117	PCB 118	PCB 119	PCB 120	PCB 121	PCB 122	PCB 123
16SLB-B5g-WA-PCB1	Grab	Total	B5g	8/11/16	1	1	857	DO095	58	DO095	0	0	12	0	DO124	DO087	0	54	0	0	DO101	0	DO110	DO085	DO085	38	DO087	0	0	1	0
16SLB-E6g-WA-PCB1	Grab	Total	E6g	8/11/16	1	1	1860	DO095	94	DO095	2	0	20	0	DO124	DO087	7	86	0	0	DO101	0	DO110	DO085	DO085	70	DO087	0	0	1	0
16SLB-SLBsub1-WA-PCB1	Grab	Total	SLBsub1	8/11/16	1	1	1011	DO095	61	DO095	1	0	14	0	DO124	DO087	4	60	0	0	DO101	0	DO110	DO085	DO085	47	DO087	0	0	1	0

Sample ID	Sample Type	Fraction	Station Code	Sample Date	Sample Replicate	Lab Replicate	Sum of 208 PCBs (SFEI)	PCB 124	PCB 125	PCB 126	PCB 127	PCB 128	PCB 129	PCB 130	PCB 131	PCB 132	PCB 133	PCB 134	PCB 135	PCB 136	PCB 137	PCB 138	PCB 139	PCB 140	PCB 141	PCB 142	PCB 143	PCB 144	PCB 145	PCB 146	PCB 147	PCB 148
16SLB-B5g-WA-PCB1	Grab	Total	B5g	8/11/16	1	1	857	0	DO087	0	0	0	DO138	0	0	11	0	0	DO151	5	0	44	1	DO139	4	0	DO134	0	0	0	DO149	0
16SLB-E6g-WA-PCB1	Grab	Total	E6g	8/11/16	1	1	1860	0	DO087	0	0	13	DO138	7	0	0	0	4	DO151	7	3	97	0	DO139	7	0	DO134	2	0	23	DO149	0
16SLB-SLBsub1-WA-PCB1	Grab	Total	SLBsub1	8/11/16	1	1	1011	0	DO087	0	0	0	DO138	3	0	13	0	3	DO151	6	0	53	0	DO139	0	0	DO134	0	0	0	DO149	0

Sample ID	Sample Type	Fraction	Station Code	Sample Date	Sample Replicate	Lab Replicate	Sum of 208 PCBs (SFEI)	PCB 149	PCB 150	PCB 151	PCB 152	PCB 153	PCB 154	PCB 155	PCB 156	PCB 157	PCB 158	PCB 159	PCB 160	PCB 161	PCB 162	PCB 163	PCB 164	PCB 165	PCB 166	PCB 167	PCB 168	PCB 169	PCB 170	PCB 171	PCB 172	PCB 173
16SLB-B5g-WA-PCB1	Grab	Total	B5g	8/11/16	1	1	857	35	0	0	0	.	DO151	0	3	DO156	3	0	DO138	0	0	DO138	3	0	DO128	1	DO153	0	5	0	0	DO171
16SLB-E6g-WA-PCB1	Grab	Total	E6g	8/11/16	1	1	1860	77	0	34	0	104	DO151	0	0	DO156	7	0	DO138	0	0	DO138	6	0	DO128	3	DO153	0	12	4	0	DO171
16SLB-SLBsub1-WA-PCB1	Grab	Total	SLBsub1	8/11/16	1	1	1011	48	0	19	0	56	DO151	0	4	DO156	4	0	DO138	0	0	DO138	0	0	DO128	2	DO153	0	0	0	0	DO171

Sample ID	Sample Type	Fraction	Station Code	Sample Date	Sample Replicate	Lab Replicate	Sum of 208 PCBs (SFEI)	PCB 174	PCB 175	PCB 176	PCB 177	PCB 178	PCB 179	PCB 180	PCB 181	PCB 182	PCB 183	PCB 184	PCB 185	PCB 186	PCB 187	PCB 188	PCB 189	PCB 190	PCB 191	PCB 192	PCB 193	PCB 194	PCB 195	PCB 196	PCB 197	PCB 198	PCB 199
16SLB-B5g-WA-PCB1	Grab	Total	B5g	8/11/16	1	1	857	0	0	0	0	2	0	14	0	0	5	0	DO183	0	11	0	0	0	0	0	DO180	2	1	1	DO200	DO199	0
16SLB-E6g-WA-PCB1	Grab	Total	E6g	8/11/16	1	1	1860	10	0	0	9	5	7	32	0	0	10	0	DO183	0	28	0	1	0	0	0	DO180	6	2	3	DO200	DO199	7
16SLB-SLBsub1-WA-PCB1	Grab	Total	SLBsub1	8/11/16	1	1	1011	6	0	0	4	3	4	18	0	0	0	0	DO183	0	14	0	0	1	0	0	DO180	4	0	0	DO200	DO199	0

Sample ID	Sample Type	Fraction	Station Code	Sample Date	Sample Replicate	Lab Replicate	Sum of 208 PCBs (SFEI)	PCB 200	PCB 201	PCB 202	PCB 203	PCB 204	PCB 205	PCB 206	PCB 207	PCB 208	PCB 209
16SLB-B5g-WA-PCB1	Grab	Total	B5g	8/11/16	1	1	857	0	0	0	2	0	0	0	0	0	2
16SLB-E6g-WA-PCB1	Grab	Total	E6g	8/11/16	1	1	1860	0	1	0	0	0	0	0	1	0	5
16SLB-SLBsub1-WA-PCB1	Grab	Total	SLBsub1	8/11/16	1	1	1011	0	0	1	0	0	0	0	0	12	115

## Appendix 6: Conventional Parameters in Water

station code	sample date	location code	sample type	collection replicate	result replicate	method	analyte	fraction	unit	result	mdl	rl	result qual code	batch comments			
B5g	8/10/16	OpenWater1	Grab	1	1	EPA 440	Particulate Organic Carbon	Particulate	mg/l	0.29	0.07	0.23	=				
B5g	8/10/16	OpenWater1	Grab	1	1	ASTM D3977	Suspended Sediment Concentration	Particulate	mg/l	4.1	0.95	0.95	=	SSC flagged with VH for holding time violation			
SLBsub1	8/10/16	Midchannel	Grab	1	1	EPA 440	Particulate Organic Carbon	Particulate	mg/l	0.00	0.07	0.23	ND				
SLBsub1	8/10/16	Midchannel	Grab	1	1	ASTM D3977	Suspended Sediment Concentration	Particulate	mg/l	6.0	0.94	0.94	=	SSC flagged with VH for holding time violation			
E6g	8/10/16	Midchannel	Grab	1	1	EPA 440	Particulate Organic Carbon	Particulate	mg/l	0.51	0.08	0.25	=				
E6g	8/10/16	Midchannel	Grab	1	1	ASTM D3977	Suspended Sediment Concentration	Particulate	mg/l	8.7	0.95	0.95	=	SSC flagged with VH for holding time violation			

## Appendix 7: Conventional Parameters in Sediment

station code	sample date	location code	collection replicate	result replicate	method	analyte	fraction	unit	result	mdl	rl	result qual code	qa code	batch verification	compliance code	lab agency	batch comments	collection depth	unit collection depth
A7cz	8/10/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Clay	<0.0039 mm	%	4.91		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
A7cz	8/10/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Fine	<0.0625 mm	%	6.93		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
A7cz	8/10/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Sand	Medium 0.25 to <0.5 mm	%	28.87		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
A7cz	8/10/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Sand	V. Coarse 1.0 to <2.0 mm	%	4.35		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
A7cz	8/10/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Sand	V. Fine 0.0625 to <0.125 mm	%	2.12		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
A7cz	8/10/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Sand	0.0625 to <2.0 mm	%	87.63		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
A7cz	8/10/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Sand	Coarse 0.5 to <1.0 mm	%	6.11		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
A7cz	8/10/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Sand	Fine 0.125 to <0.25 mm	%	36.19		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
A7cz	8/10/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Silt	0.0039 to <0.0625 mm	%	2.01		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
A7cz	8/10/16	Midchannel	1	2	ALS SOP GEN-ASTM Rev 09	Total Organic Carbon	Total	% dw	0.36	0.02	0.05	=	None	VLC.VMD	Com	ALS	some TOC re	5 cm	
A7cz	8/10/16	Midchannel	1	3	1AXYS MLA-010 Rev 11	Total Organic Carbon	Total	% dw	0.35	0.02	0.05	=	None	VLC.VMD	Com	ALS	some TOC re	5 cm	
A7cz	8/10/16	Midchannel	1	1	EPA 160.3	Total Solids	Total	%	74.00		=	D.NBC.NMDL.NVLC.VMD	Com	AXYS	Some blank		2.5 cm		
A7cz	8/10/16	Midchannel	1	2	EPA 160.3	Total Solids	Total	%	75.20		=	NBC.NMDL.NVLC.VMD	Qual	ALS			5 cm		
B5g	8/10/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Clay	<0.0039 mm	%	24.78		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
B5g	8/10/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Fine	<0.0625 mm	%	58.82		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
B5g	8/10/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Sand	Medium 0.25 to <0.5 mm	%	1.58		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
B5g	8/10/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Silt	0.0039 to <0.0625 mm	%	34.04		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
B5g	8/10/16	OpenWater	1	1	ALS SOP GEN-ASTM Rev 09	Total Organic Carbon	Total	% dw	1.25	0.02	0.05	=	None	VLC.VMD	Com	ALS	some TOC re	5 cm	
B5g	8/10/16	OpenWater	1	1	1AXYS MLA-010 Rev 11	Total Solids	Total	%	53.90		=	D.NBC.NMDL.NVLC.VMD	Com	AXYS	Some blank		2.5 cm		
B5g	8/10/16	OpenWater	1	1	EPA 160.3	Total Solids	Total	%	52.70		=	NBC.NMDL.NVLC	Qual	ALS			5 cm		
B8cz	8/10/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Clay	<0.0039 mm	%	42.21		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
B8cz	8/10/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Fine	<0.0625 mm	%	78.81		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
B8cz	8/10/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Sand	Medium 0.25 to <0.5 mm	%	2.28		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
B8cz	8/10/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Sand	V. Coarse 1.0 to <2.0 mm	%	0.18		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
B8cz	8/10/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Sand	V. Fine 0.0625 to <0.125 mm	%	13.20		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
B8cz	8/10/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Sand	0.0625 to <2.0 mm	%	21.19		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
B8cz	8/10/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Sand	Coarse 0.5 to <1.0 mm	%	1.36		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
B8cz	8/10/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Sand	Fine 0.125 to <0.25 mm	%	4.18		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
B8cz	8/10/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Silt	0.0039 to <0.0625 mm	%	36.60		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
B8cz	8/10/16	OpenWater	1	1	1AXYS MLA-010 Rev 11	Total Solids	Total	%	53.90		=	D.NBC.NMDL.NVLC.VMD	Com	AXYS	Some blank		2.5 cm		
B8cz	8/10/16	OpenWater	1	1	EPA 160.3	Total Solids	Total	%	52.70		=	NBC.NMDL.NVLC	Qual	ALS			5 cm		
B8cz	8/10/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Clay	<0.0039 mm	%	42.21		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
B8cz	8/10/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Fine	<0.0625 mm	%	78.81		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
B8cz	8/10/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Sand	Medium 0.25 to <0.5 mm	%	2.28		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
B8cz	8/10/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Sand	V. Coarse 1.0 to <2.0 mm	%	0.18		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
B8cz	8/10/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Sand	V. Fine 0.0625 to <0.125 mm	%	13.20		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
B8cz	8/10/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Sand	0.0625 to <2.0 mm	%	21.19		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
B8cz	8/10/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Sand	Coarse 0.5 to <1.0 mm	%	1.36		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
B8cz	8/10/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Sand	Fine 0.125 to <0.25 mm	%	4.18		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
B8cz	8/10/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Silt	0.0039 to <0.0625 mm	%	36.60		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
B8cz	8/10/16	OpenWater	1	1	1AXYS MLA-010 Rev 11	Total Solids	Total	% dw	1.71	0.02	0.05	=	None	VLC.VMD	Com	ALS	some TOC re	5 cm	
B8cz	8/10/16	OpenWater	1	1	EPA 160.3	Total Solids	Total	%	38.40		=	D.NBC.NMDL.NVLC.VMD	Com	AXYS	Some blank		2.5 cm		
B8cz	8/10/16	OpenWater	1	1	1AXYS MLA-010 Rev 11	Total Solids	Total	%	27.30		=	NBC.NMDL.NVLC	Qual	ALS			5 cm		
B9g	8/7/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Clay	<0.0039 mm	%	37.27		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
B9g	8/7/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Fine	<0.0625 mm	%	80.48		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
B9g	8/7/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Sand	V. Coarse 1.0 to <2.0 mm	%	0.01		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
B9g	8/7/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Sand	V. Fine 0.0625 to <0.125 mm	%	13.11		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
B9g	8/7/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Sand	0.0625 to <2.0 mm	%	19.52		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
B9g	8/7/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Sand	Coarse 0.5 to <1.0 mm	%	0.42		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
B9g	8/7/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Sand	Fine 0.125 to <0.25 mm	%	3.86		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
B9g	8/7/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Sand	Medium 0.25 to <0.5 mm	%	2.12		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
B9g	8/7/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Silt	0.0039 to <0.0625 mm	%	43.21		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
B9g	8/7/16	OpenWater	1	1	1ALS MLA-010 Rev 11	Total Organic Carbon	Total	% dw	1.32	0.02	0.05	=	VH	VLC.VMD	Qual	ALS	some TOC re	5 cm	
B9g	8/7/16	OpenWater	1	1	1AXYS MLA-010 Rev 11	Total Solids	Total	%	42.70		=	D.NBC.NMDL.NVLC.VMD	Com	AXYS	Some blank		2.5 cm		
B9g	8/7/16	OpenWater	1	1	EPA 160.3	Total Solids	Total	%	41.50		=	NBC.NMDL.NVLC.VMD	Qual	ALS			5 cm		
C9g	8/7/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Clay	<0.0039 mm	%	28.08		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
C9g	8/7/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Fine	<0.0625 mm	%	70.76		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
C9g	8/7/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Sand	V. Coarse 1.0 to <2.0 mm	%	0.08		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
C9g	8/7/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Sand	V. Fine 0.0625 to <0.125 mm	%	24.15		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
C9g	8/7/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Sand	0.0625 to <2.0 mm	%	29.24		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
C9g	8/7/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Sand	Coarse 0.5 to <1.0 mm	%	0.86		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
C9g	8/7/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Sand	Fine 0.125 to <0.25 mm	%	2.20		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
C9g	8/7/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Sand	Medium 0.25 to <0.5 mm	%	1.95		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
C9g	8/7/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Silt	0.0039 to <0.0625 mm	%	42.68		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
C9g	8/7/16	OpenWater	1	1	1ALS MLA-010 Rev 11	Total Organic Carbon	Total	% dw	1.36	0.02	0.05	=	VH	VLC.VMD	Qual	ALS	some TOC re	5 cm	
C9g	8/7/16	OpenWater	1	1	EPA 160.3	Total Solids	Total	%	46.50		=	NBC.NMDL.NVLC	Qual	ALS			5 cm		
DSF	8/7/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Clay	<0.0039 mm	%	28.29		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
DSF	8/7/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Fine	<0.0625 mm	%	70.93		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
DSF	8/7/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Sand	Medium 0.25 to <0.5 mm	%	19.68		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
DSF	8/7/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Sand	V. Coarse 1.0 to <2.0 mm	%	0.34		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
DSF	8/7/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Sand	Coarse 0.5 to <1.0 mm	%	0.34		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
DSF	8/7/16	Midchannel	1	1	ALS SOP GEN-PSP Rev														

station code	sample date	location code	collection replicate	result replicate	method	analyte	fraction	unit	result	mdl	rl	result qual code	qa code	batch verification	compliance code	lab agency	batch comments	collection depth	unit collection depth
DSM104	8/7/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Sand	Coarse 0.5 to <1.0 mm	%	1.11		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
DSM104	8/7/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Sand	Fine 0.125 to <0.25 mm	%	46.35		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
DSM105	8/7/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Sand	Medium 0.25 to <0.5 mm	%	2.00		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
DSM105	8/7/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Silt	0.0039 to <0.0625 mm	%	19.83		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
DSM105	8/7/16	Midchannel	1	1	ALS SOP GEN-ASTM Rev 09	Total Organic Carbon	Total	% dw	0.98	0.02	0.05	=	VH	VLC.VMD	Qual	ALS	some TOC re	5 cm	
DSM105	8/7/16	Midchannel	1	1	AIXS MLA-010 Rev 11	Total Solids	Total	%	66.20		=	D.NBC.NMDL.NVLC.VMD	Com	AXYS	Some blank		2.5 cm		
DSM105	8/7/16	Midchannel	1	1	EPA 160.3	Total Solids	Total	%	65.90		=	NBC.NMDL.NVLC	Qual	ALS	Granule + Pe		5 cm		
DSM201	8/10/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Clay	<0.0039 mm	%	8.57		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
DSM201	8/10/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Clay	<0.0039 mm	%	9.47		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		1 cm		
DSM201	8/10/16	Midchannel	2	1	ALS SOP GEN-PSP Rev 08	Clay	<0.0039 mm	%	9.21		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
DSM201	8/10/16	Midchannel	3	1	ALS SOP GEN-PSP Rev 08	Fine	<0.0625 mm	%	30.29		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
DSM201	8/10/16	Midchannel	2	1	ALS SOP GEN-PSP Rev 08	Fine	<0.0625 mm	%	30.87		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
DSM201	8/10/16	Midchannel	3	1	ALS SOP GEN-PSP Rev 08	Fine	<0.0625 mm	%	32.46		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
DSM201	8/10/16	Midchannel	2	1	ALS SOP GEN-PSP Rev 08	Sand	V. Coarse 1.0 to <2.0 mm	%	1.52		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
DSM201	8/10/16	Midchannel	3	1	ALS SOP GEN-PSP Rev 08	Sand	V. Coarse 1.0 to <2.0 mm	%	1.74		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
DSM201	8/10/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Sand	V. Coarse 1.0 to <2.0 mm	%	2.85		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		1 cm		
DSM201	8/10/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Sand	V. Fine 0.0625 to <0.125 mm	%	42.37		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		1 cm		
DSM201	8/10/16	Midchannel	2	1	ALS SOP GEN-PSP Rev 08	Sand	V. Fine 0.0625 to <0.125 mm	%	46.74		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
DSM201	8/10/16	Midchannel	3	1	ALS SOP GEN-PSP Rev 08	Sand	V. Fine 0.0625 to <0.125 mm	%	48.74		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
DSM201	8/10/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Sand	0.0625 to <2.0 mm	%	59.19		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		1 cm		
DSM201	8/10/16	Midchannel	2	1	ALS SOP GEN-PSP Rev 08	Sand	0.0625 to <2.0 mm	%	64.27		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
DSM201	8/10/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Sand	0.0625 to <2.0 mm	%	65.22		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
DSM201	8/10/16	Midchannel	2	1	ALS SOP GEN-PSP Rev 08	Sand	Coarse 0.5 to <1.0 mm	%	0.93		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
DSM201	8/10/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Sand	Coarse 0.5 to <1.0 mm	%	0.94		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
DSM201	8/10/16	Midchannel	3	1	ALS SOP GEN-PSP Rev 08	Sand	Coarse 0.5 to <1.0 mm	%	1.49		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		1 cm		
DSM201	8/10/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Sand	Fine 0.125 to <0.25 mm	%	10.73		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		1 cm		
DSM201	8/10/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Sand	Fine 0.125 to <0.25 mm	%	12.47		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
DSM201	8/10/16	Midchannel	2	1	ALS SOP GEN-PSP Rev 08	Sand	Fine 0.125 to <0.25 mm	%	13.69		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
DSM201	8/10/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Sand	Medium 0.25 to <0.5 mm	%	1.33		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
DSM201	8/10/16	Midchannel	2	1	ALS SOP GEN-PSP Rev 08	Sand	Medium 0.25 to <0.5 mm	%	1.39		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
DSM201	8/10/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Sand	Medium 0.25 to <0.5 mm	%	1.74		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		1 cm		
DSM201	8/10/16	Midchannel	2	1	ALS SOP GEN-PSP Rev 08	Sand	Medium 0.25 to <0.5 mm	%	20.82		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		1 cm		
DSM201	8/10/16	Midchannel	2	1	ALS SOP GEN-PSP Rev 08	Silt	0.0039 to <0.0625 mm	%	21.66		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
DSM201	8/10/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Silt	0.0039 to <0.0625 mm	%	23.49		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
DSM201	8/10/16	Midchannel	1	1	ALS SOP GEN-ASTM Rev 09	Total Organic Carbon	Total	% dw	1.58	0.02	0.05	=	None	VLC.VMD	Com	ALS	some TOC re	1 cm	
DSM201	8/10/16	Midchannel	2	1	ALS SOP GEN-ASTM Rev 09	Total Organic Carbon	Total	% dw	1.10	0.02	0.05	=	None	VLC.VMD	Com	ALS	some TOC re	5 cm	
DSM201	8/10/16	Midchannel	1	1	AIXS MLA-010 Rev 11	Total Solids	Total	%	1.05	0.02	0.05	=	None	VLC.VMD	Com	AXYS	Some blank	0.5 cm	
DSM201	8/10/16	Midchannel	2	1	AIXS MLA-010 Rev 11	Total Solids	Total	%	65.50		=	D.NBC.NMDL.NVLC.VMD	Com	AXYS	Some blank		2.5 cm		
DSM201	8/10/16	Midchannel	1	1	AIXS MLA-010 Rev 11	Total Solids	Total	%	63.60		=	D.NBC.NMDL.NVLC.VMD	Com	AXYS	Some blank		2.5 cm		
DSM201	8/10/16	Midchannel	1	1	EPA 160.3	Total Solids	Total	%	66.40		=	D.NBC.NMDL.NVLC.VMD	Com	AXYS	Some blank		3 cm		
DSM201	8/10/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Sand	0.0039 to <0.0625 mm	%	20.82		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		1 cm		
DSM201	8/10/16	Midchannel	2	1	ALS SOP GEN-PSP Rev 08	Sand	0.0039 to <0.0625 mm	%	21.66		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
DSM201	8/10/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Sand	0.0039 to <0.0625 mm	%	23.49		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
DSM201	8/10/16	Midchannel	1	1	ALS SOP GEN-ASTM Rev 09	Total Organic Carbon	Total	% dw	1.90	0.02	0.05	=	None	VLC.VMD	Com	ALS	some TOC re	1 cm	
DSM201	8/10/16	Midchannel	2	1	ALS SOP GEN-ASTM Rev 09	Total Organic Carbon	Total	% dw	1.50	0.02	0.05	=	None	VLC.VMD	Com	ALS	some TOC re	5 cm	
DSM201	8/10/16	Midchannel	1	1	AIXS MLA-010 Rev 11	Total Solids	Total	%	1.10	0.02	0.05	=	None	VLC.VMD	Com	ALS	some TOC re	5 cm	
DSM201	8/10/16	Midchannel	1	1	EPA	Total Solids	Total	%	1.05	0.02	0.05	=	None	VLC.VMD	Com	ALS	some TOC re	5 cm	
Eg3	8/7/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Clay	<0.0039 mm	%	32.99		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
Eg3	8/7/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Fine	<0.0625 mm	%	60.45		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
Eg3	8/7/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Sand	Medium 0.25 to <0.5 mm	%	6.68		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
Eg3	8/7/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Sand	V. Coarse 1.0 to <2.0 mm	%	1.26		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
Eg3	8/7/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Sand	V. Fine 0.0625 to <0.125 mm	%	11.19		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
Eg3	8/7/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Sand	0.0625 to <2.0 mm	%	38.01		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
Eg3	8/7/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Sand	Coarse 0.5 to <1.0 mm	%	1.47		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
Eg3	8/7/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Sand	Fine 0.125 to <0.25 mm	%	17.41		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
Eg3	8/7/16	OpenWater	1	1	ALS SOP GEN-PSP Rev 08	Sand	0.0039 to <0.0625 mm	%	27.45		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
Eg3	8/7/16	OpenWater	1	1	ALS SOP GEN-ASTM Rev 09	Total Organic Carbon	Total	% dw	1.23	0.02	0.05	=	VH	VLC.VMD	Qual	ALS	some TOC re	5 cm	
Eg3	8/7/16	Midchannel	1	1	EPA 160.3	Total Solids	Total	%	36.70		=	D.NBC.NMDL.NVLC.VMD	Com	AXYS	Some blank		2.5 cm		
Eg3	8/7/16	Midchannel	1	1	AIXS MLA-010 Rev 11	Total Solids	Total	%	36.90		=	NBC.NMDL.NVLC	Qual	ALS	Granule + Pe		5 cm		
Eg3	8/7/16	Midchannel	1	1	EPA 160.3	Total Solids	Total	%	47.54		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
Eg3	8/7/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Fine	<0.0625 mm	%	91.64		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
Eg3	8/7/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Sand	V. Fine 0.0625 to <0.125 mm	%	10.89		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
Eg3	8/7/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Sand	0.0625 to <2.0 mm	%	25.10		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
Eg3	8/7/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Sand	Coarse 0.5 to <1.0 mm	%	1.25		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
Eg3	8/7/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Sand	V. Fine 0.0625 to <0.125 mm	%	9.35		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
Eg3	8/7/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Sand	0.0625 to <2.0 mm	%	38.06		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
Eg3	8/7/16	Midchannel	1	1	ALS SOP GEN-ASTM Rev 09	Total Organic Carbon	Total	% dw	1.76	0.02	0.05	=	VH	VLC.VMD	Qual	ALS	some TOC re	5 cm	
Eg3	8/7/16	Midchannel	1	1	EPA 160.3	Total Solids	Total	%	32.70		=	NBC.NMDL.NVLC	Qual	ALS	Granule + Pe		5 cm		
Eg3	8/7/16	Midchannel	1	1	AIXS MLA-010 Rev 11	Total Solids	Total	%	33.30		=	D.NBC.NMDL.NVLC.VMD	Com	AXYS	Some blank		2.5 cm		
ECCF	8/21/16	Midchannel	1	1	ALS SOP GEN-PSP Rev 08	Clay	<0.0039 mm	%	27.31		=	NBC.NMDL.NVLC.VMD	Qual	ALS	Granule + Pe		5 cm		
ECCF</td																			



station code	sample date	location code	collection replicate	method	analyte	fraction	unit	result	mdl	rl	result qual code	qa code	batch verification	compliance code	lab agency	batch comments	collection depth	unit collection depth
ELMFR	8/23/16	Bank	1	EPA 160.3	Total Solids	Total	%	54.10	=	=	NBC.NMDL.VLC	Qual	ALS			5 cm		
G4g	8/7/16	Midchannel	1	1ALS SOP GEN-PSP Rev 08	Clay	<0.0039 mm	%	56.41	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
G4g	8/7/16	Midchannel	1	1ALS SOP GEN-PSP Rev 08	Fine	<0.0625 mm	%	95.24	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
G4g	8/7/16	Midchannel	1	1ALS SOP GEN-PSP Rev 08	Sand	V. Coarse 1.0 to <2.0 mm	%	0.08	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
G4g	8/7/16	Midchannel	1	1ALS SOP GEN-PSP Rev 08	Sand	V. Fine 0.0625 to <0.125 mm	%	1.42	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
G4g	8/7/16	Midchannel	1	1ALS SOP GEN-PSP Rev 08	Sand	0.0625 to <2.0 mm	%	4.64	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
G4g	8/7/16	Midchannel	1	1ALS SOP GEN-PSP Rev 08	Sand	Coarse 0.5 to <1.0 mm	%	0.11	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
G4g	8/7/16	Midchannel	1	1ALS SOP GEN-PSP Rev 08	Sand	Fine 0.125 to <0.25 mm	%	1.73	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
G4g	8/7/16	Midchannel	1	1ALS SOP GEN-PSP Rev 08	Sand	Medium 0.25 to <0.5 mm	%	1.30	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
G4g	8/7/16	Midchannel	1	1ALS SOP GEN-PSP Rev 08	Silt	0.0039 to <0.0625 mm	%	38.84	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
G4g	8/7/16	Midchannel	1	1ALS SOP GEN-ASTM Rev 09	Total Organic Carbon	Total	% dw	2.10	0.02	0.05	VH	VLC.VMD	Qual	ALS	TOC results f	5 cm		
G4g	8/7/16	Midchannel	1	1EPA 160.3	Total Solids	Total	%	29.90	=	=	NBC.NMDL.VLC	Qual	ALS			5 cm		
G4g	8/7/16	Midchannel	1	1AXYS MLA-010 Rev 11	Total Solids	Total	%	29.90	=	=	D.NBC.NMDL.VLC.VMD	Com	AUXS	Some blank c	2.5 cm			
G7g	8/7/16	Midchannel	1	1ALS SOP GEN-PSP Rev 08	Clay	<0.0039 mm	%	50.00	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
G7g	8/7/16	Midchannel	1	1ALS SOP GEN-PSP Rev 08	Fine	<0.0625 mm	%	97.49	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
G7g	8/7/16	Midchannel	1	1ALS SOP GEN-PSP Rev 08	Sand	V. Coarse 1.0 to <2.0 mm	%	0.00	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
G7g	8/7/16	Midchannel	1	1ALS SOP GEN-PSP Rev 08	Sand	V. Fine 0.0625 to <0.125 mm	%	1.15	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
G7g	8/7/16	Midchannel	1	1ALS SOP GEN-PSP Rev 08	Sand	0.0625 to <2.0 mm	%	2.51	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
G7g	8/7/16	Midchannel	1	1ALS SOP GEN-PSP Rev 08	Sand	Coarse 0.5 to <1.0 mm	%	0.02	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
G7g	8/7/16	Midchannel	1	1ALS SOP GEN-PSP Rev 08	Sand	Fine 0.125 to <0.25 mm	%	0.90	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
G7g	8/7/16	Midchannel	1	1ALS SOP GEN-PSP Rev 08	Sand	Medium 0.25 to <0.5 mm	%	0.44	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
G7g	8/7/16	Midchannel	1	1ALS SOP GEN-PSP Rev 08	Silt	0.0039 to <0.0625 mm	%	47.49	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
G7g	8/7/16	Midchannel	1	1ALS SOP GEN-ASTM Rev 09	Total Organic Carbon	Total	% dw	2.32	0.02	0.05	VH	VLC.VMD	Qual	ALS	TOC results f	5 cm		
G7g	8/7/16	Midchannel	1	1EPA 160.3	Total Solids	Total	%	22.60	=	=	NBC.NMDL.VLC	Qual	ALS			5 cm		
G7g	8/7/16	Midchannel	1	1AXYS MLA-010 Rev 11	Total Solids	Total	%	21.10	=	=	D.NBC.NMDL.VLC.VMD	Com	AUXS	Some blank c	2.5 cm			
NS100m	8/21/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Clay	<0.0039 mm	%	31.62	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
NS100m	8/21/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Fine	<0.0625 mm	%	75.93	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
NS100m	8/21/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Sand	V. Coarse 1.0 to <2.0 mm	%	0.09	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
NS100m	8/21/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Sand	V. Fine 0.0625 to <0.125 mm	%	13.09	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
NS100m	8/21/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Sand	0.0625 to <2.0 mm	%	23.85	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
NS100m	8/21/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Sand	Coarse 0.5 to <1.0 mm	%	0.26	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
NS100m	8/21/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Sand	Fine 0.125 to <0.25 mm	%	8.83	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
NS100m	8/21/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Sand	Medium 0.25 to <0.5 mm	%	1.59	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
NS100m	8/21/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Silt	0.0039 to <0.0625 mm	%	44.31	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
NS100m	8/21/16	OpenWater	1	1ALS SOP GEN-ASTM Rev 09	Total Organic Carbon	Total	% dw	1.62	0.02	0.05	None	VLC	Com	ALS		5 cm		
NS100m	8/21/16	OpenWater	1	1AXYS MLA-010 Rev 11	Total Solids	Total	%	43.50	=	=	D.NBC.NMDL.VLC.VMD	Com	AUXS	Some blank c	2.5 cm			
NS20m	9/21/16	OpenWater	1	1EPA 160.3	Total Solids	Total	%	42.60	=	=	NBC.NMDL.VLC.VMD	Qual	ALS			5 cm		
NS20m	9/21/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Clay	<0.0039 mm	%	8.61	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
NS20m	9/21/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Fine	<0.0625 mm	%	17.43	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
NS20m	9/21/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Sand	Medium 0.25 to <0.5 mm	%	16.09	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
NS20m	9/21/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Sand	V. Coarse 1.0 to <2.0 mm	%	3.55	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
NS20m	9/21/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Sand	V. Fine 0.0625 to <0.125 mm	%	9.44	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
NS20m	9/21/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Sand	0.0625 to <2.0 mm	%	76.78	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
NS20m	9/21/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Sand	Coarse 0.5 to <1.0 mm	%	2.19	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
NS20m	9/21/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Sand	Fine 0.125 to <0.25 mm	%	45.51	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
NS20m	9/21/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Silt	0.0039 to <0.0625 mm	%	8.81	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
NS20m	9/21/16	OpenWater	1	1ALS SOP GEN-ASTM Rev 09	Total Organic Carbon	Total	% dw	0.73	0.02	0.05	None	VLC	Com	ALS		5 cm		
NS20m	8/21/16	OpenWater	1	1EPA 160.3	Total Solids	Total	%	70.60	=	=	NBC.NMDL.VLC	Qual	ALS			5 cm		
SLB1m	8/7/16	OpenWater	1	1AXYS MLA-010 Rev 11	Total Solids	Total	%	71.70	=	=	D.NBC.NMDL.VLC.VMD	Com	AUXS	Some blank c	2.5 cm			
SLB1m	8/7/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Clay	<0.0039 mm	%	38.27	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
SLB1m	8/7/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Fine	<0.0625 mm	%	86.51	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
SLB1m	8/7/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Sand	V. Coarse 1.0 to <2.0 mm	%	0.00	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
SLB1m	8/7/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Sand	V. Fine 0.0625 to <0.125 mm	%	9.54	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
SLB1m	8/7/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Sand	0.0625 to <2.0 mm	%	13.49	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
SLB1m	8/7/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Sand	Coarse 0.5 to <1.0 mm	%	0.03	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
SLB1m	8/7/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Sand	Fine 0.125 to <0.25 mm	%	3.02	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
SLB1m	8/7/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Sand	Medium 0.25 to <0.5 mm	%	0.90	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		5 cm		
SLB1m	8/7/16	OpenWater	1	1ALS SOP GEN-ASTM Rev 09	Total Organic Carbon	Total	% dw	1.47	0.02	0.05	VH	VLC.VMD	Qual	ALS	TOC results f	5 cm		
SLB1m	8/7/16	OpenWater	1	1EPA 160.3	Total Solids	Total	%	40.20	=	=	D.NBC.NMDL.VLC	Com	AUXS	Some blank c	2.5 cm			
SLB1m	8/7/16	OpenWater	1	1AXYS MLA-010 Rev 11	Total Solids	Total	%	39.90	=	=	NBC.NMDL.VLC	Qual	ALS			5 cm		
SLB1m	8/7/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Clay	<0.0039 mm	%	46.85	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		1 cm		
SLB1m	8/7/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Fine	<0.0625 mm	%	46.62	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		1 cm		
SLB1m	8/7/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Sand	V. Coarse 1.0 to <2.0 mm	%	93.38	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		1 cm		
SLB1m	8/7/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Sand	V. Fine 0.0625 to <0.125 mm	%	0.11	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		1 cm		
SLB1m	8/7/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Sand	V. Coarse 0.5 to <1.0 mm	%	0.25	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		1 cm		
SLB1m	8/7/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Sand	V. Fine 0.125 to <0.25 mm	%	0.44	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		1 cm		
SLB1m	8/7/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Sand	V. Medium 0.25 to <0.5 mm	%	3.54	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		1 cm		
SLB1m	8/7/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Sand	V. Fine 0.0625 to <0.125 mm	%	4.24	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		1 cm		
SLB1m	8/7/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Sand	V. Fine 0.125 to <0.25 mm	%	5.82	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		1 cm		
SLB1m	8/7/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Sand	0.0625 to <2.0 mm	%	6.59	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		1 cm		
SLB1m	8/7/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Sand	0.0625 to <2.0 mm	%	8.89	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		1 cm		
SLB1m	8/7/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Sand	0.0625 to <2.0 mm	%	10.07	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		1 cm		
SLB1m	8/7/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Sand	Coarse 0.5 to <1.0 mm	%	0.41	=	=	NBC.NMDL.VLC.VMD	Qual	ALS	Granule + Pe		1 cm		
SLB1m	8/7/16	OpenWater	1	1ALS SOP GEN-PSP Rev 08	Sand	Coarse 0.5 to <1.0 mm	%											

