90b – Status of Implementation Actions Taken Pursuant to S4F.3.D

On August 19, 2016, Ecology modified the Phase I Permit to include Appendix 13 – Adaptive Management Requirements. Appendix 13 requires adaptive management response plans for discharges from the City of Seattle's (City) municipal separate stormwater system (MS4) to the Lower Duwamish Waterway (LDW). In accordance with S4.F.3 the City must comply with the specific requirements identified in Appendix 13. Per the requirement of S4.F.3.d, Seattle is providing the status of implementation and the results of any monitoring, assessment or evaluation efforts conducted during 2016 related to Appendix 13 Adaptive Management requirements.

This is the first Annual Report that combines the City's required source control activities for the LDW information related to these LDW Adaptive Management requirements into one report. SPU provided Ecology with a Source Control Implementation Plan (SCIP) in March of 2015, which was a basis for MS4 Permit compliance until Appendix 13 was added to the Permit in August 2016.

The following sections primarily describe the actions that the City has taken to implement the adaptive management plan as described in Appendix 13 of the August 19, 2016, Phase I Municipal Stormwater Permit.

Background

An S4.F notification was submitted in 2007 to notify Ecology of potential water quality problems that may be related to discharges from the City's MS4 for the LDW. Ecology determined that a report under S4.F.2.a was not necessary, with that determination conditioned on certain City actions. Ecology required the City, beginning with its Phase I Permit Annual Report for 2008, to include a summary of its stormwater management efforts in basins that discharge to the LDW. The City was to notify Ecology if Seattle's involvement in federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and associated Source Control Strategy processes changed or new information became available regarding phthalate recontamination in the LDW.

An S4F notification was submitted on December 5, 2013, to notify Ecology of potential sediment quality problems that may be related to discharges from the City's MS4 for the LDW. Ecology accepted the notification (June 4, 2014) as a general notification for all MS4 discharges to the LDW for all LDW sediment chemicals of concern (COC). The City's draft SCIP (November 2013) fulfilled the City's requirement for submittal under S4.F.3.a of an expanded adaptive management response. The City revised the SCIP, and a final draft of the SCIP was submitted to Ecology on March 31, 2015.

Though not for the LDW or adaptive management, an S4F notification was submitted on September 5, 2014, to notify Ecology of potential sediment quality problems that may be

related to discharges from the City's MS4 for the East Waterway (EW) of the Duwamish Waterway. To satisfy the Permit requirements, the City continues to engage in business inspections, source tracing, line cleaning, and other programs regarding the EW, as well as ongoing source control efforts to support the EW CERCLA cleanup.

Appendix 13 - Adaptive Management Requirements Reporting

Source Tracing and Sampling Activities

SPU collects samples of storm drain solids from within the City MS4 to characterize the quality of material discharged to and from the City's drainage system. Samples include 1) grabs from private onsite catch basins and catch basins located in the public right-of-way, 2) grabs from inline maintenance holes in the conveyance system, and 3) inline sediment trap samples. Data generated from these samples are used to identify potential contaminant sources and to prioritize source tracing/control activities. Between July 2014 and May 2016, SPU collected 125 samples of storm drain solids from the City's MS4.

SPU has received funding from Ecology to investigate, experiment and develop new tools to help SPU and others conduct source control. These pilot projects are not required by the Phase I Permit but are part of the City's SCIP.

Detection dog pilot test

In 2016, SPU contracted with the University of Washington Conservation Canines and Windward Environmental to conduct a pilot test to determine whether a specially-trained detection dog can detect PCBs in the urban environment. This work is supported by an Ecology grant (WQC-2015-SeaPUD-00196). Work completed in 2016 included training and field testing a dog at various sites in Seattle and Tacoma. Results have been very positive. The detection dog (Sampson) has successfully identified PCB-contaminated caulk in buildings and in concrete pavement, as well as PCB-contaminated soil. A final report will be provided to Ecology in Summer 2017.

Sediment trap pilot test

While not a specific requirement of Appendix 13, SPU is currently testing a new sediment trap design to provide more effective collection of storm drain solids to support source tracing efforts that are required by Appendix 13. The first phase of the work, conducted under an interagency agreement with Ecology, was completed in 2016. It involved developing and flume testing several prototype designs to determine which style trap performed best in collecting representative samples of suspended solids. The flume water was spiked with a known mixture of sand and silt-sized particles, which allowed a direct comparison with the material that accumulated in each trap.

Based on the flume testing, two similar-style traps were fabricated in stainless steel for field testing. In March 2016, the two prototypes were installed in two storm drains in the LDW:

- 72-inch diameter pipe in the Diagonal Ave S CSO/SD drainage system
- 24-diameter pipe in the S Myrtle St drainage system.

Other style traps that are commonly used in source tracing were also installed at each location for comparison purposes:

- Modified Norton trap, currently used by SPU
- Hamlin trap used in Spokane
- SIFT trap developed by Portland.

The traps will be removed in early 2017, and the accumulated material will be tested for grain size. Traps will be immediately redeployed and left in place for a year to allow comparison of the chemical composition of accumulated solids. This second phase of the work is being conducted under an Ecology grant (WQC-2015-SeaPUD-00196). Results from the 2017 grain size and 2018 chemical testing will be reported to Ecology in late 2018.

Effectiveness Monitoring Program

SPU is on track to install or collect one sample per calendar year from each outfall and near end of pipe location in Tables 1 and 2 of Appendix 13 and has started and is on track to revise the QAPP in support of this source tracing work. Source tracing data collected from July 2014 through May 2016 are provided in Attachment A of this report and will be loaded into EIM.

Business Inspection Program

In support of the LDW cleanup efforts, multi-media inspections are conducted, which cover stormwater pollution prevention, hazardous waste management and industrial waste management. In 2016, SPU conducted 191 inspections in the LDW. Each business is inspected for compliance with the City's Stormwater Code and required to be brought into compliance with all relevant best management practices (BMP) for source control. The inspections resulted in 134 Corrective Action Letters, and none of these sites were referred to Ecology for potential NPDES Industrial Stormwater permit coverage. Twelve facilities were issued NOV's for non-compliance with the City's Stormwater Code, and no facility entered into a Voluntary Compliance Agreement.

SPU has implemented several planned enhancements to streamline the business inspection program in the LDW. The status of these efforts is provided in the following sections.

Shortened business compliance period

Seattle Public Utilities continues to seek ways to most effectively require that businesses come into compliance and remain in compliance. In January 2016, SPU Source Control

conducted a Rapid Office Kaizen (Japanese for "improvement') workshop to improve the stormwater code compliance inspection processes and improve our customers' experience. The objective of the event was to streamline our processes by identifying and eliminating wastes. The hope was to accomplish efficiency changes before implementing a mobile inspection data collection system. One of the inefficiencies that was identified in this Kaizen process was that inspected businesses with code violations were taking too long to return to compliance. Because of our workshop, SPU Source Control modified the business inspection process to reduce the return-to-compliance period by eliminating an unnecessary and time wasting step, the "second and final letter."

Prior to the Kaizen workshop the Source Control inspection return-to-compliance process progressed through a series of inspections followed by compliance letters and ending with a closure letter whenever compliance was achieved in this process:

- Initial inspection
- Corrective action letter + 30 days
- Follow-up inspection
- Second and final letter + 15 days
- Follow-up inspection
- Notice of Violation with deferred penalty + 15 days
- Follow-up inspection (and penalty if still in non-compliance)
- Acknowledgement of Completion letter.

The typical return-to-compliance process was taking on average 55 days. Under the pre-Kaizen process, businesses would get a site inspection, a corrective action letter, a re-inspection and then a "second and final" letter, which provided additional time to come into compliance before a Notice of Violation is issued. Now, a business has 30 days to come into compliance after receiving the corrective action letter, and if the corrections are not made, a Notice of Violation is issued. Extensions may be issued on a case by case basis. This change has resulted in a reduction of process time, allowing SPU to inspect more businesses.

SPU also has implemented a procedure whereby if a business has been inspected multiple times, it can be immediately issued a Notice of Violation for not maintaining best management practices between inspection cycles. Elimination of the "second and final letter" step requires less time to re-inspect, write letters, and input data. A new tone was set that code violations were observed and consequences for non-compliance were a more immediate outcome if actions were not taken. This move is intended to impress upon businesses the importance of maintaining stormwater best management practices, rather than implementing them just for an inspection period. At the closing of an inspection cycle, businesses are alerted that they may be issued a Notice of Violation immediately upon the next inspection if compliance is not sustained. This process is used on a case by case basis, for businesses that SPU has inspected multiple times with no sustained improvement between inspection cycles.

Following the Kaizen event, the new inspection protocol implemented is as follows;

- Initial inspection
- Corrective action letter + 30 days
- Follow-up inspection
- Notice of violation with deferred penalty + 15 days
- Follow-up inspection (and penalty if still in non-compliance)
- Acknowledgement of Completion letter.

As this process was refined and implemented by SPU Source Control inspection staff, the time for a business to return to compliance has decreased on average 22 days.

Revisions to Business Inspection Information Gathering Protocols

For many years, the SPU Source Control Team has used a lengthy inspection checklist that covers not only City Stormwater Code compliance but includes multimedia inspection observations for compliance with air, hazardous waste, and also industrial waste regulations. The data were recorded on the inspection checklist and entered into the SPU inspection database. Data collection could be time consuming and cause confusion or cloud authority and SPU's message about City source control measures required by City code. Referrals from these observations were made to state, county, and regional agencies with code authority. Indication from other agencies is that they rarely utilized the data collected in the SPU inspection process. To improve efficiency with the inspection process, it was decided that the data entry for these non-City-stormwater-code violations would be discontinued. Inspectors were still encouraged to look for these other environmental concerns to act as a "triage" for other agencies (King County Industrial Waste and Ecology Hazardous Waste and Water Quality), whereby the Inspector may refer issues or problem sites to another agency for follow up and will be part of that agency's enforcement for resolving the issue. These changes have helped to shorten the inspection time onsite, without compromising the integrity of the inspection.

Transition to Electronic Information Collection

SPU has used paper inspection forms and two Microsoft Access databases to track business inspections, stormwater facility inspections, water quality complaints and spills since 2003. These databases are near the end of their useful life, and mobile devices such as cellular telephones and tablets have made a paper-based inspection system obsolete.

SPU conducted a Kaizen event to identify ways that the Source Control Team could become more efficient and develop a team culture that supports continuous improvement. The kaizen event was a 5-day workshop where source control team members mapped out the current business inspection process, evaluated the process to identify areas where a new process would improve efficiency, and then designed a new process to realize the efficiencies.

A focus of the Kaizen event was to map out the team's process so that business requirements could be developed. The business requirements form the basis of a SPU business case document that authorizes funding and resources to develop a replacement database and mobile solution. The Stage Gate was approved and the Source Control Team is authorized to design a new database, with mobile data collection, using Microsoft Dynamic CRM. This software will allow for the centralization of data and facilitate communication with our customers, management and Ecology. Inspectors will use mobile telephones or tablets to collect real time inspection data, schedule follow up inspections, access GIS and other databases while in the field to save time and provide better customer service.

This project is on track, and it is anticipated that SPU will meet the requirement to "transition to electronic information collection methods" by July 31, 2018.

Effectiveness Evaluation of the Enhanced Business Inspection Program

SPU is developing an effectiveness study working to meet the Appendix 13 requirement to conduct "An effectiveness evaluation of the enhanced business inspection program" by July 31, 2018 to provide feedback to SPU on its program. In addition, SPU is working with the City of Tacoma and the Stormwater Action Monitoring, Source ID and Diagnostic Monitoring work group to identify how the effectiveness study being developed by SPU to can include other municipalities and be conducted to provide feedback to SPU on its program and provide useful information to the larger stormwater community on ways to improve source control effectiveness.

Operations & Maintenance

Line Cleaning During 2016

SPU cleaned approximately 7,400 linear feet of pipe in the SW Dakota St. and S. 96th St. MS4 drainage basins. These basins were identified as priority basins in the City's 2015 SCIP. This work is conducted to remove solids that have accumulated in the MS4 to prevent them from discharging into the LDW and facilitate source tracing efforts. Water generated during line cleaning operations was treated and discharged to the sanitary sewer under a discharge authorization with King County. Solids were dewatered and transported to Waste Management's reload facility in Seattle, for eventual disposal.

CMOM for MS4

SPU is evaluating the existing operation and maintenance work for catch basin and flow control/water quality facilities in the MS4 basins that discharge to the LDW. The evaluation is to be delivered to Ecology in February 2018 (180 days prior to the expiration date of the permit) and reported upon in the 2017 Annual Report.

Capital Improvement Roadway Work

The Seattle Department of Transportation (SDOT) is in the process of evaluating its existing pavement maintenance programs and identifying priority capital projects within the LDW basins that will improve roadway surfaces between 2018 and 2023. A description of these projects and schedule for planned relevant capital projects will be provided to Ecology 180 days prior to the expiration date of this permit.

SDOT has several programs aimed at maintenance and improvement of roadway surfaces throughout the City. SDOT has reviewed each program to understand how projects are initiated. In 2015 Seattle votes passed the Move Seattle nine-year, $930 million property tax levy, which is a significant source of funding for the transportation budget. This levy replaces funds previously obtained from the Bridging the Gap source that funded SDOT between 2006 and 2015. The Move Seattle funds support on-going pavement maintenance and corridor improvement projects. The Move Seattle 10-year Strategic Vision for Transportation sets forth methods for identifying streets as priority corridors for investment and ranking projects proposed for these corridors.

For the entire City, a key element for identifying locations for roadway surface improvement is pavement condition. SDOT evaluates arterial road conditions once every three years based on ASTMD standards. The pavement condition inventory for arterial roads was completed between 2013 and 2015. About 85% of non-arterial roadways were evaluated between 2013 and 2015. For non-arterials, the condition of a single sample street within a geographic area is used as an estimate of the pavement condition that grid. Most of SDOT's pavement repair budget targets arterial streets. SDOT has evaluated the following programs to determine the likelihood that they can identify pavement improvement projects within the LDW basins.

Corridor Projects

The Move Seattle methodology uses several factors including leveraging opportunities, funding availability, community support, SDOT's existing commitment, geographic equity, and avoidance of major maintenance to prioritize projects. SDOT is evaluating four of the projects identified as part of Move Seattle to see if they will improve pavement in the Duwamish basins.

Arterial Asphalt and Concrete Program (AAC)

This program rehabilitates major arterials. The Move Seattle Levy funds will repave up to 180 lane-miles of arterial streets, maintaining and modernizing 35% of Seattle's busiest streets carrying the most people and goods over nine years. AAC projects are built by contractors and managed by SDOT's Capital Project group. For 2016-2024 the arterials where SDOT plans AAC projects have been identified based upon pavement condition, traffic volume, use of the road way, geographic equity, social justice equity, coordination with utility partners (SPU, SCL) and funding leverage (grants). SDOT is evaluating the location of the chosen projects vs. the LDW basins.

Arterial Major Maintenance (AMM)

This is a program implemented by in-house Maintenance Operation crews. The program has funds to repair approximately 8 lane miles per year at about 65 targeted locations. The jobs typically consist of one to three blocks of mill and overlay or replacement of eight to ten concrete panels. About 65% of work is planned about a year in advance, and the remainder is complaint-driven. For the planned portion of AMM projects there are several areas that are repaired annually because they fail repeatedly but have not been upgraded by an AAC project. AMM priority locations are located near schools, hospitals, or bike routes or in an area where the work can be combined with other City departments. As much as 35% of the AMM budget is spent constructing ramps for ADA compliance.

Non-Arterial Street Resurfacing and Restoration (NASS)

This is a program operated in the same manner as the AMM program except that the streets repaired are non-arterials. This is the only SDOT maintenance program that addresses pavement conditions on non-arterials, and its budget only covers about 2 lane-miles per year.

Pothole Repair

Maintaining safe roadways is the main priority of the pothole repair program. The locations of the pothole repairs are based on public complaints. Per the Maintenance Operation personnel who implement the program, the LDW basins may have a higher pothole repair rate because freight trucks tend to break up the roads.

Chip Sealing

SDOT no longer has a chip sealing program. The last chip sealing was performed in 2013. Going forward chip sealing will not be used to improve pavement surfaces in the LDW basins.

Micro-surfacing

Micro-surfacing, the application a protective seal coat to extend pavement life, has been an on-going project managed by SDOT's Capital Project Division since 2014. The streets chosen for micro surfacing are selected based on pavement age, pavement maintenance history and inspection results from Maintenance Operations. They are mostly low-volume

Report on weekly sweeping of S. Myrtle St.

S. Myrtle St. was swept by SDOT 46 times in 2016 as part the Street Sweeping for Water Quality Program (SS4WQ). Note that the Street Sweeping for Water Quality Program is designed to sweep 48 out of 52 weeks in a year, contingent on holidays, crew vacation, snow and ice operational needs and other unforeseen circumstances.

Report on quarterly inspection of catch basins and maintenance holes on S. Myrtle St.

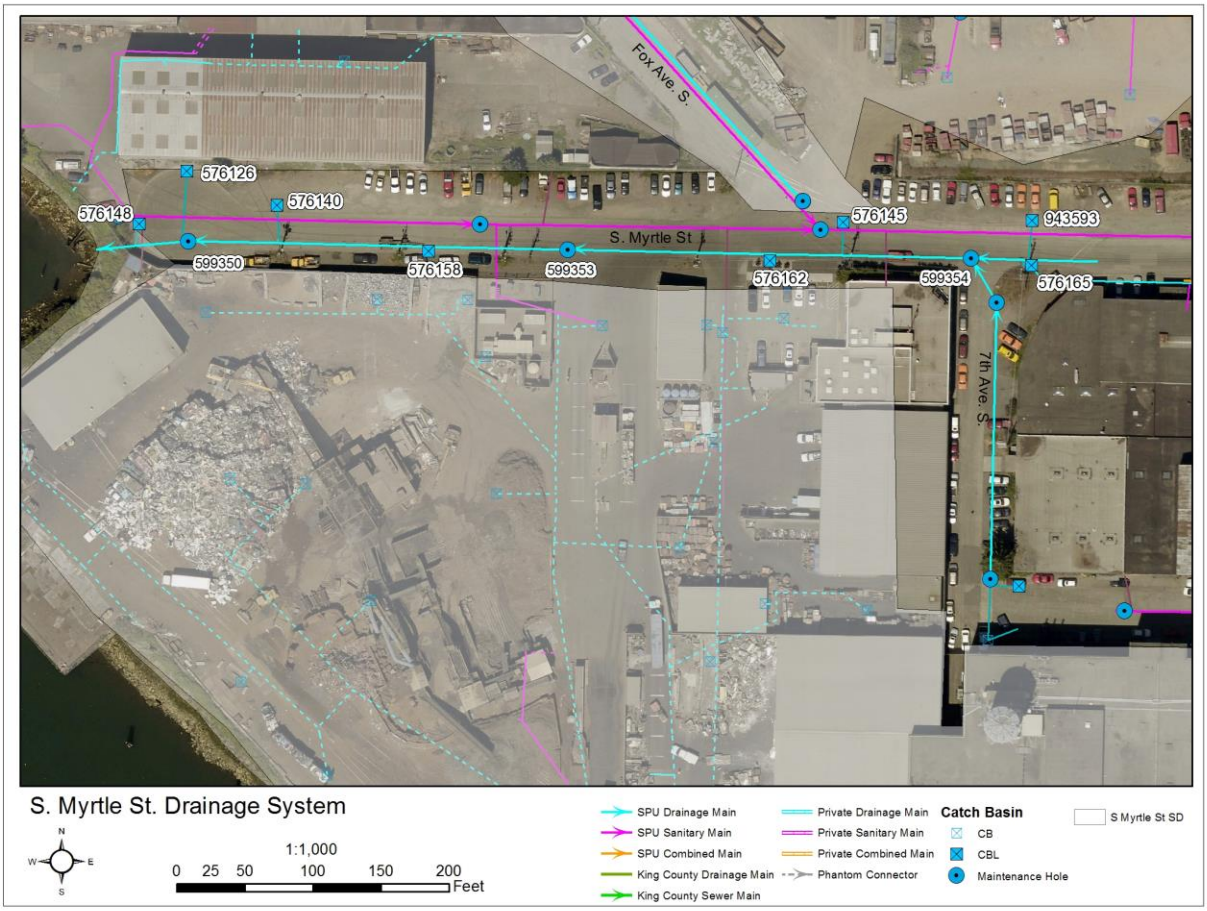
SPU conducted quarterly inspections of catch basins and mainline maintenance holes 2011 – 2015. The City became aware during preparation of the 2016 Annual Report that the inspections had not occurred during 2016. The stop after 2015 was due to an internal miscommunication about the continued adaptive management requirements for these locations. A G20 letter was submitted to Ecology on March 8, 2017.

SPU conducted quarterly inspections of catch basins and mainline maintenance holes from 2011 – 2015. Upon discovery, SPU restarted the inspections and collected data for first quarter 2017. The first quarter 2017 data indicate that one of the 8 catch basins monitored on S. Myrtle St. exceeds the maintenance threshold of solids greater than 60% of the catch basin sump volume. A work order to clean the solids from this catch basin was issued, and the work was completed on February 24, 2017. The data for catch basin and mainline maintenance hole measurements from 2011 to first quarter 2017 are provided in Table 1. Measurement locations on shown on Figure 1.

Table 1: S Myrtle St maintenance hole measurements.

EQNUM	576148	576126	576140	576158	576162	576145	576165	943593	599350	599353	599354
Location	S Myrtle St cul-de-sac, west	S Myrtle St cul-de-sac, north	north side S Myrtle St, west of SIM	south side S Myrtle St, west of SIM	south side S Myrtle St, east of SIM	S Myrtle St and Fox Ave S	south side S Myrtle St at 7th Ave S	north side S Myrtle St, east of SIM	S Myrtle St cul-de-sac	S Myrtle St at SIM	S Myrtle St at 7th Ave S
Type	CBL	CBL	CBL	CBL	CBL	CBL	CBL	CBL	MH	MH	MH
Outlet pipe size	8	8	8	8	8	8	8	8			
Casting Width	1'-4"	1'-4"	NA	1'-4"	1'-4"	1'-4"	1'-4"	1'-8"	NA	NA	NA
Casting Length	2'-7"	2'-7"	NA	2'-7"	2'-7"	2'-7"	2'-7"	2'-0"	NA	NA	NA
Structure Depth (ft)	6.45	7.90	NA	7.22	6.4	6.61	5.76	6.2	7.45	7.35	5.76
Sump Depth (ft)	3	2.4	2.6	2.4	2.9	2.9	2.5	2.3	NA	NA	NA
2011 percent full											
04/21/11	0%	0%	4%	0%	13%	3%	46%	11%	0%	0%	0%
07/14/11	0%	0%	3%	8%	29%	13%	1%	21%	0%	0%	0%
2012 percent full											
01/05/12	0%	1%	10%	11%	50%	13%	19%	27%	0%	0%	0%
06/22/12	1%	19%	11%	16%	57%	11%	41%	20%	0%	0%	0%
10/11/12	1%	9%	16%	27%	62%	14%	45%	27%	0%	0%	0%
2013 percent full											
02/11/13	9%	22%	22%	38%	69%	14%	53%	28%	0%	0%	0%
05/01/13	12%	24%	23%	48%	3%	23%	52%	33%	0%	0%	0%
10/28/13	2%	2%	29%	50%	8%	28%	49%	34%	0%	0%	0%
12/23/13	4%	5%	31%	58%	9%	17%	51%	29%	0%	0%	0%
2014 percent full											
03/14/14	4%	13%	30%	68%	19%	38%	49%	26%	0%	0%	0%
06/23/14	5%	15%	38%	73%	21%	27%	55%	37%	0%	0%	0%
09/29/14	6%	13%	42%	72%	22%	29%	55%	36%	0%	0%	0%
12/29/14	6%	15%	43%	81%	30%	28%	50%	36%	0%	0%	0%
2015 percent full											
03/27/15	7%	16%	43%	80%	33%	32%	53%	44%	0%	0%	0%
06/29/15	8%	17%	40%	2%	36%	32%	55%	41%	0%	0%	0%
09/22/15	10%	28%	50%	2%	37%	31%	0%	45%	0%	0%	0%
12/29/15	9%	15%	43%	12%	40%	39%	8%	37%	0%	0%	0%
2017 percent full											
02/22/17	14%	30%	56%	49%	63%	48%	34%	55%	0%	0%	0%
Times Exceeded Maintenance Threshold (60% full)	0	0	0	1	2	0	0	0	0	0	0

Figure 1: Catch basin and maintenance holes measuring locations on S. Myrtle St.



Structural Controls

South Park Water Quality Stormwater Treatment Facility

The South Park Water Quality Facility will treat stormwater runoff from the 7th Ave S drainage system and is progressing on schedule. In 2016, SPU completed Consultant procurement and began bench/pilot testing of two treatment technologies (chemically enhanced sand filtration and ballasted sedimentation). Testing was conducted to 1) evaluate treatment performance, 2) identify appropriate treatment chemicals/dosages, and 3) evaluate operational conditions. Although the original plan called for bench testing to occur prior to pilot testing, due to dry weather conditions in the spring and fall, bench testing was conducted concurrent with pilot testing. Pilot testing will be completed in the first quarter of 2017. Results will be documented and shared with Ecology in 2017. The project team will also focus on evaluating the pilot test results to identify the preferred treatment technology in 2017.

Street Sweeping Expansion – Arterials

This program will expand the City's arterial street sweeping program, per commitments in the Plan to Protect Seattle's Waterways (aka Integrated Plan).

The team began implementing the plan in 2016. Key tasks that were completed in 2016 included:

- Swept 22 routes that have arterial road surfaces in the MS4 basins that discharge to the LDW. Frequency of sweeping of the 22 routes is described in Table 2.
- Swept a total of 2,652 road miles on the 22 routes.
- Signed a 5-year Memorandum of Agreement between SPU and SDOT for street sweeping services to meet the regulatory commitments.
- Began sweeping new routes; 21, 28 and 300.
- Expanded day sweeping crew from half to one dedicated operator (SDOT).
- Gathered specifications and prepared a purchase order to purchase a new sweeper.
- Developed a Post-Construction Monitoring Quality Assurance Project Plan (QAPP) and submitted to Ecology for review.

Table 2: Street Sweeping Expansion – Arterials Route Sweeping Frequency

Route number	Route name	Frequency	Times Swept in 2016
3	24th Ave E	Every 2-weeks	23
6	MLK	weekly	46
7	Beach Drive SW	Every 2-weeks	23
8	1st/4th Ave S (includes S. Myrtle St.)	weekly	46
10	15th Av S (includes S. Myrtle St.)	weekly	46
11	W Marginal Way	weekly	46
12	Rainier Av S	weekly	46
17	Beacon Ave S	weekly	46
19	Alaska Way Viaduct/Aurora	weekly	46
20	West Seattle Br	weekly	46
21	Alaska Way Viaduct/Aurora (inside curb #19)	Every 2-weeks	23
22	Delridge Way SW	weekly	46
25	Spokane St	weekly	46
28	LDW Curbless Local	Every 2-weeks	20

100	Dexter, Core downtown, Pioneer Sq, Market	Every 2-weeks	23
101	Seattle Ctr, Core DT N, Pioneer Sq, Market	Every 2-weeks	23
103	Market, Core, ID/Pioneer Sq.	weekly	46
105	Elliot Ave W, Western, Corson, Michigan, E Marginal Way S	Every 2-weeks	23
106	Downtown alleys, Aves, ID	weekly	46
202	Leaf Route (South Park Storm)	Leaf Season	4
203	Leaf Route (South Park Combined)	Leaf Season	8
300	Bike Route SE District	Every 2-weeks	23

Problems that were encountered that hindered the effectiveness of sweeping as a BMP in the LDW were:

- Unsuccessful in expanding the night sweeping crew from five to six operators due to a tight labor market and high turnover on night shift.
- General hindrances to the effectiveness of sweeping in the LDW included parked vehicles along routes, curbless street sections, poor street surface quality and tight or confined turns.

During 2017, the team will continue to implement the plan and adapt as needed to meet the regulatory targets. The key tasks planned for this year include:

- Continue sweeping new arterial routes.
- Use SDOT's day shift staff as available to alleviate the current difficulty maintaining a night crew of six.
- Receive delivery of a new sweeper.
- Begin Post Construction Monitoring in early January.

Terminal 117 Adjacent Streets and Drainage Project

While not an Appendix 13 requirement, the City completed the planned cleanup and restoration of streets/drainage adjacent to Terminal 117 in the South Park neighborhood in 2016. Work involved removing approximately 25,000 tons of PCB-contaminated material from the right-of-way[1], restoring the streets, and installing 1) a new 18-inch storm

[1] Includes asphalt, concrete, vegetation, and soil removed as part of the cleanup, as well as used personal protection equipment.

drain outfall to the LDW, 2) 1,680 feet of stormwater conveyance pipe, 3) nine bioretention cells, and 4) four Filterra® tree box units to manage stormwater. This new outfall, 17th Ave S, is a location that is being used for the Effectiveness Monitoring Program in Appendix 13.

Annual Prioritization

The City continued its effectiveness monitoring program during 2016and is on schedule to collect at least one sample from each outfall/near end-of-pipe locations as noted in Tables 1 and 2 of Appendix 13. Validated analytical results from the storm drain solids samples collected between July 2014 and June 2016[2], in support of the source tracing & sampling program and effectiveness monitoring program, were compiled and reviewed to assess potential changes in the chemical characteristics of storm drain solids. This assessment has been used to assess priorities for the program during 2017. Validated analytical results for 2016 will be uploaded to EIM by May 31, 2017.

Data Review

To assess potential changes to planned actions and target locations, SPU compared analytical results for the major risk drivers in LDW sediment that are monitored in storm drain solids (arsenic, PCBs, and cPAH) from the solids data collected from July 2014 to June 2016 against the analytical data presented in the SCIP. These comparisons are provided in Table 3 and 4, in Figures 3, 4 and 5 and in Attachment A. These figures present data for the following LDW MS4 basins that were sampled as part of the source tracing & sampling program and effectiveness monitoring program between July 2014 and June 2016:

- Diagonal Ave S CSO/SD
- S River St SD
- S Brighton St SD
- S Myrtle St SD
- I-5 SD at Slip 4
- Norfolk CSO/EOF/SD
- SW Idaho St SD
- SW Kenny St SD
- Highland Park Ave SW SD
- 1st Ave SW SD (west)
- 2nd Ave S SD
- 7th Ave S SD

[2] Data validation efforts in 2016 were hampered due to contracting issues. A new contract to provide data validation services, which provides access to four different sources, was issued in late 2016 and validation has resumed.

The relatively low number of samples collected from some of the LDW MS4 basins between July 2014 and June 2016 makes it difficult to draw strong conclusions about trends in storm drain solids chemistry.

Outfalls that were not sampled during this reporting period include:

- S Nevada St SD
- S Garden St SD
- Georgetown SD
- 1st Ave S SD-east
- 16th Ave S SD -east
- I-5 SD at S Ryan St
- SW Dakota St SD
- S 96th St SD

The S Garden, I-5 SD at S Ryan St, and the S 96th St MS4 basins were not identified as priorities in the SCIP. SPU is awaiting action by City Light to repair/replace the roof on the Georgetown Steam Plant, the suspected source of the high polycyclic aromatic hydrocarbons (PAHs) in this basin, before resampling. The S Nevada (2015) and SW Dakota St (2016) MS4 has recently been cleaned. These systems will be sampled in subsequent years after sediment has accumulated in the lines.

The median concentrations of arsenic measured in sampled LDW MS4 basin between July 2014- June 2016 samples, were either slightly lower or similar to concentrations reported in the SCIP. Exceedances of the sediment cleanup objective (SCO) for arsenic (57 mg/kg) were low in the older samples (2 percent exceeded the SCO); however, none of the samples collected between July 2014 and June 2016 exceeded the SCO.

Median PCB concentrations in the July 2014 – June 2016 samples remained fairly similar to the concentrations reported in the SCIP. The main exceptions are the 7th Ave S SD, S River St the SW Idaho St SD, where median PCB concentrations were lower in the more recent samples and the S Brighton St SD and S Myrtle St SD where the median concentrations in July 2014- June 2016 samples were higher than the values reported in the SCIP.

Table 3: Outfalls where PCBs changed between SCIP and recent samples.

Outfall	Results from SCIP		Results from 2014—2016 samples	
	Median concentration (ug/kg dw PCBs)	n	Median concentration (ug/kg dw PCBs)	n
7th Ave S SD	388	7	156	18
S River St SD	291	3	114	11
SW Idaho St SD	103	4	40	6
S Brighton St SD	158	5	562	1
S Myrtle St SD	1,020	5	1,750	1

The 7th Ave S, S River St, and SW Idaho St MS4 basins were cleaned in 2013 and 2010, respectively. Data presented in the SCIP included only the post-cleaning samples, but the

new data indicate that PCB concentrations may be declining in these two basins. The S Brighton St and S Myrtle St MS4 basins were also cleaned in 2010, but as reported in the SCIP, there is an ongoing source in the S Myrtle St basin. Higher concentrations of PCBs in the S Brighton St SD are concerning, but both the S Myrtle St and S Brighton SD were only sampled once during July 2014- June 2016. Additional sampling will be conducted in 2017 to determine whether elevated PCBs are present in these basins.

With the exception of a few outfalls, median cPAH concentrations in the July 2014- June 2016 samples were fairly similar to the concentrations reported in the SCIP (Table 3).

Table 4: Outfalls where cPAHs changed between SCIP and recent samples.

Outfall	Results from SCIP		Results from 2014—2016 samples	
	Median cPAH (ug/ TEQ/kg)	n	Median cPAH (ug/ TEQ/kg)	n
7th Ave S SD	596	7	315	14
Norfolk CSO/EOF/SD	831	59	342	42
SW Idaho St SD	115	3	45	5
SW Kenny St SD	734	15	273	2
2nd Ave S SD	216	17	412	2
S Myrtle St SD	365	5	778	1

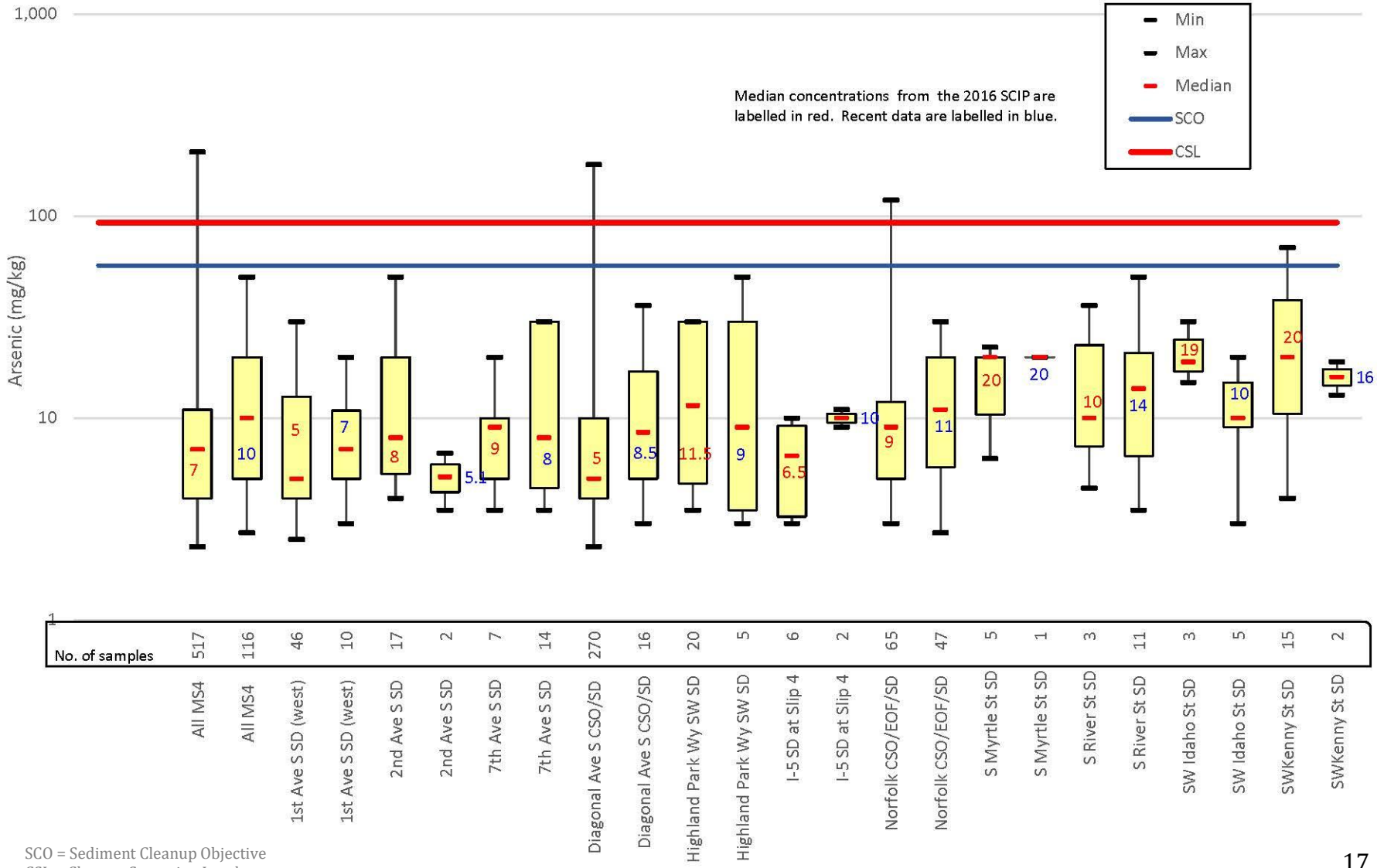
n = number of samples

Median concentrations of cPAH declined in the 7th Ave S, Norfolk, SW Idaho, and SW Kenny St MS4 basins. As mentioned above, the data presented in the SCIP for the 7th Ave S and SW Idaho St MS4 basins included only post-cleaning samples, so the recent data may indicate that cPAH concentrations in these two basins are continuing to decline. The July 2014- June 2016 dataset for the Norfolk basin is fairly robust (48 samples), because SPU conducted a focused investigation in this basin to identify source(s) of PAHs, which involved intensive inspections and sampling. However, no specific sources were found. Over the past 5 years, a number of PAH sources have been identified and controlled in this basin. The MS4 lines in this basin needs to be cleaned and resampled to determine whether there are ongoing sources of PAHs.

Although the recent data indicate that cPAH concentrations may be increasing in the 2nd Ave S and S Myrtle St MS4 basins, there are not enough samples to confirm whether this is the case. SPU intends to continue sampling in these two basins.

Figure 2: Arsenic

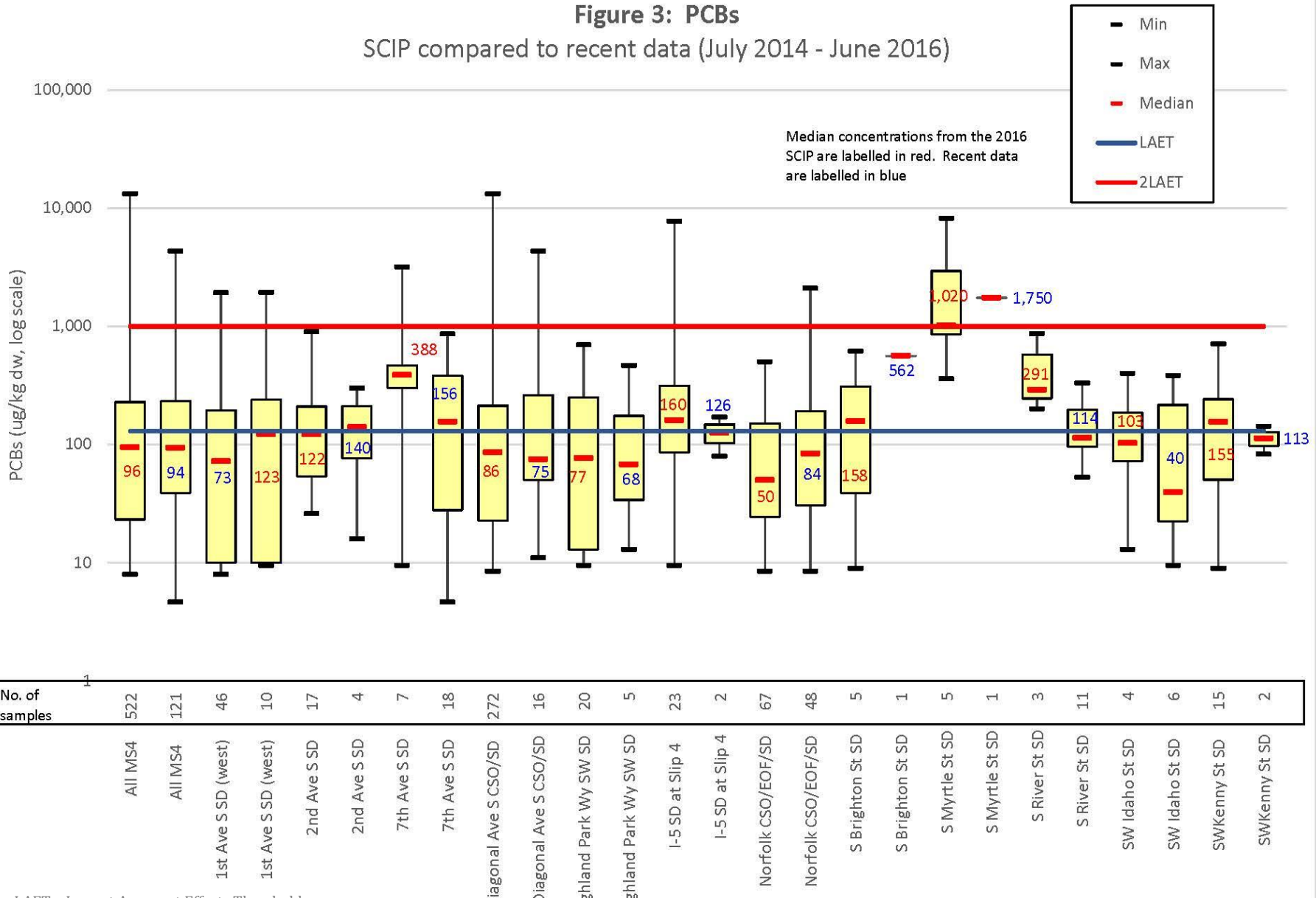
SCIP results compared to recent data (July 2014-June 2016)



SCO = Sediment Cleanup Objective
CSL = Cleanup Screening Level

Figure 3: PCBs

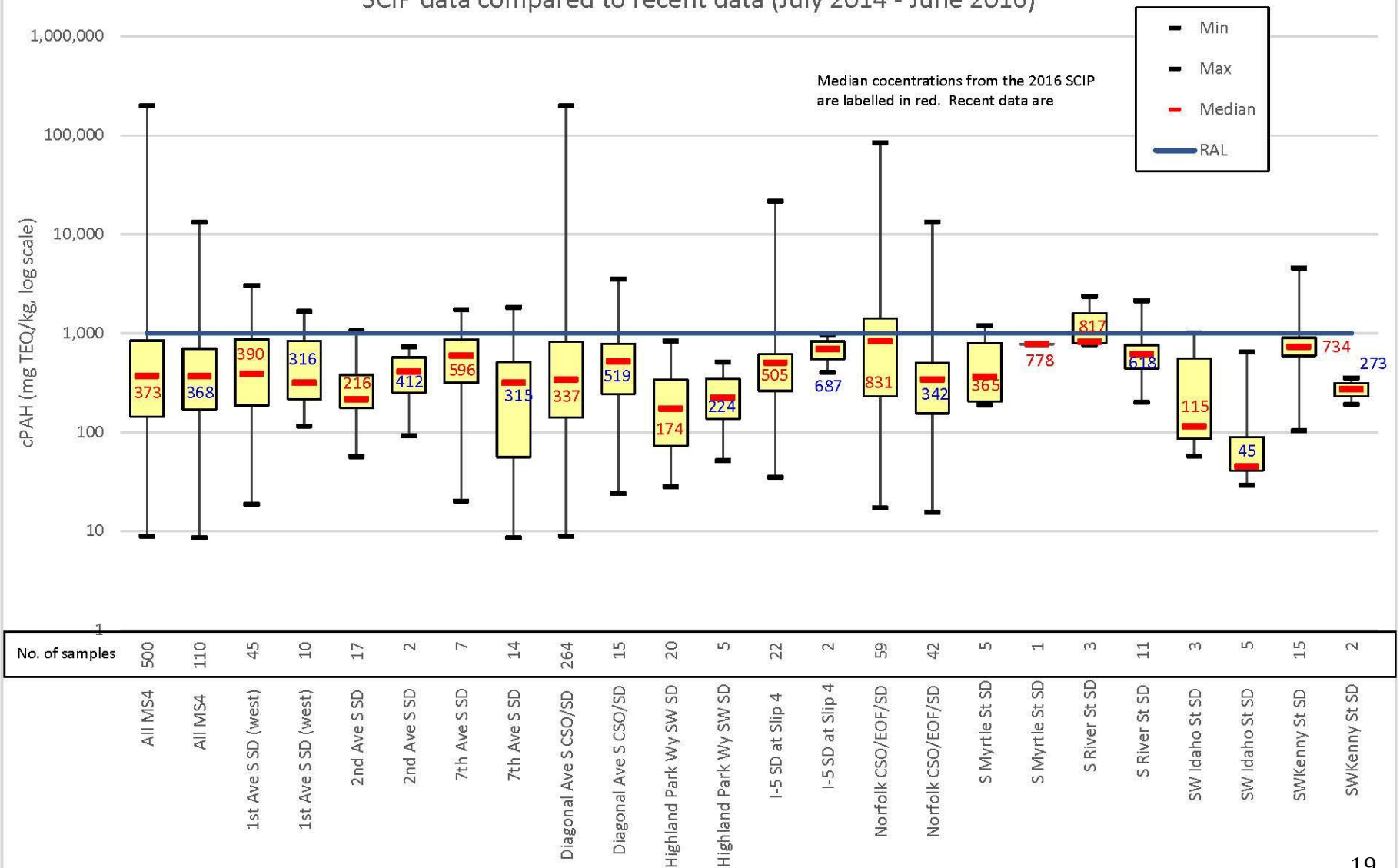
SCIP compared to recent data (July 2014 - June 2016)



LAET – Lowest Apparent Effects Threshold
2LAET – Second Lowest Apparent Effects Threshold

Figure 4: cPAH

SCIP data compared to recent data (July 2014 - June 2016)



RAL = Remedial Action Level

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Priorities for 2017

The City has conducted an evaluation of available validated analytical data and affirms that prioritization of the projects and programs in the SCIP will remain the same during 2017.

Source Tracing/Sampling

The effectiveness monitoring and sampling to fill data gap priorities identified in Tables 1 and 2 in Appendix 13 will largely remain the same during 2017. Changes identified based on the evaluation and business inspections are summarized below:

- Collect additional samples in the S Brighton St SD to determine whether there are active sources of PCBs in this basin.
- Collect additional samples in the S Myrtle St SD basin to update information on PCB levels in this system and evaluate the effectiveness of source control actions in this basin.
- Collect additional samples in the 2nd Ave S SD to determine whether there are active sources of cPAH in this basin.

Sediment Trap Pilot

If the prototype traps pulled in early 2017 show good capture of solids, SPU will have additional traps fabricated in 2017 and begin deploying them in MS4 basins that were identified in the SCIP.

Line Cleaning

Line cleaning in 2017 will focus on the MS4 portions of the 1st Ave S SD (west) and the SW Kenny St SD. Cleaning lines in these MS4 basins allows SPU to take advantage of the availability of the South Park pump station/water quality facility property for solids decanting/dewatering. This property has been used the past few years and will no longer be available when the currently scheduled construction of the pump station begins in 2018.

Citywide Programs that Support Source Control Efforts in the LDW

In addition to the specific adaptive management requirements, SPU conducts other citywide programs that support these efforts. The following is a summary of the 2016 accomplishments in these citywide programs:

- Stormwater Facility Inspections: While inspecting a business for source control BMPs, the flow control and/or treatment facility is also inspected. Within the LDW, 70 facilities were inspected for Code compliance regarding flow control and treatment system code requirements during 2016.
- Illicit Discharge Detection and Elimination (IDDE): SPU conducts sediment sampling of onsite catch basins, right of way catch basins and drainage system mainlines to identify sources of contamination and potential illicit discharges and illicit connections. Sampling is conducted in tandem with business inspections to

identify and terminate sources of pollution. Samples are analyzed for the LDW contaminants of concern, including total organic carbon, semi-volatile organic compounds, TPH-Dx, metals, polychlorinated biphenyls, grain size, and occasionally site specific parameters, such as pH, additional metals, and volatile organic compounds.

- Water Quality Complaints: Inspectors respond to complaints as they are received through the water quality hotline, webpage or agency referrals. In 2016, 56 water quality complaints were reported in the LDW and EW basins that resulted in 3 business inspections. When a complaint is reported at a business, a full business inspection is completed.
- Spill Response: Spills are dispatched through the SPU Operations Response Center to on-call Spill Coordinators as they are received. In 2016, SPU responded to 64 spills within the LDW and EW basins.
- Education and Outreach: SPU funds the Resource Venture, a conservation service for Seattle businesses. Resource Venture implements the City's Spill Kit Incentive Program, which provides free spill kits, assistance in developing spill plan and site specific technical assistance to Seattle businesses. Approximately 49 businesses in the LDW and EW basins received spill kits, either stemming from a business inspection or through targeted outreach. Surveys conducted of spill kit recipients statistically show that businesses which participate in this program show an improved understanding of stormwater pollution prevention.

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - Samples by Outfall
Attachment A, 90b - Actions Taken Pursuant to S4F

Outfall	Sample Count	Page Numbers
1st Ave S SD (west)	10	2-5
2nd Ave S SD	4	6-7
7th Ave S SD	17	8-13
Diagonal Ave S CSO/SD	18	14-19
Highland Park Wy SW SD	5	20-21
I-5 SD at Slip 4	2	22-23
S Brighton St SD	1	24
S Myrtle St SD	1	25-26
S Norfolk St CSO/PS17 EOF/SD	47	27-42
S River St SD	11	43-46
S Webster St SD	1	47-48
SW Idaho St SD	6	49-50
SW Kenny St SD/T115 CSO	2	51-52
Total	**125**	**52**

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - 1st Ave S SD (west)
Attachment A, 90b - Actions Taken Pursuant to S4F

					Location	1ST-ST1			1ST-ST1			1ST-ST2			1ST-ST2			1ST-ST3			1ST-ST3			1ST-ST3		
					Sample Date	12 May 2016			22 May 2015			12 May 2016			22 May 2015			11 May 2016			11 May 2016			21 May 2015		
					Sample Name	1ST-ST1-051216			1ST-ST1-052215			1ST-ST2-051216			1ST-ST2-052215			1ST-ST3-051116			1ST-ST3-051116G			1ST-ST3-052115		
					Drainage Type	SD			SD			SD			SD			SD			SD			SD		
					Sample Method	SedTrap			SedTrap			SedTrap			SedTrap			SedTrap			Grab-Manual			SedTrap		
					Location Type	Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	1st Ave S SD (west)			1st Ave S SD (west)			1st Ave S SD (west)			1st Ave S SD (west)			1st Ave S SD (west)			1st Ave S SD (west)			1st Ave S SD (west)		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
Solids, Total	%	LDW01 - Solids_TOC			45.96		Y	48.15		Y	34.82		Y	34.79		Y	83.87		Y	81.59		Y	66.42		Y
Total Organic Carbon	%	LDW01 - Solids_TOC			15.5		Y	10.8		Y	6.81		Y	5.59		Y	1.59		Y	0.755		Y	3.61		Y
Arsenic	mg/kg	LDW02 - Metals	57	93	10		Y	20		Y	10	U	N	10	U	N	6	U	N	6	U	N	8		Y
Copper	mg/kg	LDW02 - Metals	390	390	239		Y	259		Y	83		Y	74.6		Y	36.9		Y	37.1		Y	30.1		Y
Lead	mg/kg	LDW02 - Metals	450	530	107		Y	110		Y	78		Y	73		Y	6		Y	5		Y	8		Y
Mercury	mg/kg	LDW02 - Metals	0.41	0.59	0.31		Y	0.23		Y	0.13		Y	0.14		Y	0.03	U	N	0.02	U	N	0.04		Y
Zinc	mg/kg	LDW02 - Metals	*410*	960	*1420*		*Y*	*1310*		*Y*	*442*		*Y*	362		Y	200		Y	164		Y	258		Y
Diesel Range Hydrocarbons	mg/kg	LDW03 - TPH	*2000*	2000	1100		Y	*2800*		*Y*	280		Y	890		Y	50		Y	25		Y	400		Y
Motor Oil Range	mg/kg	LDW03 - TPH	*2000*	2000	*6600*		*Y*	*13000*		*Y*	1900		Y	*3000*		*Y*	350		Y	220		Y	1600		Y
Acenaphthene	ug/kg	LDW04 - LPAH	500	500	140	U	N	300	U	N	99	U	N	120	U	N	99	U	N	57	U	N	290	U	N
Acenaphthylene	ug/kg	LDW04 - LPAH	1300	1300	140	U	N	300	U	N	99	U	N	120	U	N	99	U	N	57	U	N	290	U	N
Anthracene	ug/kg	LDW04 - LPAH	960	960	150		Y	180	J	Y	54	J	Y	35	J	Y	99	U	N	57	U	N	290	U	N
Fluorene	ug/kg	LDW04 - LPAH	540	540	140	U	N	91	J	Y	99	U	N	120	U	N	99	U	N	57	U	N	290	U	N
LPAH	ug/kg	LDW04 - LPAH	5200	5200	680	J	Y	1401	J	Y	284	J	Y	295	J	Y	54	J	Y	160		Y	220	J	Y
Naphthalene	ug/kg	LDW04 - LPAH	2100	2100	100	J	Y	240	J	Y	40	J	Y	70	J	Y	99	U	N	57	U	N	290	U	N
Phenanthrene	ug/kg	LDW04 - LPAH	1500	1500	430		Y	890		Y	190		Y	190		Y	54	J	Y	160		Y	220	J	Y
Benzo(A)anthracene	ug/kg	LDW05 - HPAH	1300	1600	450		Y	500		Y	140		Y	120		Y	49	J	Y	120		Y	170	J	Y
Benzo(A)pyrene	ug/kg	LDW05 - HPAH	1600	1600	460		Y	560		Y	190		Y	130		Y	69	J	Y	120		Y	200	J	Y
Benzo(G,H,I)perylene	ug/kg	LDW05 - HPAH	*670*	720	510		Y	*800*		*Y*	200		Y	120	U	N	54	J	Y	120		Y	130	J	Y
Benzofluoranthenes, Total	ug/kg	LDW05 - HPAH	3200	3600	1500		Y	1300		Y	500		Y	340		Y	160	J	Y	230		Y	520	J	Y
Chrysene	ug/kg	LDW05 - HPAH	*1400*	2800	1200		Y	1300		Y	320		Y	270		Y	120	J	Y	180		Y	360		Y
Dibenzo(A,H)anthracene	ug/kg	LDW05 - HPAH	*230*	230	140	J	Y	170	J	Y	99	U	N	120	U	N	99	U	N	31	J	Y	*290*	*U*	*N*
Fluoranthene	ug/kg	LDW05 - HPAH	*1700*	2500	810		Y	1500		Y	400		Y	330		Y	140	J	Y	310		Y	520		Y
HPAH	ug/kg	LDW05 - HPAH	*12000*	17000	6610	J	Y	8580	J	Y	2300		Y	1690		Y	702	J	Y	1482	J	Y	2450	J	Y
Indeno(1,2,3-Cd)pyrene	ug/kg	LDW05 - HPAH	*600*	690	240		Y	450		Y	110		Y	130		Y	99	U	N	91		Y	130	J	Y
Pyrene	ug/kg	LDW05 - HPAH	2600	3300	1300		Y	2000		Y	440		Y	370		Y	110		Y	280		Y	420		Y
cPAH	ug/kg	LDW06 - cPAH (analyte only)		100	747	J	Y	866	J	Y	288		Y	215.7		Y	115.85	J	Y	178.3	J	Y	343.6	J	Y
Bis(2-ethylhexyl)phthalate	ug/kg	LDW07 - Phthalates	*1300*	1900	*12000*		*Y*	*21000*		*Y*	*4400*		*Y*	*4000*		*Y*	300		Y	210		Y	1000	J	Y
Butylbenzylphthalate	ug/kg	LDW07 - Phthalates	*63*	900	*300*		*Y*	*480*		*Y*	*99*	*U*	*N*	*120*	*U*	*N*	*99*	*U*	*N*	57	U	N	*290*	*U*	*N*
Diethylphthalate	ug/kg	LDW07 - Phthalates	*200*	1200	140	U	N	*300*	*U*	*N*	99	U	N	120	U	N	99	U	N	57	U	N	*290*	*U*	*N*
Dimethylphthalate	ug/kg	LDW07 - Phthalates	*71*	160	*140*	*U*	*N*	*300*	*U*	*N*	*99*	*U*	*N*	*140*		*Y*	*99*	*U*	*N*	57	U	N	*290*	*U*	*N*
Di-N-Butylphthalate	ug/kg	LDW07 - Phthalates	1400	1400	120	J	Y	300	U	N	99	U	N	120	U	N	99	U	N	57	U	N	290	U	N
Di-N-Octylphthalate	ug/kg	LDW07 - Phthalates	6200	6200	140	U	N	300	U	N	460		Y	120	U	N	99	U	N	57	U	N	290	U	N
Aroclor 1016	ug/kg	LDW08 - PCBs			20	UJ	N	18	U	N	19	U	N	19	U	N	20	U	N	19	U	N	20	U	N
Aroclor 1221	ug/kg	LDW08 - PCBs			20	UJ	N	18	U	N	19	U	N	19	U	N	20	U	N	19	U	N	20	U	N
Aroclor 1232	ug/kg	LDW08 - PCBs			20	UJ	N	18	U	N	19	U	N	19	U	N	20	U	N	19	U	N	20	U	N
Aroclor 1242	ug/kg	LDW08 - PCBs			20	UJ	N	18	U	N	19	U	N	19	U	N	20	U	N	19	U	N	20	U	N
Aroclor 1248	ug/kg	LDW08 - PCBs			40	U	N	84	J	Y	48	U	N	30		Y	20	U	N	19	U	N	20	U	N
Aroclor 1254	ug/kg	LDW08 - PCBs			140		Y	100	J	Y	93		Y	52		Y	20	U	N	19	U	N	20	U	N
Aroclor 1260	ug/kg	LDW08 - PCBs			94		Y	58		Y	52	J	Y	18	J	Y	20	U	N	19	U	N	20	U	N
Polychlorinated Biphenyls	ug/kg	LDW08 - PCBs	*130*	1000	*234*		*Y*	*242*	*J*	*Y*	*145*	*J*	*Y*	100	J	Y	20	U	N	19	U	N	20	U	N
1,2,4-Trichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*31*	51	*140*	*U*	*N*	*300*	*U*	*N*	*99*	*U*	*N*	*120*	*U*	*N*	*99*	*U*	*N*	*57*	*U*	*N*	*290*	*U*	*N*
1,2-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*35*	50	*140*	*U*	*N*	*300*	*U*	*N*	*99*	*U*	*N*	*120*	*U*	*N*	*99*	*U*	*N*	*57*	*U*	*N*	*290*	*U*	*N*
1,3-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds			140	U	N	300	U	N	99	U	N	120	U	N	99	U	N	57	U	N	290	U	N
1,4-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*110*	110	*140*	*U*	*N*	*300*	*U*	*N*	99	U	N	*120*	*U*	*N*	99	U	N	57	U	N	*290*	*U*	*N*
1-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds			140	U	N	300	U	N	99	U	N	120	U	N	99	U	N	57	U	N	290	U	N
2,2'-Oxybis(1-chloropropane)	ug/kg	LDW09 - Other Organic Compounds			140	U	N	300	U	N	99	U	N	120	U	N	99	U	N	57	U	N	290	U	N
2,4,5-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds			720	U	N	1500	U	N	500	U	N	580	U	N	490	U	N	280	U	N	1400	U	N
2,4,6-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds			720	U	N	1500	U	N	500	U	N	580	U	N	490	U	N	280	U	N	1400	U	N
2,4-Dichlorophenol	ug/kg	LDW09 - Other Organic Compounds			720	U	N	1500	U	N	500	U	N	580	U	N	490	U	N	280	U	N	1400	UJ	N
2,4-Dimethylphenol	ug/kg	LDW09 - Other Organic Compounds	*29*	29	*720*	*U*	*N*	*1500*	*U*	*N*	*500*	*U*	*N*	*580*	*U*	*N*	*490*	*U*	*N*	*280*	*U*	*N*	*1400*	*U*	*N*
2,4-Dinitrophenol	ug/kg	LDW09 - Other Organic Compounds			1400	U	N	3000	U	N	990	U	N	1200	U	N	990	U	N	570	U	N	2900	U	N
2,4-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds			720	U	N	1500	U	N	500	U	N	580	U	N	490	U	N	280	U	N	1400	U	N
2,6-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds			720	U	N	1500	U	N	500	U	N	580	U	N	490	U	N	280	U	N	1400	U	N
2-Chloronaphthalene	ug/kg	LDW09 - Other Organic Compounds			140	U	N	300	U	N	99	U	N	120	U	N	99	U	N	57	U	N	290	U	N
2-Chlorophenol	ug/kg	LDW09 - Other Organic Compounds			140	U	N	300	U	N	99	U	N	120	U	N	99	U	N	57	U	N	290	U	N
2-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds	670	670	58	J	Y	110	J	Y	99	U	N	120	U	N	99	U	N	57	U	N	290	U	N
2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*63*	63	*140*	*U*	*N*	*300*	*U*	*N*	*99*	*U*	*N*	*120*	*U*	*N*	*99*	*U*	*N*	57	U	N	*290*	*U*	*N*
2-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			720	U	N	1500	U	N	500	U	N	580	U	N	490	U	N	280	U	N	1400	U	N
2-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			140	U	N	300	U	N	99	U	N	120	U	N	99	U	N	57	U	N	290	U	N

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - 1st Ave S SD (west)
Attachment A, 90b - Actions Taken Pursuant to S4F

					Location	1ST-ST1			1ST-ST1			1ST-ST2			1ST-ST2			1ST-ST3			1ST-ST3			1ST-ST3		
					Sample Date	12 May 2016			22 May 2015			12 May 2016			22 May 2015			11 May 2016			11 May 2016			21 May 2015		
					Sample Name	1ST-ST1-051216			1ST-ST1-052215			1ST-ST2-051216			1ST-ST2-052215			1ST-ST3-051116			1ST-ST3-051116G			1ST-ST3-052115		
					Drainage Type	SD			SD			SD			SD			SD			SD			SD		
					Sample Method	SedTrap			SedTrap			SedTrap			SedTrap			SedTrap			Grab-Manual			SedTrap		
					Location Type	Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	1st Ave S SD (west)			1st Ave S SD (west)			1st Ave S SD (west)			1st Ave S SD (west)			1st Ave S SD (west)			1st Ave S SD (west)			1st Ave S SD (west)		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET		Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
3,3`-Dichlorobenzidine	ug/kg	LDW09 - Other Organic Compounds				720	U	N				500	U	N				490	U	N	280	UJ	N			
3-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds				720	U	N	1500	U	N	500	U	N	580	U	N	490	U	N	280	UJ	N	1400	U	N
4,6-Dinitro-2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds				1400	U	N	3000	U	N	990	U	N	1200	U	N	990	U	N	570	U	N	2900	U	N
4-Bromophenyl phenyl ether	ug/kg	LDW09 - Other Organic Compounds				140	U	N	300	U	N	99	U	N	120	U	N	99	U	N	57	U	N	290	U	N
4-Chloro-3-Methylphenol	ug/kg	LDW09 - Other Organic Compounds				720	U	N	1500	U	N	500	U	N	580	U	N	490	U	N	280	U	N	1400	U	N
4-Chloroaniline	ug/kg	LDW09 - Other Organic Compounds				720	U	N	1500	U	N	500	U	N	580	U	N	490	U	N	280	U	N	1400	U	N
4-Chlorophenyl Phenylether	ug/kg	LDW09 - Other Organic Compounds				140	U	N	300	U	N	99	U	N	120	U	N	99	U	N	57	U	N	290	U	N
4-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*670*	670		140	U	N	300		Y	*1000*		*Y*	270		Y	99	U	N	57	U	N	290	U	N
4-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds				720	U	N	1500	U	N	500	U	N	580	U	N	490	U	N	280	U	N	1400	U	N
4-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds				720	U	N	1500	U	N	500	U	N	580	U	N	490	U	N	280	U	N	1400	U	N
Benzoic acid	ug/kg	LDW09 - Other Organic Compounds	*650*	650		*1400*	*U*	*N*	*4000*		*Y*	410	J	Y	*4800*		*Y*	*990*	*U*	*N*	570	U	N	*2900*	*U*	*N*
Benzyl alcohol	ug/kg	LDW09 - Other Organic Compounds	*57*	73		*140*	*U*	*N*				*99*	*U*	*N*	*3800*	*J*	*Y*	*280*		*Y*	*57*	*U*	*N*			
bis(2-Chloroethoxy) methane	ug/kg	LDW09 - Other Organic Compounds				140	U	N	300	U	N	99	U	N	120	U	N	99	U	N	57	U	N	290	U	N
Bis-(2-chloroethyl) ether	ug/kg	LDW09 - Other Organic Compounds				140	U	N	300	U	N	99	U	N	120	U	N	99	U	N	57	U	N	290	U	N
Carbazole	ug/kg	LDW09 - Other Organic Compounds				140	U	N	300	U	N	50	J	Y	120	U	N	99	U	N	40	J	Y	290	U	N
Dibenzofuran	ug/kg	LDW09 - Other Organic Compounds	540	540		140	U	N	300	U	N	99	U	N	120	U	N	99	U	N	57	U	N	290	U	N
Hexachlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*22*	70		*140*	*U*	*N*	*300*	*U*	*N*	*99*	*U*	*N*	*120*	*U*	*N*	*99*	*U*	*N*	*57*	*U*	*N*	*290*	*U*	*N*
Hexachlorobutadiene	ug/kg	LDW09 - Other Organic Compounds	*11*	120		*140*	*U*	*N*	*300*	*U*	*N*	*99*	*U*	*N*	*120*	*U*	*N*	*99*	*U*	*N*	*57*	*U*	*N*	*290*	*U*	*N*
Hexachlorocyclopentadiene	ug/kg	LDW09 - Other Organic Compounds				720	U	N	1500	U	N	500	U	N	580	U	N	490	U	N	280	U	N	1400	U	N
Hexachloroethane	ug/kg	LDW09 - Other Organic Compounds				140	U	N	300	U	N	99	U	N	120	U	N	99	U	N	57	U	N	290	U	N
Isophorone	ug/kg	LDW09 - Other Organic Compounds				140	U	N	300	U	N	99	U	N	120	U	N	99	U	N	57	U	N	290	U	N
Nitrobenzene	ug/kg	LDW09 - Other Organic Compounds				140	U	N	300	U	N	99	U	N	120	U	N	99	U	N	57	U	N	290	U	N
N-Nitroso-Di-N-Propylamine	ug/kg	LDW09 - Other Organic Compounds				140	U	N	300	U	N	99	U	N	120	U	N	99	U	N	57	U	N	290	U	N
N-Nitrosodiphenylamine	ug/kg	LDW09 - Other Organic Compounds	*28*	40		*140*	*U*	*N*	*300*	*U*	*N*	*99*	*U*	*N*	*120*	*U*	*N*	*99*	*U*	*N*	*57*	*U*	*N*	*290*	*U*	*N*
Pentachlorophenol	ug/kg	LDW09 - Other Organic Compounds	*360*	690		*720*	*UJ*	*N*	*1500*	*U*	*N*	*500*	*UJ*	*N*	*580*	*U*	*N*	*490*	*UJ*	*N*	280	U	N	*1400*	*U*	*N*
Phenol	ug/kg	LDW09 - Other Organic Compounds	*420*	1200		170		Y	*420*	*J*	*Y*	*430*		*Y*	*500*	*J*	*Y*	99	U	N	57	U	N	190	J	Y
>10 Phi Clay	%	LDW10 - Grain Size																								
8-9 Phi Clay	%	LDW10 - Grain Size																								
9-10 Phi Clay	%	LDW10 - Grain Size																								
Coarse Sand	%	LDW10 - Grain Size				3.4		Y	4.2		Y							1.3		Y	16		Y	6.9		Y
Coarse Silt	%	LDW10 - Grain Size																								
Fine Gravel	%	LDW10 - Grain Size				0.6		Y	0.4		Y							0.8		Y	26.4		Y	34.7		Y
Fine Sand	%	LDW10 - Grain Size				5.3		Y	5.1		Y							0.7		Y	5.5		Y	4.7		Y
Fine Silt	%	LDW10 - Grain Size																								
Gravel	%	LDW10 - Grain Size				1.2		Y	0.4		Y							0.5		Y	14.4		Y	20.3		Y
Medium Sand	%	LDW10 - Grain Size				3.7		Y	14.6		Y							1.3		Y	21.6		Y	5.3		Y
Medium Silt	%	LDW10 - Grain Size																								
Very Coarse Sand	%	LDW10 - Grain Size				2.8		Y	3.1		Y							1.5		Y	12.5		Y	10.7		Y
Very Fine Sand	%	LDW10 - Grain Size				6.1		Y	6.2		Y							0.7		Y	0.3		Y	1.6		Y
Very Fine Silt	%	LDW10 - Grain Size																								

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - 1st Ave S SD (west)
Attachment A, 90b - Actions Taken Pursuant to S4F

					Location	1ST-ST3			1ST-ST7			1ST-ST7		
					Sample Date	21 May 2015			11 May 2016			21 May 2015		
					Sample Name	1ST-ST3-052115G			1ST-ST7-051116			1ST-ST7-052115		
					Drainage Type	SD			SD			SD		
					Sample Method	Grab-Manual			SedTrap			SedTrap		
					Location Type	Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	1st Ave S SD (west)			1st Ave S SD (west)			1st Ave S SD (west)		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
Solids, Total	%	LDW01 - Solids_TOC			82.21		Y	32.67		Y	33.78		Y
Total Organic Carbon	%	LDW01 - Solids_TOC			0.516		Y	16.1		Y	16.8		Y
Arsenic	mg/kg	LDW02 - Metals	57	93	6		Y	11.2		Y	20		Y
Copper	mg/kg	LDW02 - Metals	390	390	55.4		Y	157		Y	149		Y
Lead	mg/kg	LDW02 - Metals	450	530	5		Y	201		Y	261		Y
Mercury	mg/kg	LDW02 - Metals	0.41	0.59	0.03	U	N	0.26		Y	0.25		Y
Zinc	mg/kg	LDW02 - Metals	*410*	960	255		Y	*901*		*Y*	*919*		*Y*
Diesel Range Hydrocarbons	mg/kg	LDW03 - TPH	*2000*	2000	150		Y	1000		Y	*2500*		*Y*
Motor Oil Range	mg/kg	LDW03 - TPH	*2000*	2000	830		Y	*6000*		*Y*	*10000*		*Y*
Acenaphthene	ug/kg	LDW04 - LPAH	500	500	39	U	N	200	U	N	200	U	N
Acenaphthylene	ug/kg	LDW04 - LPAH	1300	1300	39	U	N	200	U	N	200	U	N
Anthracene	ug/kg	LDW04 - LPAH	960	960	32	J	Y	170	J	Y	78	J	Y
Fluorene	ug/kg	LDW04 - LPAH	540	540	16	J	Y	200	U	N	200	U	N
LPAH	ug/kg	LDW04 - LPAH	5200	5200	248	J	Y	1270	J	Y	908	J	Y
Naphthalene	ug/kg	LDW04 - LPAH	2100	2100	39	U	N	100	J	Y	120	J	Y
Phenanthrene	ug/kg	LDW04 - LPAH	1500	1500	200		Y	1000		Y	710		Y
Benzo(A)anthracene	ug/kg	LDW05 - HPAH	1300	1600	120		Y	1000	J	Y	520		Y
Benzo(A)pyrene	ug/kg	LDW05 - HPAH	1600	1600	150		Y	1100		Y	580		Y
Benzo(G,H,I)perylene	ug/kg	LDW05 - HPAH	*670*	720	83		Y	*860*		*Y*	400		Y
Benzofluoranthenes, Total	ug/kg	LDW05 - HPAH	3200	3600	300		Y	2800		Y	1500		Y
Chrysene	ug/kg	LDW05 - HPAH	*1400*	2800	220		Y	*1800*	*J*	*Y*	1100		Y
Dibenzo(A,H)anthracene	ug/kg	LDW05 - HPAH	*230*	230	35	J	Y	*250*		*Y*	200	U	N
Fluoranthene	ug/kg	LDW05 - HPAH	*1700*	2500	390		Y	*2600*	*J*	*Y*	*1700*		*Y*
HPAH	ug/kg	LDW05 - HPAH	*12000*	17000	1687	J	Y	*13490*	*J*	*Y*	7670		Y
Indeno(1,2,3-Cd)pyrene	ug/kg	LDW05 - HPAH	*600*	690	89		Y	*680*		*Y*	470		Y
Pyrene	ug/kg	LDW05 - HPAH	2600	3300	300		Y	2400		Y	1400		Y
cPAH	ug/kg	LDW06 - cPAH (analyte only)		100	217.1	J	Y	1666	J	Y	880		Y
Bis(2-ethylhexyl)phthalate	ug/kg	LDW07 - Phthalates	*1300*	1900	360		Y	*8500*		*Y*	*7400*		*Y*
Butylbenzylphthalate	ug/kg	LDW07 - Phthalates	*63*	900	39	U	N	*200*	*U*	*N*	*200*	*U*	*N*
Diethylphthalate	ug/kg	LDW07 - Phthalates	*200*	1200	39	U	N	*200*	*U*	*N*	*200*	*U*	*N*
Dimethylphthalate	ug/kg	LDW07 - Phthalates	*71*	160	39	U	N	*200*	*U*	*N*	*200*	*U*	*N*
Di-N-Butylphthalate	ug/kg	LDW07 - Phthalates	1400	1400	39	U	N	200	U	N	380		Y
Di-N-Octylphthalate	ug/kg	LDW07 - Phthalates	6200	6200	39	U	N	750		Y	200	U	N
Aroclor 1016	ug/kg	LDW08 - PCBs			20	U	N	19	U	N	20	U	N
Aroclor 1221	ug/kg	LDW08 - PCBs			20	U	N	19	U	N	20	U	N
Aroclor 1232	ug/kg	LDW08 - PCBs			20	U	N	19	U	N	20	U	N
Aroclor 1242	ug/kg	LDW08 - PCBs			20	U	N	19	U	N	20	U	N
Aroclor 1248	ug/kg	LDW08 - PCBs			20	U	N	48	U	N	250	U	N
Aroclor 1254	ug/kg	LDW08 - PCBs			20	U	N	940		Y	1300		Y
Aroclor 1260	ug/kg	LDW08 - PCBs			20	U	N	490		Y	650	J	Y
Polychlorinated Biphenyls	ug/kg	LDW08 - PCBs	*130*	1000	20	U	N	*1430*		*Y*	*1950*	*J*	*Y*
1,2,4-Trichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*31*	51	*39*	*U*	*N*	*200*	*U*	*N*	*200*	*U*	*N*
1,2-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*35*	50	*39*	*U*	*N*	*200*	*U*	*N*	*200*	*U*	*N*
1,3-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds			39	U	N	200	U	N	200	U	N
1,4-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*110*	110	39	U	N	*200*	*U*	*N*	*200*	*U*	*N*
1-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds			39	U	N	200	U	N	200	U	N
2,2'-Oxybis(1-chloropropane)	ug/kg	LDW09 - Other Organic Compounds			39	U	N	200	U	N	200	U	N
2,4,5-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds			200	U	N	1000	U	N	980	U	N
2,4,6-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds			200	U	N	1000	U	N	980	U	N
2,4-Dichlorophenol	ug/kg	LDW09 - Other Organic Compounds			200	U	N	1000	U	N	980	UJ	N
2,4-Dimethylphenol	ug/kg	LDW09 - Other Organic Compounds	*29*	29	*200*	*U*	*N*	*1000*	*U*	*N*	*980*	*U*	*N*
2,4-Dinitrophenol	ug/kg	LDW09 - Other Organic Compounds			390	U	N	2000	U	N	2000	U	N
2,4-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds			200	U	N	1000	U	N	980	U	N
2,6-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds			200	U	N	1000	U	N	980	U	N
2-Chloronaphthalene	ug/kg	LDW09 - Other Organic Compounds			39	U	N	200	U	N	200	U	N
2-Chlorophenol	ug/kg	LDW09 - Other Organic Compounds			39	U	N	200	U	N	200	U	N
2-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds	670	670	39	U	N	110	J	Y	78	J	Y
2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*63*	63	39	U	N	*200*	*U*	*N*	*780*		*Y*
2-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			200	U	N	1000	U	N	980	U	N
2-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			39	U	N	200	U	N	200	U	N

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - 1st Ave S SD (west)
Attachment A, 90b - Actions Taken Pursuant to S4F

					Location	1ST-ST3			1ST-ST7			1ST-ST7		
					Sample Date	21 May 2015			11 May 2016			21 May 2015		
					Sample Name	1ST-ST3-052115G			1ST-ST7-051116			1ST-ST7-052115		
					Drainage Type	SD			SD			SD		
					Sample Method	Grab-Manual			SedTrap			SedTrap		
					Location Type	Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	1st Ave S SD (west)			1st Ave S SD (west)			1st Ave S SD (west)		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
3,3`-Dichlorobenzidine	ug/kg	LDW09 - Other Organic Compounds			200	U	N	1000	U	N			
3-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			200	U	N	1000	U	N	980	U	N
4,6-Dinitro-2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			390	U	N	2000	U	N	2000	U	N
4-Bromophenyl phenyl ether	ug/kg	LDW09 - Other Organic Compounds			39	U	N	200	U	N	200	U	N
4-Chloro-3-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			200	U	N	1000	U	N	980	U	N
4-Chloroaniline	ug/kg	LDW09 - Other Organic Compounds			200	U	N	1000	U	N	980	U	N
4-Chlorophenyl Phenylether	ug/kg	LDW09 - Other Organic Compounds			39	U	N	200	U	N	200	U	N
4-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*670*	670	39	U	N	*1000*		*Y*	470		Y
4-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			200	U	N	1000	U	N	980	U	N
4-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds						1000	U	N	980	U	N
Benzoic acid	ug/kg	LDW09 - Other Organic Compounds	*650*	650	390	U	N	*2000*	*U*	*N*	*4700*		*Y*
Benzyl alcohol	ug/kg	LDW09 - Other Organic Compounds	*57*	73	39	U	N	*200*	*U*	*N*			
bis(2-Chloroethoxy) methane	ug/kg	LDW09 - Other Organic Compounds			39	U	N	200	U	N	200	U	N
Bis-(2-chloroethyl) ether	ug/kg	LDW09 - Other Organic Compounds			39	UJ	N	200	U	N	200	U	N
Carbazole	ug/kg	LDW09 - Other Organic Compounds			43	J	Y	250		Y	110	J	Y
Dibenzofuran	ug/kg	LDW09 - Other Organic Compounds	540	540	39	U	N	200	U	N	200	U	N
Hexachlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*22*	70	*39*	*U*	*N*	*200*	*U*	*N*	*200*	*U*	*N*
Hexachlorobutadiene	ug/kg	LDW09 - Other Organic Compounds	*11*	120	*39*	*U*	*N*	*200*	*U*	*N*	*200*	*U*	*N*
Hexachlorocyclopentadiene	ug/kg	LDW09 - Other Organic Compounds			200	U	N	1000	U	N	980	U	N
Hexachloroethane	ug/kg	LDW09 - Other Organic Compounds			39	U	N	200	U	N	200	U	N
Isophorone	ug/kg	LDW09 - Other Organic Compounds			39	U	N	200	U	N	200	U	N
Nitrobenzene	ug/kg	LDW09 - Other Organic Compounds			39	U	N	200	U	N	200	U	N
N-Nitroso-Di-N-Propylamine	ug/kg	LDW09 - Other Organic Compounds			39	UJ	N	200	U	N	200	U	N
N-Nitrosodiphenylamine	ug/kg	LDW09 - Other Organic Compounds	*28*	40	*39*	*U*	*N*	*200*	*U*	*N*	*200*	*U*	*N*
Pentachlorophenol	ug/kg	LDW09 - Other Organic Compounds	*360*	690	200	U	N	*1000*	*UJ*	*N*	*980*	*U*	*N*
Phenol	ug/kg	LDW09 - Other Organic Compounds	*420*	1200	39	U	N	370		Y	*460*		*Y*
>10 Phi Clay	%	LDW10 - Grain Size			3.5		Y						
8-9 Phi Clay	%	LDW10 - Grain Size			0.1	U	N						
9-10 Phi Clay	%	LDW10 - Grain Size			0.1	U	N						
Coarse Sand	%	LDW10 - Grain Size			13.4		Y						
Coarse Silt	%	LDW10 - Grain Size			0.5		Y						
Fine Gravel	%	LDW10 - Grain Size			24.1		Y						
Fine Sand	%	LDW10 - Grain Size			3.9		Y						
Fine Silt	%	LDW10 - Grain Size			0.9		Y						
Gravel	%	LDW10 - Grain Size			18.7		Y						
Medium Sand	%	LDW10 - Grain Size			15.8		Y						
Medium Silt	%	LDW10 - Grain Size			0.1	U	N						
Very Coarse Sand	%	LDW10 - Grain Size			12.2		Y						
Very Fine Sand	%	LDW10 - Grain Size			1.3		Y						
Very Fine Silt	%	LDW10 - Grain Size			0.3		Y						

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - 2nd Ave S SD
Attachment A, 90b - Actions Taken Pursuant to S4F

					Location	CB108			CB263			RCB139			RCB203		
					Sample Date	14 May 2015			14 May 2015			21 Dec 2016			21 Dec 2016		
					Sample Name	CB108-051415			CB263-051415			MKJ-122116-5			MKJ-122116-6		
					Drainage Type	SD			SD			SD			SD		
					Sample Method	Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual		
					Location Type	RCB			CB			RCB			RCB		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	2nd Ave S SD			2nd Ave S SD			2nd Ave S SD			2nd Ave S SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
Solids, Total	%	LDW01 - Solids_TOC			73.3		Y	68.99		Y	64.16		Y	75.13		Y
Total Organic Carbon	%	LDW01 - Solids_TOC			8.89		Y	9.42		Y	6.15		Y	2.11		Y
Arsenic	mg/kg	LDW02 - Metals	57	93	7	U	N	6.7	J	Y						
Copper	mg/kg	LDW02 - Metals	390	390	218		Y	158		Y						
Lead	mg/kg	LDW02 - Metals	450	530	35		Y	33		Y						
Mercury	mg/kg	LDW02 - Metals	0.41	0.59	0.03	U	N	0.1		Y						
Zinc	mg/kg	LDW02 - Metals	410	960	216		Y	302		Y						
Diesel Range Hydrocarbons	mg/kg	LDW03 - TPH	*2000*	2000	1600		Y	*2000*		*Y*						
Motor Oil Range	mg/kg	LDW03 - TPH	*2000*	2000	*6500*		*Y*	*6600*		*Y*						
Acenaphthene	ug/kg	LDW04 - LPAH	500	500	59	U	N	100	J	Y						
Acenaphthylene	ug/kg	LDW04 - LPAH	1300	1300	59	U	N	170		Y						
Anthracene	ug/kg	LDW04 - LPAH	960	960	59	U	N	72	J	Y						
Fluorene	ug/kg	LDW04 - LPAH	540	540	59	U	N	220		Y						
LPAH	ug/kg	LDW04 - LPAH	5200	5200	110		Y	3942	J	Y						
Naphthalene	ug/kg	LDW04 - LPAH	2100	2100	59	U	N	580		Y						
Phenanthrene	ug/kg	LDW04 - LPAH	*1500*	1500	110		Y	*2800*		*Y*						
Benzo(A)anthracene	ug/kg	LDW05 - HPAH	1300	1600	32	J	Y	260		Y						
Benzo(A)pyrene	ug/kg	LDW05 - HPAH	1600	1600	56	J	Y	510		Y						
Benzo(G,H,I)perylene	ug/kg	LDW05 - HPAH	670	720	67		Y	420		Y						
Benzofluoranthenes, Total	ug/kg	LDW05 - HPAH	3200	3600	140		Y	1200		Y						
Chrysene	ug/kg	LDW05 - HPAH	1400	2800	120		Y	920		Y						
Dibenzo(A,H)anthracene	ug/kg	LDW05 - HPAH	230	230	59	U	N	78	J	Y						
Fluoranthene	ug/kg	LDW05 - HPAH	*1700*	2500	110		Y	*2200*		*Y*						
HPAH	ug/kg	LDW05 - HPAH	12000	17000	761	J	Y	7748	J	Y						
Indeno(1,2,3-Cd)pyrene	ug/kg	LDW05 - HPAH	600	690	56	J	Y	360		Y						
Pyrene	ug/kg	LDW05 - HPAH	2600	3300	180		Y	1800		Y						
cPAH	ug/kg	LDW06 - cPAH (analyte only)		100	91.8	J	Y	732.4	J	Y						
Bis(2-ethylhexyl)phthalate	ug/kg	LDW07 - Phthalates	*1300*	1900	*4400*		*Y*	*6600*		*Y*						
Butylbenzylphthalate	ug/kg	LDW07 - Phthalates	*63*	900	59	U	N	*580*		*Y*						
Diethylphthalate	ug/kg	LDW07 - Phthalates	200	1200	59	U	N	110	U	N						
Dimethylphthalate	ug/kg	LDW07 - Phthalates	*71*	160	59	U	N	*110*	*U*	*N*						
Di-N-Butylphthalate	ug/kg	LDW07 - Phthalates	1400	1400	44	J	Y	89	J	Y						
Di-N-Octylphthalate	ug/kg	LDW07 - Phthalates	6200	6200	59	U	N	290		Y						
Aroclor 1016	ug/kg	LDW08 - PCBs			18	U	N	18	U	N	18.2	U	N	17.1	U	N
Aroclor 1221	ug/kg	LDW08 - PCBs			18	U	N	18	U	N	18.2	U	N	17.1	U	N
Aroclor 1232	ug/kg	LDW08 - PCBs			18	U	N	18	U	N	18.2	U	N	17.1	U	N
Aroclor 1242	ug/kg	LDW08 - PCBs			18	U	N	18	U	N	18.2	U	N	17.1	U	N
Aroclor 1248	ug/kg	LDW08 - PCBs			18	U	N	45	U	N	35.8		Y	58.5		Y
Aroclor 1254	ug/kg	LDW08 - PCBs			33		Y	54	U	N	105		Y	52.3		Y
Aroclor 1260	ug/kg	LDW08 - PCBs			64		Y	16	J	Y	160		Y	72.8		Y
Polychlorinated Biphenyls	ug/kg	LDW08 - PCBs	*130*	1000	97		Y	16	J	Y	*300.8*		*Y*	*183.6*		*Y*
1,2,4-Trichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*31*	51	*59*	*U*	*N*	*110*	*U*	*N*						
1,2-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*35*	50	*59*	*U*	*N*	*110*	*U*	*N*						
1,3-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds			59	U	N	110	U	N						
1,4-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*110*	110	59	U	N	*110*	*U*	*N*						
1-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds			59	U	N	120		Y						
2,2'-Oxybis(1-chloropropane)	ug/kg	LDW09 - Other Organic Compounds			59	U	N	110	U	N						
2,4,5-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds			290	U	N	550	U	N						
2,4,6-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds			290	U	N	550	U	N						
2,4-Dichlorophenol	ug/kg	LDW09 - Other Organic Compounds			290	U	N	550	U	N						
2,4-Dimethylphenol	ug/kg	LDW09 - Other Organic Compounds	*29*	29	*290*	*U*	*N*	*550*	*U*	*N*						
2,4-Dinitrophenol	ug/kg	LDW09 - Other Organic Compounds			590	U	N	1100	U	N						
2,4-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds			290	U	N	550	U	N						
2,6-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds			290	U	N	550	U	N						
2-Chloronaphthalene	ug/kg	LDW09 - Other Organic Compounds			59	U	N	110	U	N						
2-Chlorophenol	ug/kg	LDW09 - Other Organic Compounds			59	U	N	110	U	N						
2-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds	670	670	59	U	N	100	J	Y						
2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*63*	63	59	U	N	*110*	*U*	*N*						
2-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			290	U	N	550	U	N						
2-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			59	U	N	110	U	N						

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - 2nd Ave S SD
Attachment A, 90b - Actions Taken Pursuant to S4F

					Location	CB108			CB263			RCB139			RCB203		
					Sample Date	14 May 2015			14 May 2015			21 Dec 2016			21 Dec 2016		
					Sample Name	CB108-051415			CB263-051415			MKJ-122116-5			MKJ-122116-6		
					Drainage Type	SD			SD			SD			SD		
					Sample Method	Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual		
					Location Type	RCB			CB			RCB			RCB		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	2nd Ave S SD			2nd Ave S SD			2nd Ave S SD			2nd Ave S SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
3-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			290	U	N	550	U	N						
4,6-Dinitro-2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			590	U	N	1100	U	N						
4-Bromophenyl phenyl ether	ug/kg	LDW09 - Other Organic Compounds			59	U	N	110	U	N						
4-Chloro-3-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			290	U	N	550	U	N						
4-Chlorophenyl Phenylether	ug/kg	LDW09 - Other Organic Compounds			59	U	N	110	U	N						
4-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	670	670	210		Y	490		Y						
4-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			290	U	N	550	U	N						
4-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			290	U	N	550	U	N						
Benzoic acid	ug/kg	LDW09 - Other Organic Compounds	*650*	650	620		Y	*900*	*J*	*Y*						
bis(2-Chloroethoxy) methane	ug/kg	LDW09 - Other Organic Compounds			59	U	N	110	U	N						
Bis-(2-chloroethyl) ether	ug/kg	LDW09 - Other Organic Compounds			59	U	N	110	U	N						
Carbazole	ug/kg	LDW09 - Other Organic Compounds			59	U	N	290	J	Y						
Dibenzofuran	ug/kg	LDW09 - Other Organic Compounds	540	540	59	U	N	270		Y						
Hexachlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*22*	70	*59*	*U*	*N*	*110*	*U*	*N*						
Hexachlorobutadiene	ug/kg	LDW09 - Other Organic Compounds	*11*	120	*59*	*U*	*N*	*110*	*U*	*N*						
Hexachlorocyclopentadiene	ug/kg	LDW09 - Other Organic Compounds			290	U	N	550	U	N						
Hexachloroethane	ug/kg	LDW09 - Other Organic Compounds			59	U	N	110	U	N						
Isophorone	ug/kg	LDW09 - Other Organic Compounds			59	U	N	110	U	N						
Nitrobenzene	ug/kg	LDW09 - Other Organic Compounds			59	U	N	110	U	N						
N-Nitroso-Di-N-Propylamine	ug/kg	LDW09 - Other Organic Compounds			59	U	N	110	U	N						
N-Nitrosodiphenylamine	ug/kg	LDW09 - Other Organic Compounds	*28*	40	*59*	*U*	*N*	*110*	*U*	*N*						
Pentachlorophenol	ug/kg	LDW09 - Other Organic Compounds	*360*	690	290	U	N	*550*	*U*	*N*						
Phenol	ug/kg	LDW09 - Other Organic Compounds	420	1200	76	J	Y	250	J	Y						
>10 Phi Clay	%	LDW10 - Grain Size			8.6		Y	6.6		Y						
8-9 Phi Clay	%	LDW10 - Grain Size			1.1		Y	0.1		Y						
9-10 Phi Clay	%	LDW10 - Grain Size			0.7		Y	0.1	U	N						
Coarse Sand	%	LDW10 - Grain Size			12.8		Y	22.8		Y						
Coarse Silt	%	LDW10 - Grain Size			0.2		Y	1.2		Y						
Fine Gravel	%	LDW10 - Grain Size			7.1		Y	2.1		Y						
Fine Sand	%	LDW10 - Grain Size			5.7		Y	5.1		Y						
Fine Silt	%	LDW10 - Grain Size			4.5		Y	2		Y						
Gravel	%	LDW10 - Grain Size			13.8		Y	9.6		Y						
Medium Sand	%	LDW10 - Grain Size			15		Y	22.1		Y						
Medium Silt	%	LDW10 - Grain Size			5.3		Y	1.9		Y						
Very Coarse Sand	%	LDW10 - Grain Size			13.7		Y	23.4		Y						
Very Fine Sand	%	LDW10 - Grain Size			7.3		Y	1.8		Y						
Very Fine Silt	%	LDW10 - Grain Size			2.1		Y	0.9		Y						

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - 7th Ave S SD
Attachment A, 90b - Actions Taken Pursuant to S4F

					Location	7TH-ST1			7TH-ST1			7th-ST1			7TH-ST1			7TH-ST2			7th-ST2			7TH-ST2		
					Sample Date	09 May 2016			09 May 2016			18 May 2015			18 May 2015			10 May 2016			10 May 2016			21 May 2015		
					Sample Name	7TH-ST1-050916			7TH-ST1-050916G			7TH-ST1-051815			7TH-ST1-051815G			7TH-ST2-051016			7TH-ST2-051016 G			7TH-ST2-052115		
					Drainage Type	SD			SD			SD			SD			SD			SD			SD		
					Sample Method	SedTrap			Grab-Manual			SedTrap			Grab-Manual			SedTrap			Grab-Manual			SedTrap		
					Location Type	Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	7th Ave S SD			7th Ave S SD			7th Ave S SD			7th Ave S SD			7th Ave S SD			7th Ave S SD			7th Ave S SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET		Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
Solids, Total	%	LDW01 - Solids_TOC				41.56		Y	58.55		Y	76.77		Y	65.21		Y	36.8		Y	74.42		Y	48.62		Y
Total Organic Carbon	%	LDW01 - Solids_TOC				8.25		Y	1.43		Y	1.44		Y	0.896		Y	5.43		Y	0.173		Y	6.04		Y
Arsenic	mg/kg	LDW02 - Metals	57	93		30		Y	9		Y	7		Y	7	U	N	30.1		Y	10	U	N	20.1		Y
Copper	mg/kg	LDW02 - Metals	390	390		142		Y	51.1		Y	19.7		Y	33.6		Y	26		Y	11.1		Y	21		Y
Lead	mg/kg	LDW02 - Metals	450	530		68		Y	25		Y	6		Y	14		Y	30		Y	6	U	N	20		Y
Mercury	mg/kg	LDW02 - Metals	0.41	0.59		0.18		Y	0.07		Y	0.03	U	N	0.04		Y	0.13		Y	0.03	U	N	0.06		Y
Zinc	mg/kg	LDW02 - Metals	*410*	960		*496*		*Y*	176		Y	54		Y	99		Y	250		Y	72		Y	170		Y
Diesel Range Hydrocarbons	mg/kg	LDW03 - TPH	2000	2000		720		Y	180		Y	91		Y	170		Y	23		Y	6	U	N	85		Y
Motor Oil Range	mg/kg	LDW03 - TPH	*2000*	2000		*3200*		*Y*	590		Y	250		Y	620		Y	170		Y	16		Y	340		Y
Acenaphthene	ug/kg	LDW04 - LPAH	*500*	500		96	U	N	60	U	N	18	U	N	20	U	N	58	U	N	19	U	N	20	U	N
Acenaphthylene	ug/kg	LDW04 - LPAH	1300	1300		96	U	N	60	U	N	18	U	N	20	U	N	58	U	N	19	U	N	20	U	N
Anthracene	ug/kg	LDW04 - LPAH	*960*	960		58	J	Y	60	U	N	5.6	J	Y	6.9	J	Y	58	U	N	19	U	N	7.8	J	Y
Fluorene	ug/kg	LDW04 - LPAH	*540*	540		96	U	N	60	U	N	18	U	N	20	U	N	58	U	N	19	U	N	20	U	N
LPAH	ug/kg	LDW04 - LPAH	5200	5200		346	J	Y	66		Y	27.1	J	Y	61.7	J	Y	32	J	Y	19	U	N	65.6	J	Y
Naphthalene	ug/kg	LDW04 - LPAH	2100	2100		58	J	Y	60	U	N	6.5	J	Y	8.8	J	Y	58	U	N	19	U	N	8.8	J	Y
Phenanthrene	ug/kg	LDW04 - LPAH	*1500*	1500		230		Y	66		Y	15	J	Y	46		Y	32	J	Y	19	U	N	49		Y
Benzo(A)anthracene	ug/kg	LDW05 - HPAH	1300	1600		180		Y	54	J	Y	12	J	Y	37		Y	58	U	N	19	U	N	20		Y
Benzo(A)pyrene	ug/kg	LDW05 - HPAH	1600	1600		240		Y	75		Y	13	J	Y	46		Y	58	U	N	19	U	N	26		Y
Benzo(G,H,I)perylene	ug/kg	LDW05 - HPAH	*670*	720		96	U	N	95		Y	20		Y	39		Y	35	J	Y	19	U	N	20	U	N
Benzofluoranthenes, Total	ug/kg	LDW05 - HPAH	*3200*	3600		600	J	Y	170		Y	33	J	Y	120		Y	44	J	Y	38	U	N	77		Y
Chrysene	ug/kg	LDW05 - HPAH	*1400*	2800		470		Y	120		Y	23		Y	93		Y	38	J	Y	19	U	N	46		Y
Dibenzo(A,H)anthracene	ug/kg	LDW05 - HPAH	*230*	230		96	U	N	60	U	N	7.4	J	Y	20	U	N	58	U	N	19	U	N	20	U	N
Fluoranthene	ug/kg	LDW05 - HPAH	*1700*	2500		440		Y	150		Y	22		Y	95		Y	46	J	Y	19	U	N	71		Y
HPAH	ug/kg	LDW05 - HPAH	*12000*	17000		2540	J	Y	908	J	Y	167.4	J	Y	577		Y	221	J	Y	38	U	N	321	J	Y
Indeno(1,2,3-Cd)pyrene	ug/kg	LDW05 - HPAH	*600*	690		130		Y	54	J	Y	12	J	Y	37		Y	58	U	N	19	U	N	18	J	Y
Pyrene	ug/kg	LDW05 - HPAH	*2600*	3300		480		Y	190		Y	25		Y	110		Y	58		Y	19	U	N	63		Y
cPAH	ug/kg	LDW06 - cPAH (analyte only)		100		354.9	J	Y	116	J	Y	21.89	J	Y	70.33		Y	51.18	J	Y	17.195	U	N	41.96	J	Y
Bis(2-ethylhexyl)phthalate	ug/kg	LDW07 - Phthalates	*1300*	1900		*5700*		*Y*	1000		Y	200		Y	800		Y	210		Y	47	U	N	280		Y
Butylbenzylphthalate	ug/kg	LDW07 - Phthalates	*63*	900		*280*		*Y*	60	U	N	18	J	Y	43		Y	58	U	N	19	U	N	24		Y
Diethylphthalate	ug/kg	LDW07 - Phthalates	*200*	1200		96	U	N	60	U	N	18	U	N	20	U	N	58	U	N	19	U	N	20	U	N
Dimethylphthalate	ug/kg	LDW07 - Phthalates	*71*	160		*96*	*U*	*N*	60	U	N	18	U	N	9.8	J	Y	58	U	N	19	U	N	20	U	N
Di-N-Butylphthalate	ug/kg	LDW07 - Phthalates	1400	1400		140		Y	60	U	N	18	U	N	11	J	Y	58	U	N	19	U	N	20	U	N
Di-N-Octylphthalate	ug/kg	LDW07 - Phthalates	6200	6200		96	U	N	60	U	N	15	J	Y	20	U	N	110		Y	19	U	N	20	U	N
Aroclor 1016	ug/kg	LDW08 - PCBs				18	U	N	20	U	N	18	U	N	20	U	N	19	U	N	9.3	U	N	19	U	N
Aroclor 1221	ug/kg	LDW08 - PCBs				18	U	N	20	U	N	18	U	N	20	U	N	19	U	N	9.3	U	N	19	U	N
Aroclor 1232	ug/kg	LDW08 - PCBs				18	U	N	20	U	N	18	U	N	20	U	N	19	U	N	9.3	U	N	19	U	N
Aroclor 1242	ug/kg	LDW08 - PCBs				18	U	N	20	U	N	18	U	N	20	U	N	19	U	N	9.3	U	N	19	U	N
Aroclor 1248	ug/kg	LDW08 - PCBs				55	U	N	20	U	N	18	U	N	20	U	N	19	U	N	9.3	U	N	19	U	N
Aroclor 1254	ug/kg	LDW08 - PCBs				89		Y	47		Y	18	U	N	32	J	Y	19	U	N	9.3	U	N	16	J	Y
Aroclor 1260	ug/kg	LDW08 - PCBs				75		Y	35		Y	18	U	N	32	J	Y	19	U	N	9.3	U	N	19	U	N
Polychlorinated Biphenyls	ug/kg	LDW08 - PCBs	*130*	1000		*164*		*Y*	82		Y	18	U	N	64	J	Y	19	U	N	9.3	U	N	16	J	Y
1,2,4-Trichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*31*	51		*96*	*U*	*N*	*60*	*U*	*N*	18	U	N	20	U	N	*58*	*U*	*N*	19	U	N	20	U	N
1,2-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*35*	50		*96*	*U*	*N*	*60*	*U*	*N*	18	U	N	20	U	N	*58*	*U*	*N*	19	U	N	20	U	N
1,3-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds				96	U	N	60	U	N	18	U	N	20	U	N	58	U	N	19	U	N	20	U	N
1,4-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*110*	110		96	U	N	60	U	N	18	U	N	20	U	N	58	U	N	19	U	N	20	U	N
1-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds				96	U	N	60	U	N	5.6	J	Y	5.9	J	Y	58	U	N	19	U	N	20	U	N
2,2'-Oxybis(1-chloropropane)	ug/kg	LDW09 - Other Organic Compounds				96	U	N	60	U	N	18	U	N	20	U	N	58	U	N	19	U	N	20	U	N
2,4,5-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds				480	U	N	300	U	N	93	U	N	98	U	N	290	U	N	94	U	N	98	U	N
2,4,6-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds				480	U	N	300	U	N	93	U	N	98	U	N	290	U	N	94	U	N	98	U	N
2,4-Dichlorophenol	ug/kg	LDW09 - Other Organic Compounds				480	U	N	300	U	N	93	U	N	98	U	N	290	U	N	94	U	N	98	UJ	N
2,4-Dimethylphenol	ug/kg	LDW09 - Other Organic Compounds	*29*	29		*480*	*U*	*N*	*300*	*U*	*N*	*93*	*U*	*N*	*98*	*U*	*N*	*290*	*U*	*N*	*94*	*U*	*N*	*98*	*U*	*N*
2,4-Dinitrophenol	ug/kg	LDW09 - Other Organic Compounds				960	U	N	600	UJ	N	180	U	N	200	U	N	580	U	N	190	UJ	N	200	U	N
2,4-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds				480	U	N	300	U	N	93	U	N	98	U	N	290	U	N	94	U	N	98	U	N
2,6-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds				480	U	N	300	U	N	93	U	N	98	U	N	290	U	N	94	U	N	98	U	N
2-Chloronaphthalene	ug/kg	LDW09 - Other Organic Compounds				96	U	N	60	U	N	18	U	N	20	U	N	58	U	N	19	U	N	20	U	N
2-Chlorophenol	ug/kg	LDW09 - Other Organic Compounds				96	U	N	60	U	N	18	U	N	20	U	N	58	U	N	19	U	N	20	U	N
2-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds	670	670		96	U	N	60	U	N	7.4	J	Y	9.8	J	Y	58	U	N	19	U	N	20	U	N
2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*63*	63		*96*	*U*	*N*	60	U	N	18	U	N	20	U	N	58	U	N	19	U	N	20	U	N
2-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds				480	U	N	300	U	N	93	U	N	98	U	N	290	U	N	94	U	N	98	U	N
2-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds				96	U	N	60	U	N	18	U	N	20	U	N	58	U	N	19	U	N	20	U	N

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - 7th Ave S SD
Attachment A, 90b - Actions Taken Pursuant to S4F

					Location	7TH-ST1			7TH-ST1			7th-ST1			7TH-ST1			7TH-ST2			7th-ST2			7TH-ST2		
					Sample Date	09 May 2016			09 May 2016			18 May 2015			18 May 2015			10 May 2016			10 May 2016			21 May 2015		
					Sample Name	7TH-ST1-050916			7TH-ST1-050916G			7TH-ST1-051815			7TH-ST1-051815G			7TH-ST2-051016			7TH-ST2-051016 G			7TH-ST2-052115		
					Drainage Type	SD			SD			SD			SD			SD			SD			SD		
					Sample Method	SedTrap			Grab-Manual			SedTrap			Grab-Manual			SedTrap			Grab-Manual			SedTrap		
					Location Type	Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	7th Ave S SD			7th Ave S SD			7th Ave S SD			7th Ave S SD			7th Ave S SD			7th Ave S SD			7th Ave S SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET		Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
3,3`-Dichlorobenzidine	ug/kg	LDW09 - Other Organic Compounds				480	U	N	300	U	N				98	U	N	290	UJ	N	94	U	N			
3-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds				480	U	N	300	U	N	93	U	N	98	U	N	290	U	N	94	U	N	98	U	N
4,6-Dinitro-2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds				960	U	N	600	UJ	N	180	U	N	200	U	N	580	U	N	190	UJ	N	200	U	N
4-Bromophenyl phenyl ether	ug/kg	LDW09 - Other Organic Compounds				96	U	N	60	U	N	18	U	N	20	U	N	58	U	N	19	U	N	20	U	N
4-Chloro-3-Methylphenol	ug/kg	LDW09 - Other Organic Compounds				480	U	N	300	U	N	93	U	N	98	U	N	290	U	N	94	U	N	98	U	N
4-Chloroaniline	ug/kg	LDW09 - Other Organic Compounds				480	U	N	300	U	N	93	U	N	98	U	N	290	U	N	94	U	N	98	U	N
4-Chlorophenyl Phenylether	ug/kg	LDW09 - Other Organic Compounds				96	U	N	60	UJ	N	18	U	N	20	U	N	58	U	N	19	UJ	N	20	U	N
4-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*670*	670		100		Y	60	U	N	94		Y	32		Y	64		Y	19	U	N	20	U	N
4-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds				480	U	N	300	U	N	93	U	N	98	U	N	290	U	N	94	U	N	98	U	N
4-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds				480	U	N	300	U	N	93	U	N	98	U	N	290	U	N	94	U	N	98	U	N
Benzoic acid	ug/kg	LDW09 - Other Organic Compounds	*650*	650		*670*	*J*	*Y*	190	J	Y	180	U	N	230		Y	*3800*		*Y*	190	UJ	N	*1400*		*Y*
Benzyl alcohol	ug/kg	LDW09 - Other Organic Compounds	*57*	73		*1200*		*Y*	*100*		*Y*							*9400*		*Y*	19	U	N			
bis(2-Chloroethoxy) methane	ug/kg	LDW09 - Other Organic Compounds				96	U	N	60	U	N	18	U	N	20	U	N	58	U	N	19	U	N	20	U	N
Bis-(2-chloroethyl) ether	ug/kg	LDW09 - Other Organic Compounds				96	U	N	60	U	N	18	U	N	20	U	N	58	U	N	19	U	N	20	U	N
Carbazole	ug/kg	LDW09 - Other Organic Compounds				62	J	Y	60	U	N	18	U	N	20	U	N	29	J	Y	19	U	N	12	J	Y
Dibenzofuran	ug/kg	LDW09 - Other Organic Compounds	*540*	540		29	J	Y	60	U	N	18	U	N	20	U	N	58	U	N	19	U	N	20	U	N
Hexachlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*22*	70		*96*	*U*	*N*	*60*	*U*	*N*	18	U	N	20	U	N	*58*	*U*	*N*	19	U	N	20	U	N
Hexachlorobutadiene	ug/kg	LDW09 - Other Organic Compounds	*11*	120		*96*	*U*	*N*	*60*	*U*	*N*	*18*	*U*	*N*	*20*	*U*	*N*	*58*	*U*	*N*	*19*	*U*	*N*	*20*	*U*	*N*
Hexachlorocyclopentadiene	ug/kg	LDW09 - Other Organic Compounds				480	U	N	300	U	N	93	U	N	98	U	N	290	U	N	94	U	N	98	U	N
Hexachloroethane	ug/kg	LDW09 - Other Organic Compounds				96	U	N	60	U	N	18	U	N	20	U	N	58	U	N	19	U	N	20	U	N
Isophorone	ug/kg	LDW09 - Other Organic Compounds				96	U	N	60	U	N	18	U	N	20	U	N	58	U	N	19	U	N	20	U	N
Nitrobenzene	ug/kg	LDW09 - Other Organic Compounds				96	U	N	60	U	N	18	U	N	20	U	N	58	U	N	19	U	N	20	U	N
N-Nitroso-Di-N-Propylamine	ug/kg	LDW09 - Other Organic Compounds				96	U	N	60	U	N	18	U	N	20	U	N	58	U	N	19	U	N	20	U	N
N-Nitrosodiphenylamine	ug/kg	LDW09 - Other Organic Compounds	*28*	40		*96*	*U*	*N*	*60*	*U*	*N*	18	U	N	20	U	N	*58*	*U*	*N*	19	U	N	20	U	N
Pentachlorophenol	ug/kg	LDW09 - Other Organic Compounds	*360*	690		*480*	*U*	*N*	300	U	N	93	U	N	98	U	N	290	U	N	94	U	N	98	U	N
Phenol	ug/kg	LDW09 - Other Organic Compounds	*420*	1200		230		Y	63		Y	230		Y	42	J	Y	*1400*	*J*	*Y*	19	U	N	64		Y
>10 Phi Clay	%	LDW10 - Grain Size													8.6		Y									
8-9 Phi Clay	%	LDW10 - Grain Size													1.3		Y									
9-10 Phi Clay	%	LDW10 - Grain Size													0.7		Y									
Coarse Sand	%	LDW10 - Grain Size							1.4		Y				2.7		Y				55.5		Y	15.1		Y
Coarse Silt	%	LDW10 - Grain Size													0.1		Y									
Fine Gravel	%	LDW10 - Grain Size							0.6		Y				0.1	U	N				7.9		Y	0.1	U	N
Fine Sand	%	LDW10 - Grain Size							21.9		Y				19		Y				2.7		Y	10		Y
Fine Silt	%	LDW10 - Grain Size													2.9		Y									
Gravel	%	LDW10 - Grain Size							0.5		Y				0.4		Y				0.6		Y	0.9		Y
Medium Sand	%	LDW10 - Grain Size							22.3		Y				48.2		Y				27.5		Y	48.3		Y
Medium Silt	%	LDW10 - Grain Size													4.1		Y									
Total Fines	%	LDW10 - Grain Size																								
Very Coarse Sand	%	LDW10 - Grain Size							0.7		Y				0.6		Y				2.9		Y	3.3		Y
Very Fine Sand	%	LDW10 - Grain Size							16.9		Y				9.4		Y				0.1		Y	6.5		Y
Very Fine Silt	%	LDW10 - Grain Size													1.8		Y									

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - 7th Ave S SD
Attachment A, 90b - Actions Taken Pursuant to S4F

					Location	7TH-ST3			7TH-ST3			CB262			RCB165			RCB61			RCB62			RCB63		
					Sample Date	11 May 2016			21 May 2015			13 May 2015			29 Dec 2016			11 Sep 2014			11 Sep 2014			11 Sep 2014		
					Sample Name	7TH-ST3-051116			7TH-ST3-052115			CB262-051315			MKJ-122916-1			RCB161-091114			RCB162-091114			RCB163-091114		
					Drainage Type	SD			SD			SD			SD			SD			SD			SD		
					Sample Method	SedTrap			SedTrap			Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual		
					Location Type	Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			CB			RCB			RCB			RCB			RCB		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	7th Ave S SD			7th Ave S SD			7th Ave S SD			7th Ave S SD			7th Ave S SD			7th Ave S SD			7th Ave S SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
Solids, Total	%	LDW01 - Solids_TOC			23.58		Y	31.56		Y	52.87		Y	86.42		Y	57.32		Y	53.55		Y	56.63		Y
Total Organic Carbon	%	LDW01 - Solids_TOC			10.5		Y	10.2		Y	10.8		Y	1.08	J	Y	6.7		Y	2.3		Y	5.48		Y
Arsenic	mg/kg	LDW02 - Metals	57	93	30		Y	30		Y	30		Y				9	U	N	8	U	N	9	U	N
Copper	mg/kg	LDW02 - Metals	390	390	136		Y	137		Y	257		Y				186		Y	99.6		Y	138		Y
Lead	mg/kg	LDW02 - Metals	450	530	88		Y	103		Y	225		Y				85		Y	32		Y	95		Y
Mercury	mg/kg	LDW02 - Metals	0.41	0.59	0.2		Y	0.26		Y	0.14		Y				0.06		Y	0.06		Y	0.05		Y
Zinc	mg/kg	LDW02 - Metals	*410*	960	*628*		*Y*	*659*		*Y*	*674*		*Y*				*1450*		*Y*	255		Y	393		Y
Diesel Range Hydrocarbons	mg/kg	LDW03 - TPH	2000	2000				860		Y	890		Y				1800		Y	670		Y	820		Y
Motor Oil Range	mg/kg	LDW03 - TPH	*2000*	2000				*3600*		*Y*	*3800*		*Y*				*8800*		*Y*	*3900*		*Y*	*4800*		*Y*
Acenaphthene	ug/kg	LDW04 - LPAH	*500*	500	280	U	N	*580*	*U*	*N*	290	UJ	N				230	U	N	140	U	N	180	U	N
Acenaphthylene	ug/kg	LDW04 - LPAH	1300	1300	280	U	N	580	U	N	290	U	N				230	U	N	140	U	N	180	U	N
Anthracene	ug/kg	LDW04 - LPAH	*960*	960	280	U	N	580	U	N	290	U	N				130	J	Y	290		Y	300		Y
Fluorene	ug/kg	LDW04 - LPAH	*540*	540	280	U	N	*580*	*U*	*N*	290	U	N				230	U	N	87	J	Y	130	J	Y
LPAH	ug/kg	LDW04 - LPAH	5200	5200	270	J	Y	500	J	Y	350		Y				690	J	Y	817	J	Y	1430	J	Y
Naphthalene	ug/kg	LDW04 - LPAH	2100	2100	280	U	N	580	U	N	290	U	N				230	U	N	40	J	Y	180	U	N
Phenanthrene	ug/kg	LDW04 - LPAH	*1500*	1500	270	J	Y	500	J	Y	350		Y				560		Y	400		Y	1000		Y
Benzo(A)anthracene	ug/kg	LDW05 - HPAH	1300	1600	230	J	Y	470	J	Y	160	J	Y				330		Y	320		Y	650		Y
Benzo(A)pyrene	ug/kg	LDW05 - HPAH	1600	1600	300		Y	640		Y	290	U	N				330		Y	300		Y	670		Y
Benzo(G,H,I)perylene	ug/kg	LDW05 - HPAH	*670*	720	340		Y	440	J	Y	290	U	N				260		Y	160		Y	420		Y
Benzofluoranthenes, Total	ug/kg	LDW05 - HPAH	*3200*	3600	660		Y	1700		Y	390	J	Y				860		Y	1100		Y	1900		Y
Chrysene	ug/kg	LDW05 - HPAH	*1400*	2800	520	J	Y	990		Y	320		Y				960		Y	1100		Y	*1600*		*Y*
Dibenzo(A,H)anthracene	ug/kg	LDW05 - HPAH	*230*	230	*280*	*U*	*N*	*580*	*U*	*N*	*290*	*U*	*N*				*230*	*U*	*N*	140	U	N	120	J	Y
Fluoranthene	ug/kg	LDW05 - HPAH	*1700*	2500	580	J	Y	1300		Y	400		Y				820		Y	770		Y	*1900*		*Y*
HPAH	ug/kg	LDW05 - HPAH	*12000*	17000	3480	J	Y	7270	J	Y	1670	J	Y				4810	J	Y	4710		Y	9350	J	Y
Indeno(1,2,3-Cd)pyrene	ug/kg	LDW05 - HPAH	*600*	690	170	J	Y	530	J	Y	290	U	N				150	J	Y	160		Y	290		Y
Pyrene	ug/kg	LDW05 - HPAH	*2600*	3300	680		Y	1200		Y	400		Y				1100		Y	800		Y	1800		Y
cPAH	ug/kg	LDW06 - cPAH (analyte only)		100	467.2	J	Y	1035.9	J	Y	275.7	J	Y				519.6	J	Y	497		Y	1018	J	Y
Bis(2-ethylhexyl)phthalate	ug/kg	LDW07 - Phthalates	*1300*	1900	*7300*		*Y*	*6700*		*Y*	*12000*		*Y*				*7700*		*Y*	*2200*		*Y*	*5000*		*Y*
Butylbenzylphthalate	ug/kg	LDW07 - Phthalates	*63*	900	*280*	*U*	*N*	*320*	*J*	*Y*	*980*		*Y*				*380*		*Y*	*180*		*Y*	*230*		*Y*
Diethylphthalate	ug/kg	LDW07 - Phthalates	*200*	1200	*280*	*U*	*N*	*580*	*U*	*N*	*290*	*U*	*N*				*230*	*U*	*N*	140	U	N	180	U	N
Dimethylphthalate	ug/kg	LDW07 - Phthalates	*71*	160	*280*	*U*	*N*	*580*	*U*	*N*	*270*	*J*	*Y*				*230*	*U*	*N*	*140*	*U*	*N*	*98*	*J*	*Y*
Di-N-Butylphthalate	ug/kg	LDW07 - Phthalates	1400	1400	280	U	N	580	U	N	200	J	Y				120	J	Y	140	U	N	110	J	Y
Di-N-Octylphthalate	ug/kg	LDW07 - Phthalates	6200	6200	250	J	Y	580	U	N	1200		Y				230	U	N	110	J	Y	220		Y
Aroclor 1016	ug/kg	LDW08 - PCBs			19	U	N	20	U	N	18	U	N	19.7	U	N	20	U	N	19	U	N	20	U	N
Aroclor 1221	ug/kg	LDW08 - PCBs			19	U	N	20	U	N	18	U	N	19.7	U	N	20	U	N	19	U	N	20	U	N
Aroclor 1232	ug/kg	LDW08 - PCBs			19	U	N	20	U	N	18	U	N	19.7	U	N	20	U	N	19	U	N	20	U	N
Aroclor 1242	ug/kg	LDW08 - PCBs			19	U	N	20	U	N	18	U	N	19.7	U	N	20	U	N	19	U	N	20	U	N
Aroclor 1248	ug/kg	LDW08 - PCBs			38	U	N	30	U	N	52		Y	19.7	U	N	98	U	N	81		Y	62	J	Y
Aroclor 1254	ug/kg	LDW08 - PCBs			96	U	N	120	J	Y	88		Y	19.7	U	N	200		Y	180		Y	130		Y
Aroclor 1260	ug/kg	LDW08 - PCBs			90		Y	97	J	Y	71		Y	19.7	U	N	210		Y	310		Y	230		Y
Polychlorinated Biphenyls	ug/kg	LDW08 - PCBs	*130*	1000	90		Y	*217*	*J*	*Y*	*211*		*Y*	19.7	U	N	*410*		*Y*	*571*		*Y*	*422*	*J*	*Y*
1,2,4-Trichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*31*	51	*280*	*U*	*N*	*580*	*U*	*N*	*290*	*U*	*N*				*230*	*U*	*N*	*140*	*U*	*N*	*180*	*U*	*N*
1,2-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*35*	50	*280*	*U*	*N*	*580*	*U*	*N*	*290*	*U*	*N*				*230*	*U*	*N*	*140*	*U*	*N*	*180*	*U*	*N*
1,3-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds			280	U	N	580	U	N	290	U	N				230	U	N	140	U	N	180	U	N
1,4-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*110*	110	*280*	*U*	*N*	*580*	*U*	*N*	*290*	*U*	*N*				*230*	*U*	*N*	*140*	*U*	*N*	*180*	*U*	*N*
1-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds			280	U	N	580	U	N	290	U	N				230	U	N	140	U	N	180	U	N
2,2'-Oxybis(1-chloropropane)	ug/kg	LDW09 - Other Organic Compounds			280	U	N	580	U	N	290	U	N				230	U	N	140	U	N	180	U	N
2,4,5-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds			1400	U	N	2900	U	N	1400	U	N				1200	U	N	670	U	N	890	U	N
2,4,6-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds			1400	U	N	2900	U	N	1400	U	N				1200	U	N	670	U	N	890	U	N
2,4-Dichlorophenol	ug/kg	LDW09 - Other Organic Compounds			1400	U	N	2900	UJ	N	1400	U	N				1200	U	N	670	U	N	890	U	N
2,4-Dimethylphenol	ug/kg	LDW09 - Other Organic Compounds	*29*	29	*1400*	*U*	*N*	*2900*	*U*	*N*	*1400*	*U*	*N*				*1200*	*U*	*N*	*670*	*U*	*N*	*890*	*U*	*N*
2,4-Dinitrophenol	ug/kg	LDW09 - Other Organic Compounds			2800	U	N	5800	U	N	2900	U	N				2300	UJ	N	1400	UJ	N	1800	UJ	N
2,4-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds			1400	U	N	2900	U	N	1400	U	N				1200	U	N	670	U	N	890	U	N
2,6-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds			1400	U	N	2900	U	N	1400	U	N				1200	U	N	670	U	N	890	U	N
2-Chloronaphthalene	ug/kg	LDW09 - Other Organic Compounds			280	U	N	580	U	N	290	U	N				230	U	N	140	U	N	180	U	N
2-Chlorophenol	ug/kg	LDW09 - Other Organic Compounds			280	U	N	580	U	N	290	U	N				230	U	N	140	U	N	180	U	N
2-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds	670	670	280	U	N	580	U	N	290	U	N				230	U	N	140	U	N	180	U	N
2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*63*	63	*280*	*U*	*N*	*580*	*U*	*N*	*290*	*U*	*N*				*230*	*U*	*N*	*140*	*U*	*N*	*180*	*U*	*N*
2-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			1400	U	N	2900	U	N	1400	U	N				1200	U	N	670	U	N	890	U	N
2-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			280	U	N	580	U	N	290	U	N				230	U	N	140	U	N	180	U	N

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - 7th Ave S SD
Attachment A, 90b - Actions Taken Pursuant to S4F

					Location	7TH-ST3			7TH-ST3			CB262			RCB165			RCB61			RCB62			RCB63		
					Sample Date	11 May 2016			21 May 2015			13 May 2015			29 Dec 2016			11 Sep 2014			11 Sep 2014			11 Sep 2014		
					Sample Name	7TH-ST3-051116			7TH-ST3-052115			CB262-051315			MKJ-122916-1			RCB161-091114			RCB162-091114			RCB163-091114		
					Drainage Type	SD			SD			SD			SD			SD			SD			SD		
					Sample Method	SedTrap			SedTrap			Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual		
					Location Type	Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			CB			RCB			RCB			RCB			RCB		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	7th Ave S SD			7th Ave S SD			7th Ave S SD			7th Ave S SD			7th Ave S SD			7th Ave S SD			7th Ave S SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
3,3`-Dichlorobenzidine	ug/kg	LDW09 - Other Organic Compounds			1400	U	N				1400	U	N				1200	U	N	670	U	N	890	U	N
3-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			1400	U	N	2900	U	N	1400	U	N				1200	U	N	670	U	N	890	U	N
4,6-Dinitro-2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			2800	U	N	5800	U	N	2900	U	N				2300	U	N	1400	U	N	1800	U	N
4-Bromophenyl phenyl ether	ug/kg	LDW09 - Other Organic Compounds			280	U	N	580	U	N	290	U	N				230	U	N	140	U	N	180	U	N
4-Chloro-3-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			1400	U	N	2900	U	N	1400	U	N				1200	U	N	670	U	N	890	U	N
4-Chloroaniline	ug/kg	LDW09 - Other Organic Compounds			1400	U	N	2900	U	N	1400	U	N				1200	U	N	670	U	N	890	U	N
4-Chlorophenyl Phenylether	ug/kg	LDW09 - Other Organic Compounds			280	U	N	580	U	N	290	U	N				230	U	N	140	U	N	180	U	N
4-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*670*	670	280	U	N	580	U	N	290	U	N				*4200*		*Y*	540		Y	*740*		*Y*
4-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			1400	U	N	2900	U	N	1400	U	N				1200	U	N	670	U	N	890	U	N
4-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			1400	U	N	2900	U	N	1400	U	N				1200	U	N	670	U	N	890	U	N
Benzoic acid	ug/kg	LDW09 - Other Organic Compounds	*650*	650	*2800*	*U*	*N*	*3100*	*J*	*Y*	*2900*	*U*	*N*				*2300*	*U*	*N*	610	J	Y	*810*	*J*	*Y*
Benzyl alcohol	ug/kg	LDW09 - Other Organic Compounds	*57*	73	*420*		*Y*										*230*	*U*	*N*	*350*		*Y*	*320*		*Y*
bis(2-Chloroethoxy) methane	ug/kg	LDW09 - Other Organic Compounds			280	U	N	580	U	N	290	UJ	N				230	U	N	140	U	N	180	U	N
Bis-(2-chloroethyl) ether	ug/kg	LDW09 - Other Organic Compounds			280	U	N	580	U	N	290	U	N				230	U	N	140	U	N	180	U	N
Carbazole	ug/kg	LDW09 - Other Organic Compounds			280	U	N	580	U	N	290	U	N				120	J	Y	150		Y	200		Y
Dibenzofuran	ug/kg	LDW09 - Other Organic Compounds	*540*	540	280	U	N	*580*	*U*	*N*	290	U	N				230	U	N	140	U	N	180	U	N
Hexachlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*22*	70	*280*	*U*	*N*	*580*	*U*	*N*	*290*	*U*	*N*				*230*	*U*	*N*	*140*	*U*	*N*	*180*	*U*	*N*
Hexachlorobutadiene	ug/kg	LDW09 - Other Organic Compounds	*11*	120	*280*	*U*	*N*	*580*	*U*	*N*	*290*	*U*	*N*				*230*	*U*	*N*	*140*	*U*	*N*	*180*	*U*	*N*
Hexachlorocyclopentadiene	ug/kg	LDW09 - Other Organic Compounds			1400	U	N	2900	U	N	1400	U	N				1200	UJ	N	670	UJ	N	890	UJ	N
Hexachloroethane	ug/kg	LDW09 - Other Organic Compounds			280	U	N	580	U	N	290	U	N				230	U	N	140	U	N	180	U	N
Isophorone	ug/kg	LDW09 - Other Organic Compounds			280	U	N	580	U	N	290	U	N				230	U	N	140	U	N	180	U	N
Nitrobenzene	ug/kg	LDW09 - Other Organic Compounds			280	U	N	580	U	N	290	U	N				230	U	N	140	U	N	180	U	N
N-Nitroso-Di-N-Propylamine	ug/kg	LDW09 - Other Organic Compounds			280	U	N	580	U	N	290	U	N				230	U	N	140	U	N	180	U	N
N-Nitrosodiphenylamine	ug/kg	LDW09 - Other Organic Compounds	*28*	40	*280*	*U*	*N*	*580*	*U*	*N*	*290*	*U*	*N*				*230*	*U*	*N*	*140*	*U*	*N*	*180*	*U*	*N*
Pentachlorophenol	ug/kg	LDW09 - Other Organic Compounds	*360*	690	*1400*	*UJ*	*N*	*2900*	*U*	*N*	*1400*	*UJ*	*N*				*1200*	*U*	*N*	*670*	*U*	*N*	*890*	*U*	*N*
Phenol	ug/kg	LDW09 - Other Organic Compounds	*420*	1200	310		Y	*440*	*J*	*Y*	290	U	N				270		Y	*470*		*Y*	*590*		*Y*
>10 Phi Clay	%	LDW10 - Grain Size									11.6		Y				0.8		Y	4.4		Y	4.4		Y
8-9 Phi Clay	%	LDW10 - Grain Size									1.7		Y				2.1		Y	6.2		Y	5.8		Y
9-10 Phi Clay	%	LDW10 - Grain Size									0.8		Y				1.6		Y	5.8		Y	5.4		Y
Coarse Sand	%	LDW10 - Grain Size									26.7		Y				10		Y	7.5		Y	5.3		Y
Coarse Silt	%	LDW10 - Grain Size									6.6		Y				8.3		Y	3.5		Y	9.7		Y
Fine Gravel	%	LDW10 - Grain Size									0.9		Y												
Fine Sand	%	LDW10 - Grain Size									10.3		Y				14.6		Y	4.7		Y	4.7		Y
Fine Silt	%	LDW10 - Grain Size									5.8		Y				10.6		Y	6.7		Y	15.3		Y
Gravel	%	LDW10 - Grain Size									2.6		Y				1.8		Y	27.7		Y	10.1		Y
Medium Sand	%	LDW10 - Grain Size									7.3		Y				13.8		Y	6.2		Y	5.5		Y
Medium Silt	%	LDW10 - Grain Size									6.2		Y				13.4		Y	5.4		Y	15.1		Y
Total Fines	%	LDW10 - Grain Size															41.8		Y	39.5		Y	65.7		Y
Very Coarse Sand	%	LDW10 - Grain Size									10.1		Y				6.3		Y	10.2		Y	3.7		Y
Very Fine Sand	%	LDW10 - Grain Size									5.5		Y				11.7		Y	4.2		Y	4.9		Y
Very Fine Silt	%	LDW10 - Grain Size									3.6		Y				4.9		Y	7.4		Y	10		Y

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - 7th Ave S SD
Attachment A, 90b - Actions Taken Pursuant to S4F

					Location	RCB64			RCB70			RCB71		
					Sample Date	11 Sep 2014			21 Dec 2016			21 Dec 2016		
					Sample Name	RCB164-091114			MKJ-122116-8			MKJ-122116-9		
					Drainage Type	SD			SD			SD		
					Sample Method	Grab-Manual			Grab-Manual			Grab-Manual		
					Location Type	RCB			RCB			RCB		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	7th Ave S SD			7th Ave S SD			7th Ave S SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
Solids, Total	%	LDW01 - Solids_TOC			51.98		Y	75.45		Y	37.15		Y
Total Organic Carbon	%	LDW01 - Solids_TOC			6.22		Y	2.74		Y	12.1		Y
Arsenic	mg/kg	LDW02 - Metals	57	93	9	U	N						
Copper	mg/kg	LDW02 - Metals	390	390	128		Y						
Lead	mg/kg	LDW02 - Metals	450	530	143		Y						
Mercury	mg/kg	LDW02 - Metals	0.41	0.59	0.06		Y						
Zinc	mg/kg	LDW02 - Metals	*410*	960	*616*		*Y*						
Diesel Range Hydrocarbons	mg/kg	LDW03 - TPH	2000	2000	1500		Y						
Motor Oil Range	mg/kg	LDW03 - TPH	*2000*	2000	*8100*		*Y*						
Acenaphthene	ug/kg	LDW04 - LPAH	*500*	500	220	U	N						
Acenaphthylene	ug/kg	LDW04 - LPAH	1300	1300	220	U	N						
Anthracene	ug/kg	LDW04 - LPAH	*960*	960	*1300*		*Y*						
Fluorene	ug/kg	LDW04 - LPAH	*540*	540	300		Y						
LPAH	ug/kg	LDW04 - LPAH	5200	5200	3700		Y						
Naphthalene	ug/kg	LDW04 - LPAH	2100	2100	220	U	N						
Phenanthrene	ug/kg	LDW04 - LPAH	*1500*	1500	*2100*		*Y*						
Benzo(A)anthracene	ug/kg	LDW05 - HPAH	1300	1600	1200		Y						
Benzo(A)pyrene	ug/kg	LDW05 - HPAH	1600	1600	1200		Y						
Benzo(G,H,I)perylene	ug/kg	LDW05 - HPAH	*670*	720	*810*		*Y*						
Benzofluoranthenes, Total	ug/kg	LDW05 - HPAH	*3200*	3600	*3300*		*Y*						
Chrysene	ug/kg	LDW05 - HPAH	*1400*	2800	*2600*		*Y*						
Dibenzo(A,H)anthracene	ug/kg	LDW05 - HPAH	*230*	230	220		Y						
Fluoranthene	ug/kg	LDW05 - HPAH	*1700*	2500	*3200*		*Y*						
HPAH	ug/kg	LDW05 - HPAH	*12000*	17000	*16170*		*Y*						
Indeno(1,2,3-Cd)pyrene	ug/kg	LDW05 - HPAH	*600*	690	*640*		*Y*						
Pyrene	ug/kg	LDW05 - HPAH	*2600*	3300	*3000*		*Y*						
cPAH	ug/kg	LDW06 - cPAH (analyte only)		100	1828		Y						
Bis(2-ethylhexyl)phthalate	ug/kg	LDW07 - Phthalates	*1300*	1900	*4600*		*Y*						
Butylbenzylphthalate	ug/kg	LDW07 - Phthalates	*63*	900	*220*	*U*	*N*						
Diethylphthalate	ug/kg	LDW07 - Phthalates	*200*	1200	*220*	*U*	*N*						
Dimethylphthalate	ug/kg	LDW07 - Phthalates	*71*	160	*220*	*U*	*N*						
Di-N-Butylphthalate	ug/kg	LDW07 - Phthalates	1400	1400	220	U	N						
Di-N-Octylphthalate	ug/kg	LDW07 - Phthalates	6200	6200	170	J	Y						
Aroclor 1016	ug/kg	LDW08 - PCBs			18	U	N	18.3	U	N	19.2	U	N
Aroclor 1221	ug/kg	LDW08 - PCBs			18	U	N	18.3	U	N	19.2	U	N
Aroclor 1232	ug/kg	LDW08 - PCBs			18	U	N	18.3	U	N	19.2	U	N
Aroclor 1242	ug/kg	LDW08 - PCBs			18	U	N	18.3	U	N	19.2	U	N
Aroclor 1248	ug/kg	LDW08 - PCBs			59		Y	24.4		Y	57		Y
Aroclor 1254	ug/kg	LDW08 - PCBs			170		Y	47.8		Y	166		Y
Aroclor 1260	ug/kg	LDW08 - PCBs			200		Y	76.3		Y	643		Y
Polychlorinated Biphenyls	ug/kg	LDW08 - PCBs	*130*	1000	*429*		*Y*	*148.5*		*Y*	*866*		*Y*
1,2,4-Trichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*31*	51	*220*	*U*	*N*						
1,2-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*35*	50	*220*	*U*	*N*						
1,3-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds			220	U	N						
1,4-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*110*	110	*220*	*U*	*N*						
1-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds			220	U	N						
2,2'-Oxybis(1-chloropropane)	ug/kg	LDW09 - Other Organic Compounds			220	U	N						
2,4,5-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds			1100	U	N						
2,4,6-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds			1100	U	N						
2,4-Dichlorophenol	ug/kg	LDW09 - Other Organic Compounds			1100	U	N						
2,4-Dimethylphenol	ug/kg	LDW09 - Other Organic Compounds	*29*	29	*1100*	*U*	*N*						
2,4-Dinitrophenol	ug/kg	LDW09 - Other Organic Compounds			2200	UJ	N						
2,4-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds			1100	U	N						
2,6-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds			1100	U	N						
2-Chloronaphthalene	ug/kg	LDW09 - Other Organic Compounds			220	U	N						
2-Chlorophenol	ug/kg	LDW09 - Other Organic Compounds			220	U	N						
2-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds	670	670	220	U	N						
2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*63*	63	*220*	*U*	*N*						
2-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			1100	U	N						
2-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			220	U	N						

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - 7th Ave S SD
Attachment A, 90b - Actions Taken Pursuant to S4F

					Location	RCB64			RCB70			RCB71		
					Sample Date	11 Sep 2014			21 Dec 2016			21 Dec 2016		
					Sample Name	RCB164-091114			MKJ-122116-8			MKJ-122116-9		
					Drainage Type	SD			SD			SD		
					Sample Method	Grab-Manual			Grab-Manual			Grab-Manual		
					Location Type	RCB			RCB			RCB		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	7th Ave S SD			7th Ave S SD			7th Ave S SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
3,3`-Dichlorobenzidine	ug/kg	LDW09 - Other Organic Compounds			1100	U	N						
3-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			1100	U	N						
4,6-Dinitro-2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			2200	U	N						
4-Bromophenyl phenyl ether	ug/kg	LDW09 - Other Organic Compounds			220	U	N						
4-Chloro-3-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			1100	U	N						
4-Chloroaniline	ug/kg	LDW09 - Other Organic Compounds			1100	U	N						
4-Chlorophenyl Phenylether	ug/kg	LDW09 - Other Organic Compounds			220	U	N						
4-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*670*	670	460		Y						
4-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			1100	U	N						
4-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			1100	U	N						
Benzoic acid	ug/kg	LDW09 - Other Organic Compounds	*650*	650	*960*	*J*	*Y*						
Benzyl alcohol	ug/kg	LDW09 - Other Organic Compounds	*57*	73	*220*	*U*	*N*						
bis(2-Chloroethoxy) methane	ug/kg	LDW09 - Other Organic Compounds			220	U	N						
Bis-(2-chloroethyl) ether	ug/kg	LDW09 - Other Organic Compounds			220	U	N						
Carbazole	ug/kg	LDW09 - Other Organic Compounds			660		Y						
Dibenzofuran	ug/kg	LDW09 - Other Organic Compounds	*540*	540	220	U	N						
Hexachlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*22*	70	*220*	*U*	*N*						
Hexachlorobutadiene	ug/kg	LDW09 - Other Organic Compounds	*11*	120	*220*	*U*	*N*						
Hexachlorocyclopentadiene	ug/kg	LDW09 - Other Organic Compounds			1100	UJ	N						
Hexachloroethane	ug/kg	LDW09 - Other Organic Compounds			220	U	N						
Isophorone	ug/kg	LDW09 - Other Organic Compounds			220	U	N						
Nitrobenzene	ug/kg	LDW09 - Other Organic Compounds			220	U	N						
N-Nitroso-Di-N-Propylamine	ug/kg	LDW09 - Other Organic Compounds			220	U	N						
N-Nitrosodiphenylamine	ug/kg	LDW09 - Other Organic Compounds	*28*	40	*220*	*U*	*N*						
Pentachlorophenol	ug/kg	LDW09 - Other Organic Compounds	*360*	690	*1100*	*U*	*N*						
Phenol	ug/kg	LDW09 - Other Organic Compounds	*420*	1200	230		Y						
>10 Phi Clay	%	LDW10 - Grain Size			4.3		Y						
8-9 Phi Clay	%	LDW10 - Grain Size			6.8		Y						
9-10 Phi Clay	%	LDW10 - Grain Size			5.5		Y						
Coarse Sand	%	LDW10 - Grain Size			7		Y						
Coarse Silt	%	LDW10 - Grain Size			5.4		Y						
Fine Gravel	%	LDW10 - Grain Size											
Fine Sand	%	LDW10 - Grain Size			5.6		Y						
Fine Silt	%	LDW10 - Grain Size			17.8		Y						
Gravel	%	LDW10 - Grain Size			2.5		Y						
Medium Sand	%	LDW10 - Grain Size			7.3		Y						
Medium Silt	%	LDW10 - Grain Size			15.2		Y						
Total Fines	%	LDW10 - Grain Size			66.2		Y						
Very Coarse Sand	%	LDW10 - Grain Size			6.5		Y						
Very Fine Sand	%	LDW10 - Grain Size			4.9		Y						
Very Fine Silt	%	LDW10 - Grain Size			11.1		Y						

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - Diagonal Ave S SD
Attachment A, 90b - Actions Taken Pursuant to S4F

					Location	CB185			CB237			CB281			CB290			CB291			CB295			CB83		
					Sample Date	12 Jun 2015			21 Dec 2016			11 Feb 2016			01 Apr 2016			15 Apr 2016			08 Apr 2016			08 Apr 2016		
					Sample Name	CB185-061215			MKJ-122116-3			CB281-021116			CB290-040116			CB291-041516			CB295-040816			CB83-040816		
					Drainage Type	SD			SD			SD			SD			SD			SD			SD		
					Sample Method	Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual		
					Location Type	CB			CB			CB			CB			CB			CB			CB		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	Diagonal Ave S CSO/SD			Diagonal Ave S CSO/SD			Diagonal Ave S CSO/SD			Diagonal Ave S CSO/SD			Diagonal Ave S CSO/SD			Diagonal Ave S CSO/SD			Diagonal Ave S CSO/SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET		Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
Solids, Total	%	LDW01 - Solids_TOC				26.01		Y	40.44		Y				55.18		Y	37.78		Y	69.9		Y	40.46		Y
Total Organic Carbon	%	LDW01 - Solids_TOC				22.2		Y	13.9		Y				7.61	J	Y	10.1		Y	3.78		Y	8.93		Y
Arsenic	mg/kg	LDW02 - Metals	57	93		10	U	N				4.7		Y	16		Y	10	U	N	10		Y	10	U	N
Copper	mg/kg	LDW02 - Metals	*390*	390		48.1		Y							134	J	Y	120		Y	142		Y	185		Y
Lead	mg/kg	LDW02 - Metals	*450*	530		16		Y							87		Y	51		Y	264		Y	*981*		*Y*
Mercury	mg/kg	LDW02 - Metals	*0.41*	0.59		0.06	U	N							0.12		Y	0.09		Y	0.07		Y	0.07		Y
Zinc	mg/kg	LDW02 - Metals	*410*	960		187		Y							*613*		*Y*	*492*		*Y*	363		Y	343		Y
Diesel Range (Silica and Acid Cleaned)	mg/kg	LDW03 - TPH	*2000*	2000																						
Diesel Range Hydrocarbons	mg/kg	LDW03 - TPH	*2000*	2000		*2700*		*Y*				*2100*		*Y*	940		Y	290		Y	360		Y	710		Y
Motor Oil (Silica and Acid Cleaned)	mg/kg	LDW03 - TPH	*2000*	2000																						
Motor Oil Range	mg/kg	LDW03 - TPH	*2000*	2000		*5100*		*Y*				*8900*		*Y*	*3900*		*Y*	*2000*		*Y*	1500		Y	*4100*		*Y*
Acenaphthene	ug/kg	LDW04 - LPAH	*500*	500		180	U	N							230	U	N	240	U	N	110	U	N	120	U	N
Acenaphthylene	ug/kg	LDW04 - LPAH	*1300*	1300		180	U	N							80	J	Y	240	U	N	110	U	N	120	U	N
Anthracene	ug/kg	LDW04 - LPAH	*960*	960		72	J	Y							240		Y	280		Y	110	U	N	120	U	N
Fluorene	ug/kg	LDW04 - LPAH	*540*	540		54	J	Y							230	U	N	120	J	Y	110	U	N	120	U	N
LPAH	ug/kg	LDW04 - LPAH	*5200*	5200		536	J	Y							790	J	Y	2000	J	Y	120		Y	293	J	Y
Naphthalene	ug/kg	LDW04 - LPAH	2100	2100		90	J	Y							130	J	Y	240	U	N	110	U	N	93	J	Y
Phenanthrene	ug/kg	LDW04 - LPAH	*1500*	1500		320		Y							340		Y	*1600*		*Y*	120		Y	200		Y
Benzo(A)anthracene	ug/kg	LDW05 - HPAH	*1300*	1600		140	J	Y							460		Y	810		Y	140		Y	120		Y
Benzo(A)pyrene	ug/kg	LDW05 - HPAH	*1600*	1600		120	J	Y							480		Y	980		Y	180		Y	120		Y
Benzo(G,H,I)perylene	ug/kg	LDW05 - HPAH	*670*	720		200		Y							600		Y	*960*	*J*	*Y*	250		Y	270		Y
Benzofluoranthenes, Total	ug/kg	LDW05 - HPAH	*3200*	3600		360		Y							1500		Y	1800		Y	360		Y	420		Y
Chrysene	ug/kg	LDW05 - HPAH	*1400*	2800		400		Y							940		Y	*1400*		*Y*	220		Y	260		Y
Dibenzo(A,H)anthracene	ug/kg	LDW05 - HPAH	*230*	230		180	U	N							120	J	Y	220	J	Y	110	U	N	120	U	N
Fluoranthene	ug/kg	LDW05 - HPAH	*1700*	2500		440		Y							1500		Y	*2300*		*Y*	290		Y	320		Y
HPAH	ug/kg	LDW05 - HPAH	*12000*	17000		2100	J	Y							7470	J	Y	11320	J	Y	1870		Y	1970	J	Y
Indeno(1,2,3-Cd)pyrene	ug/kg	LDW05 - HPAH	*600*	690		180	U	N							370		Y	*750*	*J*	*Y*	150		Y	100	J	Y
Pyrene	ug/kg	LDW05 - HPAH	*2600*	3300		440		Y							1500		Y	2100		Y	280		Y	360		Y
cPAH	ug/kg	LDW06 - cPAH (analyte only)		100		219	J	Y							770.4	J	Y	1418	J	Y	269.2		Y	210.6	J	Y
Bis(2-ethylhexyl)phthalate	ug/kg	LDW07 - Phthalates	*1300*	1900		*17000*		*Y*							*4100*		*Y*	*6400*		*Y*	*2300*		*Y*	*5900*		*Y*
Butylbenzylphthalate	ug/kg	LDW07 - Phthalates	*63*	900		*390*		*Y*							*290*		*Y*	*260*		*Y*	*190*		*Y*	*250*		*Y*
Diethylphthalate	ug/kg	LDW07 - Phthalates	*200*	1200		180	U	N							*230*	*U*	*N*	*240*	*U*	*N*	110	U	N	120	U	N
Dimethylphthalate	ug/kg	LDW07 - Phthalates	*71*	160		*180*	*U*	*N*							*220*	*J*	*Y*	*240*	*U*	*N*	67	J	Y	*120*	*U*	*N*
Di-N-Butylphthalate	ug/kg	LDW07 - Phthalates	*1400*	1400		72	J	Y							80	J	Y	240	U	N	110	U	N	58	J	Y
Di-N-Octylphthalate	ug/kg	LDW07 - Phthalates	*6200*	6200		930		Y							210	J	Y	240	U	N	180		Y	200		Y
Aroclor 1016	ug/kg	LDW08 - PCBs				19	U	N	19.3	U	N				19	U	N	20	U	N	19	U	N	19	U	N
Aroclor 1221	ug/kg	LDW08 - PCBs				19	U	N	19.3	U	N				19	U	N	20	U	N	19	U	N	19	U	N
Aroclor 1232	ug/kg	LDW08 - PCBs				19	U	N	19.3	U	N				19	U	N	20	U	N	19	U	N	19	U	N
Aroclor 1242	ug/kg	LDW08 - PCBs				19	U	N	19.3	U	N				19	U	N	20	U	N	19	U	N	19	U	N
Aroclor 1248	ug/kg	LDW08 - PCBs				24	U	N	145	U	N				57	U	N	20	U	N	19	U	N	19	U	N
Aroclor 1254	ug/kg	LDW08 - PCBs				42	J	Y	574		Y				92		Y	53		Y	35		Y	42		Y
Aroclor 1260	ug/kg	LDW08 - PCBs				19	U	N	217		Y				65		Y	59	U	N	20		Y	18	J	Y
Polychlorinated Biphenyls	ug/kg	LDW08 - PCBs	*130*	1000		42	J	Y	*791*		*Y*				*157*		*Y*	53		Y	55		Y	60	J	Y
1,2,4-Trichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*31*	51		*180*	*U*	*N*							*230*	*U*	*N*	*240*	*U*	*N*	*110*	*U*	*N*	*120*	*U*	*N*
1,2-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*35*	50		*180*	*U*	*N*							*230*	*U*	*N*	*240*	*U*	*N*	*110*	*U*	*N*	*120*	*U*	*N*
1,3-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds				180	U	N							230	U	N	240	U	N	110	U	N	120	U	N
1,4-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*110*	110		*180*	*U*	*N*							*230*	*U*	*N*	*240*	*U*	*N*	*110*	*U*	*N*	*120*	*U*	*N*
1-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds				180	U	N							230	U	N	240	U	N	110	U	N	120	U	N
2,2'-Oxybis(1-chloropropane)	ug/kg	LDW09 - Other Organic Compounds				180	U	N							230	U	N	240	U	N	110	U	N	120	U	N
2,4,5-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds				900	U	N							1200	U	N	1200	U	N	560	U	N	580	U	N
2,4,6-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds				900	U	N							1200	U	N	1200	U	N	560	U	N	580	U	N
2,4-Dichlorophenol	ug/kg	LDW09 - Other Organic Compounds				900	U	N							1200	U	N	1200	U	N	560	U	N	580	U	N
2,4-Dimethylphenol	ug/kg	LDW09 - Other Organic Compounds	*29*	29		*900*	*U*	*N*							*1200*	*U*	*N*	*1200*	*U*	*N*	*560*	*U*	*N*	*580*	*U*	*N*
2,4-Dinitrophenol	ug/kg	LDW09 - Other Organic Compounds				1800	U	N							2300	U	N	2400	U	N	1100	UJ	N	1200	UJ	N
2,4-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds				900	U	N							1200	U	N	1200	U	N	560	U	N	580	U	N
2,6-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds				900	U	N							1200	U	N	1200	U	N	560	U	N	580	U	N
2-Chloronaphthalene	ug/kg	LDW09 - Other Organic Compounds				180	U	N							230	U	N	240	U	N	110	U	N	120	U	N
2-Chlorophenol	ug/kg	LDW09 - Other Organic Compounds				180	U	N							230	U	N	240	U	N	110	U	N	120	U	N
2-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds	*670*	670		81	J	Y							230	U	N	240	U	N	110	U	N	64	J	Y
2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*63*	63		*180*	*U*	*N*							*230*	*U*	*N*	*240*	*U*	*N*	*110*	*U*	*N*	*120*	*U*	*N*

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - Diagonal Ave S SD
Attachment A, 90b - Actions Taken Pursuant to S4F

					Location	CB185			CB237			CB281			CB290			CB291			CB295			CB83		
					Sample Date	12 Jun 2015			21 Dec 2016			11 Feb 2016			01 Apr 2016			15 Apr 2016			08 Apr 2016			08 Apr 2016		
					Sample Name	CB185-061215			MKJ-122116-3			CB281-021116			CB290-040116			CB291-041516			CB295-040816			CB83-040816		
					Drainage Type	SD			SD			SD			SD			SD			SD			SD		
					Sample Method	Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual		
					Location Type	CB			CB			CB			CB			CB			CB			CB		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	Diagonal Ave S CSO/SD			Diagonal Ave S CSO/SD			Diagonal Ave S CSO/SD			Diagonal Ave S CSO/SD			Diagonal Ave S CSO/SD			Diagonal Ave S CSO/SD			Diagonal Ave S CSO/SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
2-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			900	U	N							1200	U	N	1200	U	N	560	U	N	580	U	N
2-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			180	U	N							230	U	N	240	U	N	110	U	N	120	U	N
3,3`-Dichlorobenzidine	ug/kg	LDW09 - Other Organic Compounds			900	U	N							1200	U	N	1200	U	N	560	U	N	580	U	N
3-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			900	U	N							1200	U	N	1200	U	N	560	U	N	580	U	N
4,6-Dinitro-2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			1800	U	N							2300	U	N	2400	U	N	1100	U	N	1200	U	N
4-Bromophenyl phenyl ether	ug/kg	LDW09 - Other Organic Compounds			180	U	N							230	U	N	240	U	N	110	U	N	120	U	N
4-Chloro-3-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			900	U	N							1200	U	N	1200	U	N	560	U	N	580	U	N
4-Chloroaniline	ug/kg	LDW09 - Other Organic Compounds			900	U	N							1200	U	N	1200	U	N	560	U	N	580	U	N
4-Chlorophenyl Phenylether	ug/kg	LDW09 - Other Organic Compounds			180	U	N							230	U	N	240	U	N	110	U	N	120	U	N
4-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*670*	670	*34000*		*Y*							230	U	N	620		Y	110	U	N	620		Y
4-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			900	U	N							1200	U	N	1200	U	N	560	U	N	580	U	N
4-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			900	U	N							1200	U	N	1200	U	N	560	UJ	N	580	UJ	N
Benzoic acid	ug/kg	LDW09 - Other Organic Compounds	*650*	650	*4300*		*Y*							*720*	*J*	*Y*	*1200*	*J*	*Y*	*680*	*J*	*Y*	*1300*	*J*	*Y*
Benzyl alcohol	ug/kg	LDW09 - Other Organic Compounds	*57*	73										*230*	*U*	*N*	*240*	*U*	*N*	*110*	*U*	*N*	*190*		*Y*
bis(2-Chloroethoxy) methane	ug/kg	LDW09 - Other Organic Compounds			180	U	N							230	U	N	240	U	N	110	U	N	120	U	N
Bis-(2-chloroethyl) ether	ug/kg	LDW09 - Other Organic Compounds			180	U	N							230	U	N	290		Y	110	U	N	120	U	N
Carbazole	ug/kg	LDW09 - Other Organic Compounds			180	U	N							150	J	Y	370	J	Y	110	U	N	120	U	N
Dibenzofuran	ug/kg	LDW09 - Other Organic Compounds	*540*	540	180	U	N							230	U	N	240	U	N	110	U	N	120	U	N
Hexachlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*22*	70	*180*	*U*	*N*							*230*	*U*	*N*	*240*	*U*	*N*	*110*	*U*	*N*	*120*	*U*	*N*
Hexachlorobutadiene	ug/kg	LDW09 - Other Organic Compounds	*11*	120	*180*	*U*	*N*							*230*	*U*	*N*	*240*	*U*	*N*	*110*	*U*	*N*	*120*	*U*	*N*
Hexachlorocyclopentadiene	ug/kg	LDW09 - Other Organic Compounds			900	U	N							1200	U	N	1200	U	N	560	U	N	580	U	N
Hexachloroethane	ug/kg	LDW09 - Other Organic Compounds			180	U	N							230	U	N	240	U	N	110	U	N	120	U	N
Isophorone	ug/kg	LDW09 - Other Organic Compounds			180	U	N							230	U	N	240	U	N	110	U	N	120	U	N
Nitrobenzene	ug/kg	LDW09 - Other Organic Compounds			180	U	N							230	U	N	240	U	N	110	U	N	120	U	N
N-Nitroso-Di-N-Propylamine	ug/kg	LDW09 - Other Organic Compounds			180	U	N							230	U	N	240	U	N	110	U	N	120	U	N
N-Nitrosodiphenylamine	ug/kg	LDW09 - Other Organic Compounds	*28*	40	*180*	*U*	*N*							*230*	*U*	*N*	*240*	*U*	*N*	*110*	*U*	*N*	*120*	*U*	*N*
Pentachlorophenol	ug/kg	LDW09 - Other Organic Compounds	*360*	690	*900*	*U*	*N*							*1200*	*UJ*	*N*	*1200*	*U*	*N*	*560*	*U*	*N*	*580*	*U*	*N*
Phenol	ug/kg	LDW09 - Other Organic Compounds	*420*	1200	*2700*		*Y*							230		Y	160	J	Y	290		Y	410		Y
>10 Phi Clay	%	LDW10 - Grain Size																							
8-9 Phi Clay	%	LDW10 - Grain Size																							
9-10 Phi Clay	%	LDW10 - Grain Size																							
Coarse Sand	%	LDW10 - Grain Size			9.7		Y							10.7		Y	15.4		Y	12.2		Y	9.5		Y
Coarse Silt	%	LDW10 - Grain Size																							
Fine Gravel	%	LDW10 - Grain Size			5.9		Y							23.9		Y	1.1		Y	15.4		Y	13.6		Y
Fine Sand	%	LDW10 - Grain Size			5.5		Y							8.5		Y	17.5		Y	10.1		Y	8.8		Y
Fine Silt	%	LDW10 - Grain Size																							
Gravel	%	LDW10 - Grain Size			3.3		Y							18.8		Y	3.4		Y	12.4		Y	5.6		Y
Medium Sand	%	LDW10 - Grain Size			10.9		Y							9.7		Y	18.1		Y	19.5		Y	15.8		Y
Medium Silt	%	LDW10 - Grain Size																							
Very Coarse Sand	%	LDW10 - Grain Size			7.1		Y							10.7		Y	10.4		Y	11.5		Y	7.5		Y
Very Fine Sand	%	LDW10 - Grain Size			2.8		Y							5.3		Y	7.5		Y	4.1		Y	10.6		Y
Very Fine Silt	%	LDW10 - Grain Size																							

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - Diagonal Ave S SD
Attachment A, 90b - Actions Taken Pursuant to S4F

					Location	MH18			MH37			RCB296			RCB72			ST1			ST1			ST1		
					Sample Date	06 Apr 2016			15 Oct 2015			15 Apr 2016			21 Dec 2016			09 May 2016			09 May 2016			22 May 2015		
					Sample Name	MH18-040616			MH37-101515			RCB296-041516			MKJ-122116-4			ST1-050916			ST1-050916G			ST1-052215		
					Drainage Type	SD			SD			SD			SD			SD			SD			SD		
					Sample Method	Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual			SedTrap			Grab-Manual			SedTrap		
					Location Type	Inline			Inline			CB			RCB			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	Diagonal Ave S CSO/SD			Diagonal Ave S CSO/SD			Diagonal Ave S CSO/SD			Diagonal Ave S CSO/SD			Diagonal Ave S CSO/SD			Diagonal Ave S CSO/SD			Diagonal Ave S CSO/SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET		Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
Solids, Total	%	LDW01 - Solids_TOC				52.74		Y	47.59		Y	48.08		Y	24.13		Y	40.99		Y	81.05		Y	43.48		Y
Total Organic Carbon	%	LDW01 - Solids_TOC				10.7		Y	5.47		Y	5.92		Y	19.7		Y	9.65		Y	0.624		Y	7.5		Y
Arsenic	mg/kg	LDW02 - Metals	57	93		36		Y	20		Y	9	U	N				10		Y	26		Y	20		Y
Copper	mg/kg	LDW02 - Metals	*390*	390		255		Y	227		Y	69.4		Y				160		Y	58.7		Y	152		Y
Lead	mg/kg	LDW02 - Metals	*450*	530		*478*		*Y*	103		Y	40		Y				88		Y	23		Y	82		Y
Mercury	mg/kg	LDW02 - Metals	*0.41*	0.59		*1.14*		*Y*	0.17		Y	0.06		Y				0.18		Y	0.13		Y	*0.78*		*Y*
Zinc	mg/kg	LDW02 - Metals	*410*	960		*600*		*Y*	*1460*		*Y*	294		Y				*714*		*Y*	158		Y	*556*		*Y*
Diesel Range (Silica and Acid Cleaned)	mg/kg	LDW03 - TPH	*2000*	2000																						
Diesel Range Hydrocarbons	mg/kg	LDW03 - TPH	*2000*	2000		750		Y	1300		Y	560		Y				570		Y	39		Y	1300		Y
Motor Oil (Silica and Acid Cleaned)	mg/kg	LDW03 - TPH	*2000*	2000																						
Motor Oil Range	mg/kg	LDW03 - TPH	*2000*	2000		*2800*		*Y*	*5100*		*Y*	*3700*		*Y*				*2800*		*Y*	220		Y	*4900*		*Y*
Acenaphthene	ug/kg	LDW04 - LPAH	*500*	500		310		Y	96	U	N	150	J	Y				290	U	N	19	U	N	68	J	Y
Acenaphthylene	ug/kg	LDW04 - LPAH	*1300*	1300		290	U	N	91	J	Y	260	U	N				290	U	N	19	U	N	190	U	N
Anthracene	ug/kg	LDW04 - LPAH	*960*	960		510		Y	130		Y	300		Y				290	U	N	19	U	N	120	J	Y
Fluorene	ug/kg	LDW04 - LPAH	*540*	540		280	J	Y	62	J	Y	180	J	Y				290	U	N	19	U	N	190	U	N
LPAH	ug/kg	LDW04 - LPAH	*5200*	5200		*6560*	*J*	*Y*	1273	J	Y	2130	J	Y				498	J	Y	22		Y	1095	J	Y
Naphthalene	ug/kg	LDW04 - LPAH	2100	2100		160	J	Y	360		Y	260	U	N				88	J	Y	19	U	N	87	J	Y
Phenanthrene	ug/kg	LDW04 - LPAH	*1500*	1500		*5300*		*Y*	630		Y	*1500*		*Y*				410		Y	22		Y	820		Y
Benzo(A)anthracene	ug/kg	LDW05 - HPAH	*1300*	1600		*2200*		*Y*	320		Y	720		Y				290	U	N	12	J	Y	450		Y
Benzo(A)pyrene	ug/kg	LDW05 - HPAH	*1600*	1600		*2400*		*Y*	550		Y	730		Y				340		Y	14	J	Y	390		Y
Benzo(G,H,I)perylene	ug/kg	LDW05 - HPAH	*670*	720		*2100*		*Y*	620		Y	*670*	*J*	*Y*				350		Y	21		Y	160	J	Y
Benzofluoranthenes, Total	ug/kg	LDW05 - HPAH	*3200*	3600		*4800*		*Y*	1300		Y	1300		Y				790	J	Y	36	J	Y	1100		Y
Chrysene	ug/kg	LDW05 - HPAH	*1400*	2800		*3300*		*Y*	1000		Y	1100		Y				510		Y	27		Y	850		Y
Dibenzo(A,H)anthracene	ug/kg	LDW05 - HPAH	*230*	230		*510*		*Y*	120		Y	140	J	Y				*290*	*U*	*N*	19	U	N	190	U	N
Fluoranthene	ug/kg	LDW05 - HPAH	*1700*	2500		*7700*		*Y*	890		Y	*1900*		*Y*				690		Y	38		Y	1500		Y
HPAH	ug/kg	LDW05 - HPAH	*12000*	17000		*30410*	*J*	*Y*	6300		Y	8910	J	Y				3590	J	Y	200	J	Y	5790	J	Y
Indeno(1,2,3-Cd)pyrene	ug/kg	LDW05 - HPAH	*600*	690		*1800*	*J*	*Y*	300		Y	450	J	Y				220	J	Y	12	J	Y	240		Y
Pyrene	ug/kg	LDW05 - HPAH	*2600*	3300		*5600*		*Y*	1200		Y	1900		Y				690		Y	40		Y	1100		Y
cPAH	ug/kg	LDW06 - cPAH (analyte only)		100		3517	J	Y	800		Y	1044	J	Y				518.6	J	Y	24.07	J	Y	615.5		Y
Bis(2-ethylhexyl)phthalate	ug/kg	LDW07 - Phthalates	*1300*	1900		*4800*		*Y*	*7500*		*Y*	*14000*		*Y*				*5900*		*Y*	360		Y	*8300*		*Y*
Butylbenzylphthalate	ug/kg	LDW07 - Phthalates	*63*	900		*410*		*Y*	*96*	*U*	*N*	*400*		*Y*				*290*	*U*	*N*	19	U	N	*300*		*Y*
Diethylphthalate	ug/kg	LDW07 - Phthalates	*200*	1200		*290*	*U*	*N*	96	U	N	*260*	*U*	*N*				*290*	*U*	*N*	24	J	Y	190	U	N
Dimethylphthalate	ug/kg	LDW07 - Phthalates	*71*	160		*890*		*Y*	*96*	*U*	*N*	*260*	*U*	*N*				*290*	*U*	*N*	19	U	N	*190*	*U*	*N*
Di-N-Butylphthalate	ug/kg	LDW07 - Phthalates	*1400*	1400		290	U	N	82	J	Y	310		Y				290	U	N	19	U	N	130	J	Y
Di-N-Octylphthalate	ug/kg	LDW07 - Phthalates	*6200*	6200		290	U	N	96	U	N	260	U	N				570		Y	19	U	N	730		Y
Aroclor 1016	ug/kg	LDW08 - PCBs				190	U	N	18	U	N	19	U	N	19.3	U	N	19	U	N	19	U	N	20	U	N
Aroclor 1221	ug/kg	LDW08 - PCBs				190	U	N	18	U	N	19	U	N	19.3	U	N	19	U	N	19	U	N	20	U	N
Aroclor 1232	ug/kg	LDW08 - PCBs				190	U	N	18	U	N	19	U	N	19.3	U	N	19	U	N	19	U	N	20	U	N
Aroclor 1242	ug/kg	LDW08 - PCBs				2000		Y	18	U	N	19	U	N	19.3	U	N	19	U	N	19	U	N	20	U	N
Aroclor 1248	ug/kg	LDW08 - PCBs				190	U	N	18	U	N	47	U	N	35		Y	75	U	N	19	U	N	140		Y
Aroclor 1254	ug/kg	LDW08 - PCBs				1800		Y	18	U	N	170		Y	66		Y	130		Y	26		Y	130		Y
Aroclor 1260	ug/kg	LDW08 - PCBs				550		Y	11	J	Y	130		Y	48.3		Y	120	J	Y	19	U	N	44		Y
Polychlorinated Biphenyls	ug/kg	LDW08 - PCBs	*130*	1000		*4350*		*Y*	11	J	Y	*300*		*Y*	*149.3*		*Y*	*250*	*J*	*Y*	26		Y	*314*		*Y*
1,2,4-Trichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*31*	51		*290*	*U*	*N*	*96*	*U*	*N*	*260*	*U*	*N*				*290*	*U*	*N*	19	U	N	*190*	*U*	*N*
1,2-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*35*	50		*290*	*U*	*N*	*96*	*U*	*N*	*260*	*U*	*N*				*290*	*U*	*N*	19	U	N	*190*	*U*	*N*
1,3-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds				290	U	N	96	U	N	260	U	N				290	U	N	19	U	N	190	U	N
1,4-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*110*	110		*290*	*U*	*N*	96	U	N	*260*	*U*	*N*				*290*	*U*	*N*	19	U	N	*190*	*U*	*N*
1-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds				290	U	N	96	U	N	260	U	N				290	U	N	19	U	N	190	U	N
2,2'-Oxybis(1-chloropropane)	ug/kg	LDW09 - Other Organic Compounds				290	U	N	96	U	N	260	U	N				290	U	N	19	U	N	190	U	N
2,4,5-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds				1500	U	N	480	U	N	1300	U	N				1500	U	N	96	U	N	970	U	N
2,4,6-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds				1500	U	N	480	U	N	1300	U	N				1500	U	N	96	U	N	970	U	N
2,4-Dichlorophenol	ug/kg	LDW09 - Other Organic Compounds				1500	U	N	480	U	N	1300	U	N				1500	U	N	96	U	N	970	U	N
2,4-Dimethylphenol	ug/kg	LDW09 - Other Organic Compounds	*29*	29		*1500*	*U*	*N*	*480*	*U*	*N*	*1300*	*U*	*N*				*1500*	*U*	*N*	*96*	*U*	*N*	*970*	*U*	*N*
2,4-Dinitrophenol	ug/kg	LDW09 - Other Organic Compounds				2900	U	N	960	U	N	2600	U	N				2900	U	N	190	UJ	N	1900	U	N
2,4-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds				1500	U	N	480	U	N	1300	U	N				1500	U	N	96	U	N	970	U	N
2,6-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds				1500	U	N	480	U	N	1300	U	N				1500	U	N	96	U	N	970	U	N
2-Chloronaphthalene	ug/kg	LDW09 - Other Organic Compounds				290	U	N	96	U	N	260	U	N				290	U	N	19	U	N	190	U	N
2-Chlorophenol	ug/kg	LDW09 - Other Organic Compounds				290	U	N	96	U	N	260	U	N				290	U	N	19	U	N	190	U	N
2-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds	*670*	670		290	U	N	91	J	Y	260	U	N				290	U	N	19	U	N	68	J	Y
2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*63*	63		*290*	*U*	*N*	*96*	*U*	*N*	*260*	*U*	*N*				*290*	*U*	*N*	19	U	N	*190*	*U*	*N*

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - Diagonal Ave S SD
Attachment A, 90b - Actions Taken Pursuant to S4F

					Location	MH18			MH37			RCB296			RCB72			ST1			ST1			ST1		
					Sample Date	06 Apr 2016			15 Oct 2015			15 Apr 2016			21 Dec 2016			09 May 2016			09 May 2016			22 May 2015		
					Sample Name	MH18-040616			MH37-101515			RCB296-041516			MKJ-122116-4			ST1-050916			ST1-050916G			ST1-052215		
					Drainage Type	SD			SD			SD			SD			SD			SD			SD		
					Sample Method	Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual			SedTrap			Grab-Manual			SedTrap		
					Location Type	Inline			Inline			CB			RCB			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	Diagonal Ave S CSO/SD			Diagonal Ave S CSO/SD			Diagonal Ave S CSO/SD			Diagonal Ave S CSO/SD			Diagonal Ave S CSO/SD			Diagonal Ave S CSO/SD			Diagonal Ave S CSO/SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
2-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			1500	U	N	480	U	N	1300	U	N				1500	U	N	96	U	N	970	U	N
2-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			290	U	N	96	U	N	260	U	N				290	U	N	19	U	N	190	U	N
3,3`-Dichlorobenzidine	ug/kg	LDW09 - Other Organic Compounds			1500	U	N				1300	U	N				1500	U	N	96	U	N			
3-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			1500	U	N				1300	U	N				1500	U	N	96	U	N	970	U	N
4,6-Dinitro-2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			2900	U	N	960	U	N	2600	U	N				2900	U	N	190	UJ	N	1900	U	N
4-Bromophenyl phenyl ether	ug/kg	LDW09 - Other Organic Compounds			290	U	N	96	U	N	260	U	N				290	U	N	19	U	N	190	U	N
4-Chloro-3-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			1500	U	N	480	U	N	1300	U	N				1500	U	N	96	U	N	970	U	N
4-Chloroaniline	ug/kg	LDW09 - Other Organic Compounds			1500	U	N				1300	U	N				1500	U	N	96	U	N	970	U	N
4-Chlorophenyl Phenylether	ug/kg	LDW09 - Other Organic Compounds			290	U	N	96	U	N	260	U	N				290	U	N	19	UJ	N	190	U	N
4-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*670*	670	320		Y	210		Y	*680*		*Y*				*1100*		*Y*	19	U	N	230		Y
4-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			1500	U	N	480	U	N	1300	U	N				1500	U	N	96	U	N	970	U	N
4-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			1500	U	N	480	U	N	1300	U	N				1500	U	N	96	U	N	970	U	N
Benzoic acid	ug/kg	LDW09 - Other Organic Compounds	*650*	650	*2100*	*J*	*Y*	*690*	*J*	*Y*	*2600*	*UJ*	*N*				*1400*	*J*	*Y*	170	J	Y	*1200*	*J*	*Y*
Benzyl alcohol	ug/kg	LDW09 - Other Organic Compounds	*57*	73	*290*	*UJ*	*N*	*96*	*U*	*N*	*5200*		*Y*				*380*	*J*	*Y*	19	U	N	*320*	*J*	*Y*
bis(2-Chloroethoxy) methane	ug/kg	LDW09 - Other Organic Compounds			290	U	N	96	U	N	260	U	N				290	U	N	19	U	N	190	U	N
Bis-(2-chloroethyl) ether	ug/kg	LDW09 - Other Organic Compounds			290	U	N	96	U	N	260	U	N				290	U	N	19	U	N	190	U	N
Carbazole	ug/kg	LDW09 - Other Organic Compounds			1200	J	Y	110	J	Y	180	J	Y				290	U	N	19	U	N	120	J	Y
Dibenzofuran	ug/kg	LDW09 - Other Organic Compounds	*540*	540	250	J	Y	48	J	Y	*260*	U	N				290	U	N	19	U	N	58	J	Y
Hexachlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*22*	70	*290*	*U*	*N*	*96*	*U*	*N*	*260*	*U*	*N*				*290*	*U*	*N*	19	U	N	*190*	*U*	*N*
Hexachlorobutadiene	ug/kg	LDW09 - Other Organic Compounds	*11*	120	*290*	*U*	*N*	*96*	*U*	*N*	*260*	*U*	*N*				*290*	*U*	*N*	*19*	*U*	*N*	*190*	*U*	*N*
Hexachlorocyclopentadiene	ug/kg	LDW09 - Other Organic Compounds			1500	U	N	480	U	N	1300	U	N				1500	U	N	96	U	N	970	U	N
Hexachloroethane	ug/kg	LDW09 - Other Organic Compounds			290	U	N	96	U	N	260	U	N				290	U	N	19	U	N	190	U	N
Isophorone	ug/kg	LDW09 - Other Organic Compounds			290	U	N	96	U	N	260	U	N				290	U	N	19	U	N	190	U	N
Nitrobenzene	ug/kg	LDW09 - Other Organic Compounds			290	U	N	96	U	N	260	U	N				290	U	N	19	U	N	190	U	N
N-Nitroso-Di-N-Propylamine	ug/kg	LDW09 - Other Organic Compounds			290	U	N	96	U	N	260	U	N				290	U	N	19	U	N	190	U	N
N-Nitrosodiphenylamine	ug/kg	LDW09 - Other Organic Compounds	*28*	40	*290*	*U*	*N*	*120*		*Y*	*260*	*U*	*N*				*290*	*U*	*N*	19	U	N	*190*	*U*	*N*
Pentachlorophenol	ug/kg	LDW09 - Other Organic Compounds	*360*	690	*1500*	*U*	*N*	*480*	*U*	*N*	*1300*	*U*	*N*				*1500*	*U*	*N*	96	U	N	*970*	*U*	*N*
Phenol	ug/kg	LDW09 - Other Organic Compounds	*420*	1200	280	J	Y	350	J	Y	220	J	Y				220	J	Y	18	J	Y	240	J	Y
>10 Phi Clay	%	LDW10 - Grain Size																							
8-9 Phi Clay	%	LDW10 - Grain Size																							
9-10 Phi Clay	%	LDW10 - Grain Size																							
Coarse Sand	%	LDW10 - Grain Size			15.8		Y	11		Y	8.8		Y							27.7		Y	9.2		Y
Coarse Silt	%	LDW10 - Grain Size																							
Fine Gravel	%	LDW10 - Grain Size			4.6		Y	6.7		Y	3.6		Y							11.4		Y	0.8		Y
Fine Sand	%	LDW10 - Grain Size			8.4		Y	6.3		Y	7.7		Y							1.9		Y	12.9		Y
Fine Silt	%	LDW10 - Grain Size																							
Gravel	%	LDW10 - Grain Size			13.4		Y	8.4		Y	8.6		Y							14.1		Y	1.3		Y
Medium Sand	%	LDW10 - Grain Size			17.2		Y	11		Y	9.7		Y							16.3		Y	26.6		Y
Medium Silt	%	LDW10 - Grain Size																							
Very Coarse Sand	%	LDW10 - Grain Size			20		Y	14.5		Y	9.8		Y							19.1		Y	2.9		Y
Very Fine Sand	%	LDW10 - Grain Size			3.7		Y	8.8		Y	11.6		Y							1		Y	7.4		Y
Very Fine Silt	%	LDW10 - Grain Size																							

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - Diagonal Ave S SD
Attachment A, 90b - Actions Taken Pursuant to S4F

					Location	ST1			ST7			ST7			ST7		
					Sample Date	22 May 2015			09 May 2016			18 May 2015			18 May 2015		
					Sample Name	ST1-052215G			ST7-050916			ST7-051815			ST7-051815G		
					Drainage Type	SD			SD			SD			SD		
					Sample Method	Grab-Manual			SedTrap			SedTrap			Grab-Manual		
					Location Type	Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	Diagonal Ave S CSO/SD			Diagonal Ave S CSO/SD			Diagonal Ave S CSO/SD			Diagonal Ave S CSO/SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET		Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
Solids, Total	%	LDW01 - Solids_TOC				79.22		Y	59.5		Y	58.89		Y	82.53		Y
Total Organic Carbon	%	LDW01 - Solids_TOC				1.21		Y	3.32		Y	6.85		Y	0.628		Y
Arsenic	mg/kg	LDW02 - Metals	57	93		7		Y	9		Y	8		Y	6	U	N
Copper	mg/kg	LDW02 - Metals	*390*	390		41.7		Y	87.4		Y	75.9		Y	32.3		Y
Lead	mg/kg	LDW02 - Metals	*450*	530		24		Y	60		Y	43		Y	13		Y
Mercury	mg/kg	LDW02 - Metals	*0.41*	0.59		0.06		Y	0.07		Y	0.07		Y	0.03	U	N
Zinc	mg/kg	LDW02 - Metals	*410*	960		134		Y	350		Y	270		Y	120		Y
Diesel Range (Silica and Acid Cleaned)	mg/kg	LDW03 - TPH	*2000*	2000													
Diesel Range Hydrocarbons	mg/kg	LDW03 - TPH	*2000*	2000		120		N	250		Y	860		Y	92		Y
Motor Oil (Silica and Acid Cleaned)	mg/kg	LDW03 - TPH	*2000*	2000													
Motor Oil Range	mg/kg	LDW03 - TPH	*2000*	2000		1400		Y	1400		Y	*3000*		*Y*	490		Y
Acenaphthene	ug/kg	LDW04 - LPAH	*500*	500		38	J	Y	300	U	N	250	U	N	11	J	Y
Acenaphthylene	ug/kg	LDW04 - LPAH	*1300*	1300		77	U	N	300	U	N	250	U	N	19	U	N
Anthracene	ug/kg	LDW04 - LPAH	*960*	960		130	J	Y	300	U	N	250	U	N	6.8	J	Y
Fluorene	ug/kg	LDW04 - LPAH	*540*	540		42	J	Y	300	U	N	63	J	Y	9.7	J	Y
LPAH	ug/kg	LDW04 - LPAH	*5200*	5200		770	J	Y	240	J	Y	793	J	Y	73.5	J	Y
Naphthalene	ug/kg	LDW04 - LPAH	2100	2100		77	U	N	300	U	N	250	U	N	14	J	Y
Phenanthrene	ug/kg	LDW04 - LPAH	*1500*	1500		560		Y	240	J	Y	730		Y	32		Y
Benzo(A)anthracene	ug/kg	LDW05 - HPAH	*1300*	1600		290		Y	150	J	Y	250		Y	19		Y
Benzo(A)pyrene	ug/kg	LDW05 - HPAH	*1600*	1600		260	J	Y	160	J	Y	330		Y	20		Y
Benzo(G,H,I)perylene	ug/kg	LDW05 - HPAH	*670*	720		180		Y	180	J	Y	290		Y	23		Y
Benzofluoranthenes, Total	ug/kg	LDW05 - HPAH	*3200*	3600		510		Y	420	J	Y	820		Y	52		Y
Chrysene	ug/kg	LDW05 - HPAH	*1400*	2800		370		Y	300		Y	600		Y	47		Y
Dibenzo(A,H)anthracene	ug/kg	LDW05 - HPAH	*230*	230		88		Y	*300*	*U*	*N*	*250*	*U*	*N*	19	U	N
Fluoranthene	ug/kg	LDW05 - HPAH	*1700*	2500		880		Y	360		Y	970		Y	50		Y
HPAH	ug/kg	LDW05 - HPAH	*12000*	17000		3418	J	Y	2039	J	Y	4360		Y	274	J	Y
Indeno(1,2,3-Cd)pyrene	ug/kg	LDW05 - HPAH	*600*	690		170		Y	89	J	Y	260		Y	11	J	Y
Pyrene	ug/kg	LDW05 - HPAH	*2600*	3300		670		Y	380		Y	840		Y	52		Y
cPAH	ug/kg	LDW06 - cPAH (analyte only)		100		395.9	J	Y	288.9	J	Y	519		Y	32.47	J	Y
Bis(2-ethylhexyl)phthalate	ug/kg	LDW07 - Phthalates	*1300*	1900		770		Y	*3600*		*Y*	*4000*		*Y*	630		Y
Butylbenzylphthalate	ug/kg	LDW07 - Phthalates	*63*	900		*440*		*Y*	*300*	*U*	*N*	*350*		*Y*	19	U	N
Diethylphthalate	ug/kg	LDW07 - Phthalates	*200*	1200		77	U	N	*300*	*U*	*N*	*250*	*U*	*N*	19	U	N
Dimethylphthalate	ug/kg	LDW07 - Phthalates	*71*	160		*77*	*U*	*N*	*2500*		*Y*	*250*	*U*	*N*	19	U	N
Di-N-Butylphthalate	ug/kg	LDW07 - Phthalates	*1400*	1400		77	U	N	300	U	N	250	U	N	19	U	N
Di-N-Octylphthalate	ug/kg	LDW07 - Phthalates	*6200*	6200		77	U	N	520		Y	820		Y	55		Y
Aroclor 1016	ug/kg	LDW08 - PCBs				18	U	N	18	U	N	19	U	N	20	U	N
Aroclor 1221	ug/kg	LDW08 - PCBs				18	U	N	18	U	N	19	U	N	20	U	N
Aroclor 1232	ug/kg	LDW08 - PCBs				18	U	N	18	U	N	19	U	N	20	U	N
Aroclor 1242	ug/kg	LDW08 - PCBs				18	U	N	18	U	N	19	U	N	20	U	N
Aroclor 1248	ug/kg	LDW08 - PCBs				18	U	N	23	U	N	78		Y	20	U	N
Aroclor 1254	ug/kg	LDW08 - PCBs				37	J	Y	90		Y	89		Y	19	J	Y
Aroclor 1260	ug/kg	LDW08 - PCBs				20	J	Y	18	U	N	30	J	Y	20	U	N
Polychlorinated Biphenyls	ug/kg	LDW08 - PCBs	*130*	1000		57	J	Y	90		Y				19	J	Y
1,2,4-Trichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*31*	51		*77*	*U*	*N*	*300*	*U*	*N*	*250*	*U*	*N*	19	U	N
1,2-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*35*	50		*77*	*U*	*N*	*300*	*U*	*N*	*250*	*U*	*N*	19	U	N
1,3-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds				77	U	N	300	U	N	250	U	N	19	U	N
1,4-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*110*	110		77		Y	*300*	*U*	*N*	*250*	*U*	*N*	19	U	N
1-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds				77	U	N	300	U	N	250	U	N	5.8	J	Y
2,2'-Oxybis(1-chloropropane)	ug/kg	LDW09 - Other Organic Compounds				77	U	N	300	U	N	250	U	N	19	U	N
2,4,5-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds				380	U	N	1500	U	N	1300	U	N	97	U	N
2,4,6-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds				380	U	N	1500	U	N	1300	U	N	97	U	N
2,4-Dichlorophenol	ug/kg	LDW09 - Other Organic Compounds				380	U	N	1500	U	N	1300	U	N	97	U	N
2,4-Dimethylphenol	ug/kg	LDW09 - Other Organic Compounds	*29*	29		*380*	*U*	*N*	*1500*	*U*	*N*	*1300*	*U*	*N*	*97*	*U*	*N*
2,4-Dinitrophenol	ug/kg	LDW09 - Other Organic Compounds				770	U	N	3000	U	N	2500	U	N	190	U	N
2,4-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds				380	U	N	1500	U	N	1300	U	N	97	U	N
2,6-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds				380	U	N	1500	U	N	1300	U	N	97	U	N
2-Chloronaphthalene	ug/kg	LDW09 - Other Organic Compounds				77	U	N	300	U	N	250	U	N	19	U	N
2-Chlorophenol	ug/kg	LDW09 - Other Organic Compounds				77	U	N	300	U	N	250	U	N	19	U	N
2-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds	*670*	670		77	U	N	300	U	N	250	U	N	11	J	Y
2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*63*	63		*77*	*U*	*N*	*300*	*U*	*N*	*250*	*U*	*N*	19	U	N

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - Diagonal Ave S SD
Attachment A, 90b - Actions Taken Pursuant to S4F

					Location	ST1			ST7			ST7			ST7		
					Sample Date	22 May 2015			09 May 2016			18 May 2015			18 May 2015		
					Sample Name	ST1-052215G			ST7-050916			ST7-051815			ST7-051815G		
					Drainage Type	SD			SD			SD			SD		
					Sample Method	Grab-Manual			SedTrap			SedTrap			Grab-Manual		
					Location Type	Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	Diagonal Ave S CSO/SD			Diagonal Ave S CSO/SD			Diagonal Ave S CSO/SD			Diagonal Ave S CSO/SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
2-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			380	U	N	1500	U	N	1300	U	N	97	U	N
2-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			77	U	N	300	U	N	250	U	N	19	U	N
3,3`-Dichlorobenzidine	ug/kg	LDW09 - Other Organic Compounds						1500	U	N				97	U	N
3-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			380	UJ	N	1500	U	N	1300	U	N	97	U	N
4,6-Dinitro-2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			770	U	N	3000	U	N	2500	U	N	190	U	N
4-Bromophenyl phenyl ether	ug/kg	LDW09 - Other Organic Compounds			77	U	N	300	U	N	250	U	N	19	U	N
4-Chloro-3-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			380	U	N	1500	U	N	1300	U	N	97	U	N
4-Chloroaniline	ug/kg	LDW09 - Other Organic Compounds						1500	U	N	1300	U	N	97	U	N
4-Chlorophenyl Phenylether	ug/kg	LDW09 - Other Organic Compounds			77	U	N	300	U	N	250	U	N	19	U	N
4-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*670*	670	77	U	N	300	U	N	400		Y	19	U	N
4-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			380	UJ	N	1500	U	N	1300	U	N	97	U	N
4-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			380	U	N	1500	U	N	1300	U	N	97	U	N
Benzoic acid	ug/kg	LDW09 - Other Organic Compounds	*650*	650	240	J	Y	*3000*	*U*	*N*	*2500*	*U*	*N*	300		Y
Benzyl alcohol	ug/kg	LDW09 - Other Organic Compounds	*57*	73				*300*	*U*	*N*						
bis(2-Chloroethoxy) methane	ug/kg	LDW09 - Other Organic Compounds			77	U	N	300	U	N	250	U	N	19	U	N
Bis-(2-chloroethyl) ether	ug/kg	LDW09 - Other Organic Compounds			77	U	N	300	U	N	250	U	N	19	U	N
Carbazole	ug/kg	LDW09 - Other Organic Compounds			42	J	Y	300	U	N	110	J	Y	8.8	J	Y
Dibenzofuran	ug/kg	LDW09 - Other Organic Compounds	*540*	540	23	J	Y	300	U	N	250	U	N	19	U	N
Hexachlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*22*	70	*77*	*U*	*N*	*300*	*U*	*N*	*250*	*U*	*N*	19	U	N
Hexachlorobutadiene	ug/kg	LDW09 - Other Organic Compounds	*11*	120	*77*	*U*	*N*	*300*	*U*	*N*	*250*	*U*	*N*	*19*	*U*	*N*
Hexachlorocyclopentadiene	ug/kg	LDW09 - Other Organic Compounds			380	U	N	1500	U	N	1300	U	N	97	U	N
Hexachloroethane	ug/kg	LDW09 - Other Organic Compounds			77	U	N	300	U	N	250	U	N	19	U	N
Isophorone	ug/kg	LDW09 - Other Organic Compounds			77	U	N	300	U	N	250	U	N	19	U	N
Nitrobenzene	ug/kg	LDW09 - Other Organic Compounds			77	U	N	300	U	N	250	U	N	19	U	N
N-Nitroso-Di-N-Propylamine	ug/kg	LDW09 - Other Organic Compounds			77	U	N	300	U	N	250	U	N	19	U	N
N-Nitrosodiphenylamine	ug/kg	LDW09 - Other Organic Compounds	*28*	40	*77*	*U*	*N*	*300*	*U*	*N*	*250*	*U*	*N*	19	U	N
Pentachlorophenol	ug/kg	LDW09 - Other Organic Compounds	*360*	690	*380*	*U*	*N*	*1500*	*U*	*N*	*1300*	*U*	*N*	97	U	N
Phenol	ug/kg	LDW09 - Other Organic Compounds	*420*	1200	77	U	N	210	J	Y	130	J	Y	39	J	Y
>10 Phi Clay	%	LDW10 - Grain Size			6		Y							6.1		Y
8-9 Phi Clay	%	LDW10 - Grain Size			0.1	U	N							0.2		Y
9-10 Phi Clay	%	LDW10 - Grain Size			0.1	U	N							0.1	U	N
Coarse Sand	%	LDW10 - Grain Size			22.9		Y	25.3		Y				46.3		Y
Coarse Silt	%	LDW10 - Grain Size			0.4		Y							0.1		Y
Fine Gravel	%	LDW10 - Grain Size			18.5		Y	7.3		Y				8.7		Y
Fine Sand	%	LDW10 - Grain Size			0.4		Y	13.4		Y				1.6		Y
Fine Silt	%	LDW10 - Grain Size			0.6		Y							0.1	U	N
Gravel	%	LDW10 - Grain Size			14.7		Y	7.6		Y				8.2		Y
Medium Sand	%	LDW10 - Grain Size			17.1		Y	22.4		Y				12.3		Y
Medium Silt	%	LDW10 - Grain Size			0.1	U	N							0.1	U	N
Very Coarse Sand	%	LDW10 - Grain Size			16.8		Y	9.4		Y				14.4		Y
Very Fine Sand	%	LDW10 - Grain Size			0.2		Y	2.7		Y				0.1		Y
Very Fine Silt	%	LDW10 - Grain Size			0.6		Y							1.1		Y

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - Highland Park Wy SW SD
Attachment A, 90b - Actions Taken Pursuant to S4F

					Location	HP-ST4			HP-ST4			HP-ST6			HP-ST6			HP-ST6		
					Sample Date	10 May 2016			18 May 2015			10 May 2016			18 May 2015			18 May 2015		
					Sample Name	HP-ST4-051016			HP-ST4-051815			HP-ST6-051016			HP-ST6-051815			HP-ST6-051815G		
					Drainage Type	SD			SD			SD			SD			SD		
					Sample Method	SedTrap			SedTrap			SedTrap			SedTrap			Grab-Manual		
					Location Type	Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	Highland Park Wy SW SD			Highland Park Wy SW SD			Highland Park Wy SW SD			Highland Park Wy SW SD			Highland Park Wy SW SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
Solids, Total	%	LDW01 - Solids_TOC			77.04		Y	55.08		Y	35.22		Y	34.82		Y	69.2		Y
Total Organic Carbon	%	LDW01 - Solids_TOC			8.43		Y	8.98		Y	10.9		Y	11.9		Y	2.35		Y
Arsenic	mg/kg	LDW02 - Metals	57	93	6	U	N	9		Y	30		Y	50		Y	7	U	N
Copper	mg/kg	LDW02 - Metals	390	390	19.5		Y	37.8		Y	113		Y	131		Y	52.3		Y
Lead	mg/kg	LDW02 - Metals	450	530	11		Y	40		Y	160		Y	200		Y	40		Y
Mercury	mg/kg	LDW02 - Metals	0.41	0.59	0.03	U	N	0.05		Y	0.24		Y	0.27		Y	0.06		Y
Zinc	mg/kg	LDW02 - Metals	*410*	960	85		Y	212		Y	*793*		*Y*	*759*		*Y*	*495*		*Y*
Diesel Range Hydrocarbons	mg/kg	LDW03 - TPH	2000	2000	40		Y	700		Y	560		Y	1300		Y	170		Y
Motor Oil Range	mg/kg	LDW03 - TPH	*2000*	2000	290		Y	*2300*		*Y*	*2800*		*Y*	*4500*		*Y*	750		Y
Acenaphthene	ug/kg	LDW04 - LPAH	500	500	60	U	N	110	U	N	160		Y	290	J	Y	42		Y
Acenaphthylene	ug/kg	LDW04 - LPAH	1300	1300	60	U	N	110	U	N	120	U	N	360	U	N	19	U	N
Anthracene	ug/kg	LDW04 - LPAH	960	960	60	U	N	110	U	N	110	J	Y	140	J	Y	640		Y
Fluorene	ug/kg	LDW04 - LPAH	540	540	60	U	N	110	U	N	130		Y	220	J	Y	68		Y
LPAH	ug/kg	LDW04 - LPAH	5200	5200	27	J	Y	140		Y	950	J	Y	1410	J	Y	1007		Y
Naphthalene	ug/kg	LDW04 - LPAH	2100	2100	60	U	N	110	U	N	130		Y	220	J	Y	27		Y
Phenanthrene	ug/kg	LDW04 - LPAH	1500	1500	27	J	Y	140		Y	420		Y	540		Y	230		Y
Benzo(A)anthracene	ug/kg	LDW05 - HPAH	1300	1600	60	U	N	60	J	Y	250		Y	290	J	Y	170		Y
Benzo(A)pyrene	ug/kg	LDW05 - HPAH	1600	1600	60	U	N	81	J	Y	220		Y	290	J	Y	140		Y
Benzo(G,H,I)perylene	ug/kg	LDW05 - HPAH	670	720	39	J	Y	98	J	Y	420	J	Y	600		Y	92		Y
Benzofluoranthenes, Total	ug/kg	LDW05 - HPAH	3200	3600	33	J	Y	210	J	Y	520		Y	830		Y	450		Y
Chrysene	ug/kg	LDW05 - HPAH	1400	2800	36	J	Y	160		Y	510		Y	710		Y	550		Y
Dibenzo(A,H)anthracene	ug/kg	LDW05 - HPAH	*230*	230	60	U	N	110	U	N	64	J	Y	*360*	*U*	*N*	22		Y
Fluoranthene	ug/kg	LDW05 - HPAH	1700	2500	36	J	Y	190		Y	740		Y	980		Y	470		Y
HPAH	ug/kg	LDW05 - HPAH	12000	17000	192	J	Y	1058	J	Y	3714	J	Y	4990	J	Y	2398		Y
Indeno(1,2,3-Cd)pyrene	ug/kg	LDW05 - HPAH	600	690	60	U	N	49	J	Y	180	J	Y	290	J	Y	74		Y
Pyrene	ug/kg	LDW05 - HPAH	2600	3300	48	J	Y	210		Y	810		Y	1000		Y	430		Y
cPAH	ug/kg	LDW06 - cPAH (analyte only)		100	51.66	J	Y	136.5	J	Y	345.7	J	Y	510.1	J	Y	223.7		Y
Bis(2-ethylhexyl)phthalate	ug/kg	LDW07 - Phthalates	*1300*	1900	340		Y	*2200*		*Y*	*4600*		*Y*	*8300*		*Y*	*1900*		*Y*
Butylbenzylphthalate	ug/kg	LDW07 - Phthalates	*63*	900	*84*	*J*	*Y*	*570*		*Y*	*270*		*Y*	*580*		*Y*	*87*		*Y*
Diethylphthalate	ug/kg	LDW07 - Phthalates	*200*	1200	60	U	N	110	U	N	120	U	N	*360*	*U*	*N*	19	U	N
Dimethylphthalate	ug/kg	LDW07 - Phthalates	*71*	160	60	U	N	*110*	*U*	*N*	*82*	*J*	*Y*	*330*	*J*	*Y*	19	U	N
Di-N-Butylphthalate	ug/kg	LDW07 - Phthalates	1400	1400	60	U	N	320		Y	120	U	Y	360	U	N	19	U	N
Di-N-Octylphthalate	ug/kg	LDW07 - Phthalates	6200	6200	48	J	Y	300		Y	380		Y	440		Y	84		Y
Aroclor 1016	ug/kg	LDW08 - PCBs			18	U	N	18	U	N	19	U	N	19	U	N	18	U	N
Aroclor 1221	ug/kg	LDW08 - PCBs			18	U	N	18	U	N	19	U	N	19	U	N	18	U	N
Aroclor 1232	ug/kg	LDW08 - PCBs			18	U	N	18	U	N	19	U	N	19	U	N	18	U	N
Aroclor 1242	ug/kg	LDW08 - PCBs			18	U	N	18	U	N	19	U	N	19	U	N	18	U	N
Aroclor 1248	ug/kg	LDW08 - PCBs			18	U	N	18	U	N	140	U	N	230		Y	35	U	N
Aroclor 1254	ug/kg	LDW08 - PCBs			13	J	Y	34	J	Y	97		Y	170		Y	44		Y
Aroclor 1260	ug/kg	LDW08 - PCBs			18	U	N	18	U	N	78		Y	69	J	Y	24		Y
Polychlorinated Biphenyls	ug/kg	LDW08 - PCBs	*130*	1000	13	J	Y	34	J	Y	*175*		*Y*	*469*	*J*	*Y*	68		Y
1,2,4-Trichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*31*	51	*60*	*U*	*N*	*110*	*U*	*N*	*120*	*U*	*N*	*360*	*U*	*N*	19	U	N
1,2-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*35*	50	*60*	*U*	*N*	*110*	*U*	*N*	*120*	*U*	*N*	*360*	*U*	*N*	19	U	N
1,3-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds			60	U	N	110	U	N	120	U	N	360	U	N	19	U	N
1,4-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*110*	110	60	U	N	*110*	*U*	*N*	*120*	*U*	*N*	*360*	*U*	*N*	19	U	N
1-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds			60	U	N	110	U	N	120	U	N	360	U	N	19	U	N
2,2'-Oxybis(1-chloropropane)	ug/kg	LDW09 - Other Organic Compounds			60	U	N	110	U	N	120	U	N	360	U	N	19	U	N
2,4,5-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds			300	U	N	540	U	N	590	U	N	1800	U	N	94	U	N
2,4,6-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds			300	U	N	540	U	N	590	U	N	1800	U	N	94	U	N
2,4-Dichlorophenol	ug/kg	LDW09 - Other Organic Compounds			300	U	N	540	U	N	590	U	N	1800	U	N	94	U	N
2,4-Dimethylphenol	ug/kg	LDW09 - Other Organic Compounds	*29*	29	*300*	*U*	*N*	*540*	*U*	*N*	*590*	*U*	*N*	*1800*	*U*	*N*	*94*	*U*	*N*
2,4-Dinitrophenol	ug/kg	LDW09 - Other Organic Compounds			600	U	N	1100	U	N	1200	U	N	3600	U	N	190	U	N
2,4-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds			300	U	N	540	U	N	590	U	N	1800	U	N	94	U	N
2,6-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds			300	U	N	540	U	N	590	U	N	1800	U	N	94	U	N
2-Chloronaphthalene	ug/kg	LDW09 - Other Organic Compounds			60	U	N	110	U	N	120	U	N	360	U	N	19	U	N
2-Chlorophenol	ug/kg	LDW09 - Other Organic Compounds			60	U	N	110	U	N	120	U	N	360	U	N	19	U	N
2-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds	670	670	60	U	N	32	J	Y	120	U	N	360	U	N	22		Y
2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*63*	63	60	U	N	*110*	*U*	*N*	*120*	*U*	*N*	*360*	*U*	*N*	19	U	N
2-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			300	U	N	540	U	N	590	U	N	1800	U	N	94	U	N
2-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			60	U	N	110	U	N	120	U	N	360	U	N	19	U	N

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - Highland Park Wy SW SD
Attachment A, 90b - Actions Taken Pursuant to S4F

					Location	HP-ST4			HP-ST4			HP-ST6			HP-ST6			HP-ST6		
					Sample Date	10 May 2016			18 May 2015			10 May 2016			18 May 2015			18 May 2015		
					Sample Name	HP-ST4-051016			HP-ST4-051815			HP-ST6-051016			HP-ST6-051815			HP-ST6-051815G		
					Drainage Type	SD			SD			SD			SD			SD		
					Sample Method	SedTrap			SedTrap			SedTrap			SedTrap			Grab-Manual		
					Location Type	Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	Highland Park Wy SW SD			Highland Park Wy SW SD			Highland Park Wy SW SD			Highland Park Wy SW SD			Highland Park Wy SW SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
3,3`-Dichlorobenzidine	ug/kg	LDW09 - Other Organic Compounds			300	UJ	N				590	UJ	N				94	U	N
3-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			300	U	N	540	U	N	590	U	N	1800	U	N	94	U	N
4,6-Dinitro-2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			600	U	N	1100	U	N	1200	U	N	3600	U	N	190	U	N
4-Bromophenyl phenyl ether	ug/kg	LDW09 - Other Organic Compounds			60	U	N	110	U	N	120	U	N	360	U	N	19	U	N
4-Chloro-3-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			300	U	N	540	U	N	590	U	N	1800	U	N	94	U	N
4-Chloroaniline	ug/kg	LDW09 - Other Organic Compounds			300	U	N	540	U	N	590	U	N	1800	U	N	94	U	N
4-Chlorophenyl Phenylether	ug/kg	LDW09 - Other Organic Compounds			60	U	N	110	U	N	120	U	N	360	U	N	19	U	N
4-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*670*	670	*900*		*Y*	*1100*		*Y*	120		Y	360	U	N	31		Y
4-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			300	U	N	540	U	N	590	U	N	1800	U	N	94	U	N
4-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			300	U	N	540	U	N	590	U	N	1800	U	N	94	U	N
Benzoic acid	ug/kg	LDW09 - Other Organic Compounds	*650*	650	600	U	N	*940*	*J*	*Y*	*2100*		*Y*	*7500*		*Y*	430		Y
Benzyl alcohol	ug/kg	LDW09 - Other Organic Compounds	*57*	73	*60*	*U*	*N*				*860*		*Y*						
bis(2-Chloroethoxy) methane	ug/kg	LDW09 - Other Organic Compounds			60	U	N	110	U	N	120	U	N	360	U	N	19	U	N
Bis-(2-chloroethyl) ether	ug/kg	LDW09 - Other Organic Compounds			60	U	N	110	U	N	120	U	N	360	U	N	19	U	N
Carbazole	ug/kg	LDW09 - Other Organic Compounds			60	U	N	110	U	N	120	U	N	360	U	N	250		Y
Dibenzofuran	ug/kg	LDW09 - Other Organic Compounds	540	540	60	U	N	110	U	N	100	J	Y	360	U	N	30		Y
Hexachlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*22*	70	*60*	*U*	*N*	*110*	*U*	*N*	*120*	*U*	*N*	*360*	*U*	*N*	19	U	N
Hexachlorobutadiene	ug/kg	LDW09 - Other Organic Compounds	*11*	120	*60*	*U*	*N*	*110*	*U*	*N*	*120*	*U*	*N*	*360*	*U*	*N*	*19*	*U*	*N*
Hexachlorocyclopentadiene	ug/kg	LDW09 - Other Organic Compounds			300	U	N	540	U	N	590	U	N	1800	U	N	94	U	N
Hexachloroethane	ug/kg	LDW09 - Other Organic Compounds			60	U	N	110	U	N	120	U	N	360	U	N	19	U	N
Isophorone	ug/kg	LDW09 - Other Organic Compounds			60	U	N	110	U	N	120	U	N	360	U	N	19	U	N
Nitrobenzene	ug/kg	LDW09 - Other Organic Compounds			60	U	N	110	U	N	120	U	N	360	U	N	19	U	N
N-Nitroso-Di-N-Propylamine	ug/kg	LDW09 - Other Organic Compounds			60	U	N	110	U	N	120	U	N	360	U	N	19	U	N
N-Nitrosodiphenylamine	ug/kg	LDW09 - Other Organic Compounds	*28*	40	*60*	*U*	*N*	*110*	*U*	*N*	*120*	*U*	*N*	*360*	*U*	*N*	19	U	N
Pentachlorophenol	ug/kg	LDW09 - Other Organic Compounds	*360*	690	300	U	N	*540*	*U*	*N*	*590*	*U*	*N*	*1800*	*U*	*N*	94	U	N
Phenol	ug/kg	LDW09 - Other Organic Compounds	*420*	1200	60	U	N	260		Y	320	J	Y	*690*		*Y*	66	J	Y
>10 Phi Clay	%	LDW10 - Grain Size															8.3		Y
8-9 Phi Clay	%	LDW10 - Grain Size															0.4		Y
9-10 Phi Clay	%	LDW10 - Grain Size															0.1	U	N
Coarse Sand	%	LDW10 - Grain Size			23		Y										44.7		Y
Coarse Silt	%	LDW10 - Grain Size															0.5		Y
Fine Gravel	%	LDW10 - Grain Size			11.2		Y										3.7		Y
Fine Sand	%	LDW10 - Grain Size			4.5		Y										3		Y
Fine Silt	%	LDW10 - Grain Size															1.7		Y
Gravel	%	LDW10 - Grain Size			13.5		Y										3.5		Y
Medium Sand	%	LDW10 - Grain Size			14.2		Y										14.9		Y
Medium Silt	%	LDW10 - Grain Size															2.7		Y
Very Coarse Sand	%	LDW10 - Grain Size			27.4		Y										12.4		Y
Very Fine Sand	%	LDW10 - Grain Size			3.1		Y										1.5		Y
Very Fine Silt	%	LDW10 - Grain Size															2.4		Y

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - I-5 SD at Slip 4
Attachment A, 90b - Actions Taken Pursuant to S4F

					Location	SL4-T6			SL4-T6		
					Sample Date	09 May 2016			18 May 2015		
					Sample Name	SL4-T6-050916			SL4-T6-051815		
					Drainage Type	SD			SD		
					Sample Method	SedTrap			SedTrap		
					Location Type	Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	I-5 SD at Slip 4			I-5 SD at Slip 4		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected	Result	Qualifier	Detected
Solids, Total	%	LDW01 - Solids_TOC			63.96		Y	61.91		Y
Total Organic Carbon	%	LDW01 - Solids_TOC			2.72		Y	4.9		Y
Arsenic	mg/kg	LDW02 - Metals	57	93	9		Y	11		Y
Copper	mg/kg	LDW02 - Metals	390	390	110		Y	157		Y
Lead	mg/kg	LDW02 - Metals	450	530	55		Y	68		Y
Mercury	mg/kg	LDW02 - Metals	0.41	0.59	0.04		Y	0.07		Y
Zinc	mg/kg	LDW02 - Metals	*410*	960	*445*		*Y*	*503*		*Y*
Diesel Range Hydrocarbons	mg/kg	LDW03 - TPH	2000	2000				1300		Y
Motor Oil Range	mg/kg	LDW03 - TPH	*2000*	2000	1300		Y	*3400*		*Y*
Acenaphthene	ug/kg	LDW04 - LPAH	500	500	97	U	N	85	J	Y
Acenaphthylene	ug/kg	LDW04 - LPAH	1300	1300	97	U	N	240	U	N
Anthracene	ug/kg	LDW04 - LPAH	960	960	63	J	Y	220	J	Y
Fluorene	ug/kg	LDW04 - LPAH	540	540	58	J	Y	97	J	Y
LPAH	ug/kg	LDW04 - LPAH	5200	5200	604	J	Y	1522	J	Y
Naphthalene	ug/kg	LDW04 - LPAH	2100	2100	63	J	Y	120	J	Y
Phenanthrene	ug/kg	LDW04 - LPAH	1500	1500	420		Y	1000		Y
Benzo(A)anthracene	ug/kg	LDW05 - HPAH	1300	1600	200		Y	680		Y
Benzo(A)pyrene	ug/kg	LDW05 - HPAH	1600	1600	270		Y	640		Y
Benzo(G,H,I)perylene	ug/kg	LDW05 - HPAH	670	720	300		Y	530		Y
Benzofluoranthenes, Total	ug/kg	LDW05 - HPAH	3200	3600	620	J	Y	1400		Y
Chrysene	ug/kg	LDW05 - HPAH	1400	2800	440		Y	1000		Y
Dibenzo(A,H)anthracene	ug/kg	LDW05 - HPAH	230	230	73	J	Y	170	J	Y
Fluoranthene	ug/kg	LDW05 - HPAH	*1700*	2500	680		Y	*1800*		*Y*
HPAH	ug/kg	LDW05 - HPAH	12000	17000	3433	J	Y	8260	J	Y
Indeno(1,2,3-Cd)pyrene	ug/kg	LDW05 - HPAH	600	690	180		Y	440		Y
Pyrene	ug/kg	LDW05 - HPAH	2600	3300	670		Y	1600		Y
cPAH	ug/kg	LDW06 - cPAH (analyte only)		100	403.6	J	Y	970	J	Y
Bis(2-ethylhexyl)phthalate	ug/kg	LDW07 - Phthalates	*1300*	1900	*4100*		*Y*	*20000*		*Y*
Butylbenzylphthalate	ug/kg	LDW07 - Phthalates	*63*	900	*340*		*Y*	*280*		*Y*
Diethylphthalate	ug/kg	LDW07 - Phthalates	*200*	1200	97	U	N	*240*	*U*	*N*
Dimethylphthalate	ug/kg	LDW07 - Phthalates	*71*	160	*97*	*U*	*N*	*97*	*J*	*Y*
Di-N-Butylphthalate	ug/kg	LDW07 - Phthalates	1400	1400	53	J	Y	140	J	Y
Di-N-Octylphthalate	ug/kg	LDW07 - Phthalates	6200	6200	360		Y	1100		Y
Aroclor 1016	ug/kg	LDW08 - PCBs			20	U	N	17	U	N
Aroclor 1221	ug/kg	LDW08 - PCBs			20	U	N	17	U	N
Aroclor 1232	ug/kg	LDW08 - PCBs			20	U	N	17	U	N
Aroclor 1242	ug/kg	LDW08 - PCBs			20	U	N	17	U	N
Aroclor 1248	ug/kg	LDW08 - PCBs			29	U	N	64		Y
Aroclor 1254	ug/kg	LDW08 - PCBs			45		Y	73		Y
Aroclor 1260	ug/kg	LDW08 - PCBs			35		Y	34	J	Y
Polychlorinated Biphenyls	ug/kg	LDW08 - PCBs	*130*	1000	80		Y	*171*	*J*	*Y*
1,2,4-Trichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*31*	51	*97*	*U*	*N*	*240*	*U*	*N*
1,2-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*35*	50	*97*	*U*	*N*	*240*	*U*	*N*
1,3-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds			97	U	N	240	U	N
1,4-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*110*	110	97	U	N	*240*	*U*	*N*
1-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds			97	U	N	85	J	Y
2,2'-Oxybis(1-chloropropane)	ug/kg	LDW09 - Other Organic Compounds			97	U	N	240	U	N
2,4,5-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds			490	U	N	1200	U	N
2,4,6-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds			490	U	N	1200	U	N
2,4-Dichlorophenol	ug/kg	LDW09 - Other Organic Compounds			490	U	N	1200	U	N
2,4-Dimethylphenol	ug/kg	LDW09 - Other Organic Compounds	*29*	29	*490*	*U*	*N*	*1200*	*U*	*N*
2,4-Dinitrophenol	ug/kg	LDW09 - Other Organic Compounds			970	U	N	2400	U	N
2,4-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds			490	U	N	1200	U	N
2,6-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds			490	U	N	1200	U	N
2-Chloronaphthalene	ug/kg	LDW09 - Other Organic Compounds			97	U	N	240	U	N
2-Chlorophenol	ug/kg	LDW09 - Other Organic Compounds			97	U	N	240	U	N
2-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds	670	670	49	J	Y	120	J	Y
2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*63*	63	*97*	*U*	*N*	*240*	*U*	*N*
2-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			490	U	N	1200	U	N
2-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			97	U	N	240	U	N

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - I-5 SD at Slip 4
Attachment A, 90b - Actions Taken Pursuant to S4F

				Location	SL4-T6			SL4-T6		
				Sample Date	09 May 2016			18 May 2015		
				Sample Name	SL4-T6-050916			SL4-T6-051815		
				Drainage Type	SD			SD		
				Sample Method	SedTrap			SedTrap		
				Location Type	Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap		
				Project	Lower Duwamish Waterway			Lower Duwamish Waterway		
				Outfall	I-5 SD at Slip 4			I-5 SD at Slip 4		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected	Result	Qualifier	Detected
3,3`-Dichlorobenzidine	ug/kg	LDW09 - Other Organic Compounds			490	U	N			
3-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			490	U	N	1200	U	N
4,6-Dinitro-2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			970	U	N	2400	U	N
4-Bromophenyl phenyl ether	ug/kg	LDW09 - Other Organic Compounds			97	U	N	240	U	N
4-Chloro-3-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			490	U	N	1200	U	N
4-Chloroaniline	ug/kg	LDW09 - Other Organic Compounds			490	U	N	1200	U	N
4-Chlorophenyl Phenylether	ug/kg	LDW09 - Other Organic Compounds			97	U	N	240	U	N
4-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*670*	670	*1400*		*Y*	*730*		*Y*
4-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			490	U	N	1200	U	N
4-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			490	U	N	1200	U	N
Benzoic acid	ug/kg	LDW09 - Other Organic Compounds	*650*	650	*660*	*J*	*Y*	*850*	*J*	*Y*
Benzyl alcohol	ug/kg	LDW09 - Other Organic Compounds	*57*	73	*240*	*J*	*Y*			
bis(2-Chloroethoxy) methane	ug/kg	LDW09 - Other Organic Compounds			97	U	N	240	U	N
Bis-(2-chloroethyl) ether	ug/kg	LDW09 - Other Organic Compounds			97	U	N	240	U	N
Carbazole	ug/kg	LDW09 - Other Organic Compounds			100		Y	170	J	Y
Dibenzofuran	ug/kg	LDW09 - Other Organic Compounds	540	540	97	U	N	240	U	N
Hexachlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*22*	70	*97*	*U*	*N*	*240*	*U*	*N*
Hexachlorobutadiene	ug/kg	LDW09 - Other Organic Compounds	*11*	120	*97*	*U*	*N*	*240*	*U*	*N*
Hexachlorocyclopentadiene	ug/kg	LDW09 - Other Organic Compounds			490	U	N	1200	U	N
Hexachloroethane	ug/kg	LDW09 - Other Organic Compounds			97	U	N	240	U	N
Isophorone	ug/kg	LDW09 - Other Organic Compounds			97	U	N	240	U	N
Nitrobenzene	ug/kg	LDW09 - Other Organic Compounds			97	U	N	240	U	N
N-Nitroso-Di-N-Propylamine	ug/kg	LDW09 - Other Organic Compounds			97	U	N	240	U	N
N-Nitrosodiphenylamine	ug/kg	LDW09 - Other Organic Compounds	*28*	40	*97*	*U*	*N*	*240*	*U*	*N*
Pentachlorophenol	ug/kg	LDW09 - Other Organic Compounds	*360*	690	*490*	*U*	*N*	*1200*	*U*	*N*
Phenol	ug/kg	LDW09 - Other Organic Compounds	420	1200	180		Y	170	J	Y

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - S Brighton St SD
Attachment A, 90b - Actions Taken Pursuant to S4F

				Location	RCB178		
				Sample Date	22 Dec 2016		
				Sample Name	MKJ-122216-2		
				Drainage Type	SD		
				Sample Method	Grab-Manual		
				Location Type	RCB		
				Project	Lower Duwamish Waterway		
				Outfall	S Brighton St SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected
Solids, Total	%	LDW01 - Solids_TOC			56.09		Y
Total Organic Carbon	%	LDW01 - Solids_TOC			7.02		Y
Aroclor 1016	ug/kg	LDW08 - PCBs			18.4	U	N
Aroclor 1221	ug/kg	LDW08 - PCBs			18.4	U	N
Aroclor 1232	ug/kg	LDW08 - PCBs			18.4	U	N
Aroclor 1242	ug/kg	LDW08 - PCBs			18.4	U	N
Aroclor 1248	ug/kg	LDW08 - PCBs			261		Y
Aroclor 1254	ug/kg	LDW08 - PCBs			195		Y
Aroclor 1260	ug/kg	LDW08 - PCBs			106	J	Y
Polychlorinated Biphenyls	ug/kg	LDW08 - PCBs	*130*	1000	*562*	*J*	*Y*

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - S Myrtle St SD
Attachment A, 90b - Actions Taken Pursuant to S4F

				Location	RCB65		
				Sample Date	05 Feb 2015		
				Sample Name	RCB62-020515		
				Drainage Type	SD		
				Sample Method	Grab-Manual		
				Location Type	RCB		
				Project	Lower Duwamish Waterway		
				Outfall	S Myrtle St SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected
Solids, Total	%	LDW01 - Solids_TOC			51.11		Y
Total Organic Carbon	%	LDW01 - Solids_TOC			7.27		Y
Arsenic	mg/kg	LDW02 - Metals	57	93	20		Y
Copper	mg/kg	LDW02 - Metals	390	390	382		Y
Lead	mg/kg	LDW02 - Metals	450	530	334		Y
Mercury	mg/kg	LDW02 - Metals	*0.41*	0.59	*0.69*		*Y*
Zinc	mg/kg	LDW02 - Metals	*410*	960	*2470*		*Y*
Diesel Range Hydrocarbons	mg/kg	LDW03 - TPH	*2000*	2000	*2000*		*Y*
Motor Oil Range	mg/kg	LDW03 - TPH	*2000*	2000	*7100*		*Y*
Acenaphthene	ug/kg	LDW04 - LPAH	500	500	140	U	N
Acenaphthylene	ug/kg	LDW04 - LPAH	1300	1300	36	J	Y
Anthracene	ug/kg	LDW04 - LPAH	960	960	140	J	Y
Fluorene	ug/kg	LDW04 - LPAH	540	540	86	J	Y
LPAH	ug/kg	LDW04 - LPAH	5200	5200	1132	J	Y
Naphthalene	ug/kg	LDW04 - LPAH	2100	2100	180		Y
Phenanthrene	ug/kg	LDW04 - LPAH	1500	1500	690		Y
Benzo(A)anthracene	ug/kg	LDW05 - HPAH	1300	1600	480		Y
Benzo(A)pyrene	ug/kg	LDW05 - HPAH	1600	1600	540		Y
Benzo(G,H,I)perylene	ug/kg	LDW05 - HPAH	670	720	270	J	Y
Benzofluoranthenes, Total	ug/kg	LDW05 - HPAH	3200	3600	1200		Y
Chrysene	ug/kg	LDW05 - HPAH	1400	2800	800		Y
Dibenzo(A,H)anthracene	ug/kg	LDW05 - HPAH	230	230	100	J	Y
Fluoranthene	ug/kg	LDW05 - HPAH	1700	2500	1100		Y
HPAH	ug/kg	LDW05 - HPAH	12000	17000	5810	J	Y
Indeno(1,2,3-Cd)pyrene	ug/kg	LDW05 - HPAH	600	690	220	J	Y
Pyrene	ug/kg	LDW05 - HPAH	2600	3300	1100		Y
cPAH	ug/kg	LDW06 - cPAH (analyte only)		100	778	J	Y
Bis(2-ethylhexyl)phthalate	ug/kg	LDW07 - Phthalates	*1300*	1900	*14000*		*Y*
Butylbenzylphthalate	ug/kg	LDW07 - Phthalates	*63*	900	*1900*	*J*	*Y*
Diethylphthalate	ug/kg	LDW07 - Phthalates	200	1200	140	U	N
Dimethylphthalate	ug/kg	LDW07 - Phthalates	*71*	160	*430*		*Y*
Di-N-Butylphthalate	ug/kg	LDW07 - Phthalates	1400	1400	550		Y
Di-N-Octylphthalate	ug/kg	LDW07 - Phthalates	6200	6200	140	UJ	N
Aroclor 1016	ug/kg	LDW08 - PCBs			19	U	N
Aroclor 1221	ug/kg	LDW08 - PCBs			19	U	N
Aroclor 1232	ug/kg	LDW08 - PCBs			19	U	N
Aroclor 1242	ug/kg	LDW08 - PCBs			930		Y
Aroclor 1248	ug/kg	LDW08 - PCBs			19	U	N
Aroclor 1254	ug/kg	LDW08 - PCBs			670		Y
Aroclor 1260	ug/kg	LDW08 - PCBs			150		Y
Polychlorinated Biphenyls	ug/kg	LDW08 - PCBs	*130*	1000	*1750*		*Y*
1,2,4-Trichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*31*	51	*140*	*U*	*N*
1,2-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*35*	50	*140*	*U*	*N*
1,3-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds			140	U	N
1,4-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*110*	110	*140*	*U*	*N*
1-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds			110	J	Y
2,2'-Oxybis(1-chloropropane)	ug/kg	LDW09 - Other Organic Compounds			140	UJ	N
2,4,5-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds			710	U	N
2,4,6-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds			710	U	N
2,4-Dichlorophenol	ug/kg	LDW09 - Other Organic Compounds			710	U	N
2,4-Dimethylphenol	ug/kg	LDW09 - Other Organic Compounds	*29*	29	*710*	*U*	*N*
2,4-Dinitrophenol	ug/kg	LDW09 - Other Organic Compounds			1400	UJ	N
2,4-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds			710	U	N
2,6-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds			710	U	N
2-Chloronaphthalene	ug/kg	LDW09 - Other Organic Compounds			140	U	N
2-Chlorophenol	ug/kg	LDW09 - Other Organic Compounds			140	UJ	N
2-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds	670	670	220		Y
2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*63*	63	*140*	*U*	*N*
2-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			710	U	N
2-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			140	U	N

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - S Myrtle St SD
Attachment A, 90b - Actions Taken Pursuant to S4F

				Location	RCB65		
				Sample Date	05 Feb 2015		
				Sample Name	RCB62-020515		
				Drainage Type	SD		
				Sample Method	Grab-Manual		
				Location Type	RCB		
				Project	Lower Duwamish Waterway		
				Outfall	S Myrtle St SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected
3,3`-Dichlorobenzidine	ug/kg	LDW09 - Other Organic Compounds			710	U	N
3-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			710	UJ	N
4,6-Dinitro-2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			1400	U	N
4-Bromophenyl phenyl ether	ug/kg	LDW09 - Other Organic Compounds			140	U	N
4-Chloro-3-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			710	U	N
4-Chloroaniline	ug/kg	LDW09 - Other Organic Compounds			710	U	N
4-Chlorophenyl Phenylether	ug/kg	LDW09 - Other Organic Compounds			140	U	N
4-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*670*	670	*910*		*Y*
4-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			710	U	N
4-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			710	U	N
Benzoic acid	ug/kg	LDW09 - Other Organic Compounds	650	650	480	J	Y
Benzyl alcohol	ug/kg	LDW09 - Other Organic Compounds	*57*	73	*140*	*U*	*N*
bis(2-Chloroethoxy) methane	ug/kg	LDW09 - Other Organic Compounds			140	U	N
Bis-(2-chloroethyl) ether	ug/kg	LDW09 - Other Organic Compounds			140	U	N
Carbazole	ug/kg	LDW09 - Other Organic Compounds			93	J	Y
Dibenzofuran	ug/kg	LDW09 - Other Organic Compounds	540	540	140	U	N
Hexachlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*22*	70	*140*	*U*	*N*
Hexachlorobutadiene	ug/kg	LDW09 - Other Organic Compounds	*11*	120	*140*	*U*	*N*
Hexachlorocyclopentadiene	ug/kg	LDW09 - Other Organic Compounds			710	U	N
Hexachloroethane	ug/kg	LDW09 - Other Organic Compounds			140	U	N
Isophorone	ug/kg	LDW09 - Other Organic Compounds			140	U	N
Nitrobenzene	ug/kg	LDW09 - Other Organic Compounds			140	U	N
N-Nitroso-Di-N-Propylamine	ug/kg	LDW09 - Other Organic Compounds			140	U	N
N-Nitrosodiphenylamine	ug/kg	LDW09 - Other Organic Compounds	*28*	40	*140*	*U*	*N*
Pentachlorophenol	ug/kg	LDW09 - Other Organic Compounds	*360*	690	*710*	*U*	*N*
Phenol	ug/kg	LDW09 - Other Organic Compounds	*420*	1200	*1000*		*Y*
>10 Phi Clay	%	LDW10 - Grain Size			3.5		Y
8-9 Phi Clay	%	LDW10 - Grain Size			10.5		Y
9-10 Phi Clay	%	LDW10 - Grain Size			6.4		Y
Coarse Sand	%	LDW10 - Grain Size			2.8		Y
Coarse Silt	%	LDW10 - Grain Size			10.9		Y
Fine Sand	%	LDW10 - Grain Size			3.8		Y
Fine Silt	%	LDW10 - Grain Size			13.3		Y
Gravel	%	LDW10 - Grain Size			2.9		Y
Medium Sand	%	LDW10 - Grain Size			3.1		Y
Medium Silt	%	LDW10 - Grain Size			18.6		Y
Total Fines	%	LDW10 - Grain Size			79.5		Y
Very Coarse Sand	%	LDW10 - Grain Size			2.9		Y
Very Fine Sand	%	LDW10 - Grain Size			5.1		Y
Very Fine Silt	%	LDW10 - Grain Size			16.2		Y

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - S Norfolk St CSOPS17 EOFSD
Attachment A, 90b - Actions Taken Pursuant to S4F

					Location	CB189			CB189			CB193			CB195			CB196			CB197		
					Sample Date	06 Apr 2016			23 Apr 2015			22 Jun 2015			22 Jun 2015			22 Jun 2015			15 Jul 2015		
					Sample Name	CB189-040616			CB189-042315			CB193-062215			CB195-062215			CB196-062215			CB197-071515		
					Drainage Type	SD			SD			SD			SD			SD			SD		
					Sample Method	Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual		
					Location Type	CB			CB			CB			CB			CB			CB		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET		Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
Solids, Total	%	LDW01 - Solids_TOC				53.15		Y	45.87		Y	43.05		Y	25.86		Y	76.97		Y	66.95		Y
Total Organic Carbon	%	LDW01 - Solids_TOC				2.85		Y	4.62	J	Y	5.1		Y	5.06		Y	1.57		Y	2.65		Y
Arsenic	mg/kg	LDW02 - Metals	57	93		2.7		Y	2.8		Y	30		Y	20		Y	12		Y	20		Y
Copper	mg/kg	LDW02 - Metals	*390*	390		*1560*		*Y*	*643*		*Y*	171		Y	96.1		Y	27.4		Y	81.5		Y
Lead	mg/kg	LDW02 - Metals	450	530		35		Y	40		Y	42		Y	81		Y	34		Y	43		Y
Mercury	mg/kg	LDW02 - Metals	0.41	0.59		0.11		Y	0.12		Y	0.1		N	0.2		Y	0.11		Y	0.04		Y
Zinc	mg/kg	LDW02 - Metals	*410*	960		*483*		*Y*	*593*		*Y*	*1160*		*Y*	*1810*		*Y*	79		Y	362		Y
Diesel Range (Silica and Acid Cleaned)	mg/kg	LDW03 - TPH	2000	2000																			
Diesel Range Hydrocarbons	mg/kg	LDW03 - TPH	*2000*	2000		380		Y	1200		Y	*9500*		*Y*	280		Y	68		N	1000		Y
Motor Oil (Silica and Acid Cleaned)	mg/kg	LDW03 - TPH	*2000*	2000																			
Motor Oil Range	mg/kg	LDW03 - TPH	*2000*	2000		*2800*		*Y*	*4400*		*Y*	*16000*		*Y*	1900		Y	140		N	*3300*		*Y*
Acenaphthene	ug/kg	LDW04 - LPAH	*500*	500		300	U	N	110	U	N	230	U	N	120	U	N	19	U	N	23	J	Y
Acenaphthylene	ug/kg	LDW04 - LPAH	1300	1300		300	U	N	110	U	N	230	U	N	120	U	N	19	U	N	17	J	Y
Anthracene	ug/kg	LDW04 - LPAH	*960*	960		300	U	N	110	U	N	230	U	N	35	J	Y	16	J	Y	52	J	Y
Fluorene	ug/kg	LDW04 - LPAH	*540*	540		300	U	N	110	U	N	230	U	N	120	U	N	19	U	N	37	J	Y
LPAH	ug/kg	LDW04 - LPAH	*5200*	5200		160	J	Y	166	J	Y	390	J	Y	418	J	Y	69.8	J	Y	418	J	Y
Naphthalene	ug/kg	LDW04 - LPAH	2100	2100		300	U	N	46	J	Y	70	J	Y	93	J	Y	6.8	J	Y	49	J	Y
Phenanthrene	ug/kg	LDW04 - LPAH	*1500*	1500		160	J	Y	120		Y	320		Y	290		Y	47		Y	240		Y
Benzo(A)anthracene	ug/kg	LDW05 - HPAH	*1300*	1600		300	U	N	63	J	Y	100	J	Y	160		Y	59		Y	95		Y
Benzo(A)pyrene	ug/kg	LDW05 - HPAH	*1600*	1600		300	U	N	68	J	Y	230	U	N	200		Y	63		Y	120		Y
Benzo(G,H,I)perylene	ug/kg	LDW05 - HPAH	*670*	720		270	J	Y	220		Y	220	J	Y	240		Y	51		Y	120		Y
Benzofluoranthenes, Total	ug/kg	LDW05 - HPAH	*3200*	3600		600	U	N	170	J	Y	350	J	Y	540		Y	140		Y	200		Y
Chrysene	ug/kg	LDW05 - HPAH	*1400*	2800		300	U	N	160		Y	400		Y	340		Y	95		Y	180		Y
Dibenzo(A,H)anthracene	ug/kg	LDW05 - HPAH	*230*	230		*300*	*U*	*N*	110	U	N	*230*	*U*	*N*	41	J	Y	14	J	Y	57	U	N
Fluoranthene	ug/kg	LDW05 - HPAH	*1700*	2500		250	J	Y	150		Y	370		Y	420		Y	150		Y	290		Y
HPAH	ug/kg	LDW05 - HPAH	*12000*	17000		890	J	Y	1124	J	Y	1870	J	Y	2541	J	Y	756	J	Y	1402		Y
Indeno(1,2,3-Cd)pyrene	ug/kg	LDW05 - HPAH	*600*	690		300	U	N	63	J	Y	230	U	N	150		Y	44		Y	77		Y
Pyrene	ug/kg	LDW05 - HPAH	*2600*	3300		370		Y	230		Y	430		Y	450		Y	140		Y	320		Y
cPAH	ug/kg	LDW06 - cPAH (analyte only)		100		271.5	U	N	121.2	J	Y	221.5	J	Y	304.8	J	Y	93.85	J	Y	170.4		Y
Bis(2-ethylhexyl)phthalate	ug/kg	LDW07 - Phthalates	*1300*	1900		*6800*		*Y*	*6500*		*Y*	*74000*		*Y*	*5400*		*Y*	150		Y	*10000*		*Y*
Butylbenzylphthalate	ug/kg	LDW07 - Phthalates	*63*	900		*730*		*Y*	*110*	*U*	*N*	*230*	*U*	*N*	*180*		*Y*	16	J	Y	*980*		*Y*
Diethylphthalate	ug/kg	LDW07 - Phthalates	*200*	1200		*300*	*U*	*N*	110	U	N	*230*	*U*	*N*	120	U	N	35		Y	57	U	N
Dimethylphthalate	ug/kg	LDW07 - Phthalates	*71*	160		*300*	*U*	*N*	*110*	*U*	*N*	*230*	*U*	*N*	*120*	*U*	*N*	19	U	N	57	U	N
Di-N-Butylphthalate	ug/kg	LDW07 - Phthalates	*1400*	1400		680		Y	510		Y	610		Y	76	J	Y	19	U	N	160		Y
Di-N-Octylphthalate	ug/kg	LDW07 - Phthalates	*6200*	6200		300	U	N	110	U	N	1200		Y	430		Y	19	U	N	230		Y
Aroclor 1016	ug/kg	LDW08 - PCBs				19	U	N	18	U	N	19	U	N	19	U	N	19	U	N	19	U	N
Aroclor 1221	ug/kg	LDW08 - PCBs				19	U	N	18	U	N	19	U	N	19	U	N	19	U	N	19	U	N
Aroclor 1232	ug/kg	LDW08 - PCBs				19	U	N	18	U	N	19	U	N	19	U	N	19	U	N	19	U	N
Aroclor 1242	ug/kg	LDW08 - PCBs				19	U	N	18	U	N	19	U	N	19	U	N	19	U	N	19	U	N
Aroclor 1248	ug/kg	LDW08 - PCBs				19	U	N	18	U	N	19	U	N	19	U	N	19	U	N	480	U	N
Aroclor 1254	ug/kg	LDW08 - PCBs				50		Y	42		Y	29	U	N	48	J	Y	57		Y	2100		Y
Aroclor 1260	ug/kg	LDW08 - PCBs				31		Y	44		Y	24	U	N	34		Y	22		Y	140	U	N
Polychlorinated Biphenyls	ug/kg	LDW08 - PCBs	*130*	1000		81		Y	86		Y	29	U	N	82	J	Y	79		Y	*2100*		*Y*
1,2,4-Trichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*31*	51		*300*	*U*	*N*	*110*	*U*	*N*	*230*	*U*	*N*	*120*	*U*	*N*	19	U	N	*57*	*U*	*N*
1,2-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*35*	50		*300*	*U*	*N*	*110*	*U*	*N*	*230*	*U*	*N*	*120*	*U*	*N*	19	U	N	*57*	*U*	*N*
1,3-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds				300	U	N	110	U	N	230	U	N	120	U	N	19	U	N	57	U	N
1,4-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*110*	110		*300*	*U*	*N*	*110*	*U*	*N*	*230*	*U*	*N*	*120*	*U*	*N*	19	U	N	57	U	N
1-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds				300	U	N	110	U	N	230	U	N	120	U	N	19	U	N	29	J	Y
2,2'-Oxybis(1-chloropropane)	ug/kg	LDW09 - Other Organic Compounds				300	U	N	110	U	N	230	UJ	N	120	UJ	N	19	UJ	N	57	U	N
2,4,5-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds				1500	U	N	570	U	N	1200	U	N	580	U	N	97	U	N	290	U	N
2,4,6-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds				1500	U	N	570	U	N	1200	U	N	580	U	N	97	U	N	290	U	N
2,4-Dichlorophenol	ug/kg	LDW09 - Other Organic Compounds				1500	U	N	570	U	N	1200	U	N	580	U	N	97	U	N	290	U	N
2,4-Dimethylphenol	ug/kg	LDW09 - Other Organic Compounds	*29*	29		*1500*	*U*	*N*	*570*	*U*	*N*	*1200*	*U*	*N*	*580*	*U*	*N*	*97*	*U*	*N*	*290*	*U*	*N*
2,4-Dinitrophenol	ug/kg	LDW09 - Other Organic Compounds				3000	U	N	1100	U	N	2300	U	N	1200	U	N	190	U	N	570	U	N
2,4-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds				1500	U	N	570	U	N	1200	U	N	580	U	N	97	U	N	290	U	N
2,6-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds				1500	U	N	570	U	N	1200	U	N	580	U	N	97	U	N	290	U	N
2-Chloronaphthalene	ug/kg	LDW09 - Other Organic Compounds				300	U	N	110	U	N	230	U	N	120	U	N	19	U	N	57	U	N
2-Chlorophenol	ug/kg	LDW09 - Other Organic Compounds				300	U	N	110	U	N	230	U	N	120	U	N	19	U	N	57	U	N
2-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds	670	670		300	U	N	110	U	N	230	U	N	47	J	Y	9.7	J	Y	49	J	Y
2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*63*	63		*300*	*U*	*N*	*110*	*U*	*N*	*230*	*U*	*N*	*120*	*U*	*N*	9.7	J	Y	57	U	N

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Summary of Analytical Data - S Norfolk St CSOPS17 EOFSD
Attachment A, 90b - Actions Taken Pursuant to S4F

					Location	CB189			CB189			CB193			CB195			CB196			CB197		
					Sample Date	06 Apr 2016			23 Apr 2015			22 Jun 2015			22 Jun 2015			22 Jun 2015			15 Jul 2015		
					Sample Name	CB189-040616			CB189-042315			CB193-062215			CB195-062215			CB196-062215			CB197-071515		
					Drainage Type	SD			SD			SD			SD			SD			SD		
					Sample Method	Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual		
					Location Type	CB			CB			CB			CB			CB			CB		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
2-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			1500	U	N	570	U	N	1200	U	N	580	U	N	97	U	N	290	U	N
2-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			300	U	N	110	U	N	230	U	N	120	U	N	19	U	N	57	U	N
3,3`-Dichlorobenzidine	ug/kg	LDW09 - Other Organic Compounds			1500	U	N	570	UJ	N	1200	U	N	580	U	N	97	U	N	290	U	N
3-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			1500	U	N	570	U	N	1200	U	N	580	U	N	97	U	N	290	U	N
4,6-Dinitro-2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			3000	U	N	1100	U	N	2300	U	N	1200	U	N	190	U	N	570	U	N
4-Bromophenyl phenyl ether	ug/kg	LDW09 - Other Organic Compounds			300	U	N	110	U	N	230	U	N	120	U	N	19	U	N	57	U	N
4-Chloro-3-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			1500	U	N	570	U	N	1200	U	N	580	U	N	97	U	N	290	U	N
4-Chloroaniline	ug/kg	LDW09 - Other Organic Compounds			1500	U	N	570	U	N	1200	U	N	580	U	N	97	U	N	290	U	N
4-Chlorophenyl Phenylether	ug/kg	LDW09 - Other Organic Compounds			300	U	N	110	U	N	230	U	N	120	U	N	19	U	N	57	U	N
4-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*670*	670	330		Y	350		Y	*4600*		*Y*	220		Y	23		Y	200		Y
4-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			1500	U	N	570	U	N	1200	U	N	580	U	N	97	U	N	290	U	N
4-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			1500	U	N	570	U	N	1200	U	N	580	U	N	97	U	N	290	U	N
Benzoic acid	ug/kg	LDW09 - Other Organic Compounds	*650*	650	*1100*	*J*	*Y*	*2600*		*Y*	*2300*	*U*	*N*	*2000*		*Y*	590		Y	580		Y
Benzyl alcohol	ug/kg	LDW09 - Other Organic Compounds	*57*	73	*300*	*UJ*	*N*	*470*		*Y*	*430*		*Y*	*1000*		*Y*	*190*		*Y*			
bis(2-Chloroethoxy) methane	ug/kg	LDW09 - Other Organic Compounds			300	U	N	110	UJ	N	230	U	N	120	U	N	19	U	N	57	U	N
Bis-(2-chloroethyl) ether	ug/kg	LDW09 - Other Organic Compounds			300	U	N	110	UJ	N	230	U	N	120	U	N	19	U	N	57	U	N
Carbazole	ug/kg	LDW09 - Other Organic Compounds			300	UJ	N	110	U	N	230	U	N	120	U	N	9.7	J	Y	34	J	Y
Dibenzofuran	ug/kg	LDW09 - Other Organic Compounds	*540*	540	300	U	N	110	U	N	230	U	N	47	J	Y	19	U	N	57	U	N
Hexachlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*22*	70	*300*	*U*	*N*	*110*	*U*	*N*	*230*	*U*	*N*	*120*	*U*	*N*	19	U	N	*57*	*U*	*N*
Hexachlorobutadiene	ug/kg	LDW09 - Other Organic Compounds	*11*	120	*300*	*U*	*N*	*110*	*U*	*N*	*230*	*U*	*N*	*120*	*U*	*N*	*19*	*U*	*N*	*57*	*U*	*N*
Hexachlorocyclopentadiene	ug/kg	LDW09 - Other Organic Compounds			1500	U	N	570	U	N	1200	U	N	580	U	N	97	U	N	290	U	N
Hexachloroethane	ug/kg	LDW09 - Other Organic Compounds			300	U	N	110	U	N	230	U	N	120	U	N	19	U	N	57	U	N
Isophorone	ug/kg	LDW09 - Other Organic Compounds			300	U	N	110	U	N	230	U	N	120	U	N	19	U	N	57	U	N
Nitrobenzene	ug/kg	LDW09 - Other Organic Compounds			300	U	N	110	U	N	230	U	N	120	U	N	19	U	N	57	U	N
N-Nitroso-Di-N-Propylamine	ug/kg	LDW09 - Other Organic Compounds			300	U	N	110	UJ	N	230	U	N	120	U	N	19	U	N	57	U	N
N-Nitrosodiphenylamine	ug/kg	LDW09 - Other Organic Compounds	*28*	40	*300*	*U*	*N*	*110*	*UJ*	*N*	*230*	*U*	*N*	*120*	*U*	*N*	19	U	N	*49*	*J*	*Y*
Pentachlorophenol	ug/kg	LDW09 - Other Organic Compounds	*360*	690	*1500*	*U*	*N*	*570*	*U*	*N*	*1200*	*U*	*N*	*580*	*U*	*N*	31	J	Y	290	U	N
Phenol	ug/kg	LDW09 - Other Organic Compounds	*420*	1200	330		Y	*450*		*Y*	*450*		*Y*	260		Y	30		Y	160		Y
>10 Phi Clay	%	LDW10 - Grain Size						0.4		Y												
8-9 Phi Clay	%	LDW10 - Grain Size						1.1		Y												
9-10 Phi Clay	%	LDW10 - Grain Size						0.5		Y												
Coarse Sand	%	LDW10 - Grain Size			5.2		Y	4		Y	5.9		Y	0.3		Y	28		Y	18		Y
Coarse Silt	%	LDW10 - Grain Size						26.6		Y												
Fine Gravel	%	LDW10 - Grain Size			2.9		Y				9.2		Y	0.1	U	N	18.2		Y	3.1		Y
Fine Sand	%	LDW10 - Grain Size			11.2		Y	13.7		Y	7.9		Y	2.5		Y	4		Y	10.8		Y
Fine Silt	%	LDW10 - Grain Size						8.1		Y												
Gravel	%	LDW10 - Grain Size			2		Y	2.5		Y	2.4		Y	0.3		Y	9.1		Y	4.5		Y
Medium Sand	%	LDW10 - Grain Size			6.8		Y	7		Y	11.6		Y	1.4		Y	20.8		Y	31		Y
Medium Silt	%	LDW10 - Grain Size						16.1		Y												
Total Fines	%	LDW10 - Grain Size						56.1		Y												
Very Coarse Sand	%	LDW10 - Grain Size			2.9		Y	3		Y	3.1		Y	0.3		Y	7.7		Y	6.5		Y
Very Fine Sand	%	LDW10 - Grain Size			8.4		Y	13.8		Y	8.1		Y	1.7		Y	2.6		Y	4.3		Y
Very Fine Silt	%	LDW10 - Grain Size						3.2		Y												

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - S Norfolk St CSOPS17 EOFSD
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					Location	CB198			CB199			CB210			CB214			CB215			CB216		
					Sample Date	15 Jul 2015			15 Jul 2015			29 Jul 2015			29 Jul 2015			29 Jul 2015			29 Jul 2015		
					Sample Name	CB198-071515			CB199-071515			CB210-072915			CB214-072915			CB215-072915			CB216-072915		
					Drainage Type	SD			SD			SD			SD			SD			SD		
					Sample Method	Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual		
					Location Type	CB			CB			CB			CB			CB			CB		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET		Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
Solids, Total	%	LDW01 - Solids_TOC				70.31		Y	40.33		Y	35.02		Y	36.16		Y	44.65		Y	66.54		Y
Total Organic Carbon	%	LDW01 - Solids_TOC				2.79		Y	10.6		Y	16.3		Y	13.1		Y	5.88		Y	4.74		Y
Arsenic	mg/kg	LDW02 - Metals	57	93		20		Y	20		Y	20		Y	10	U	N	30		Y	17		Y
Copper	mg/kg	LDW02 - Metals	*390*	390		112		Y	*563*		*Y*	172		Y	84.2		Y	93.8		Y	142		Y
Lead	mg/kg	LDW02 - Metals	450	530		62		Y	60		Y	74		Y	100		Y	85		Y	133		Y
Mercury	mg/kg	LDW02 - Metals	0.41	0.59		0.03	U	N	0.07		Y	0.1		Y	0.06	UJ	N	0.08		Y	0.08		Y
Zinc	mg/kg	LDW02 - Metals	*410*	960		277		Y	*1000*		*Y*	*1120*		*Y*	*950*	*J*	*Y*	*1570*		*Y*	*1130*		*Y*
Diesel Range (Silica and Acid Cleaned)	mg/kg	LDW03 - TPH	2000	2000																			
Diesel Range Hydrocarbons	mg/kg	LDW03 - TPH	*2000*	2000		270		Y	700		Y	1100		Y	790		Y	160		Y	300		Y
Motor Oil (Silica and Acid Cleaned)	mg/kg	LDW03 - TPH	*2000*	2000																			
Motor Oil Range	mg/kg	LDW03 - TPH	*2000*	2000		1400		Y	*3000*		*Y*	*3300*		*Y*	*3800*		*Y*	780		Y	1200		Y
Acenaphthene	ug/kg	LDW04 - LPAH	*500*	500		56	J	Y	170	U	N	150	U	N	34	J	Y	99	U	N	94	U	N
Acenaphthylene	ug/kg	LDW04 - LPAH	1300	1300		110	U	N	170	U	N	150	U	N	110	U	N	99	U	N	94	U	N
Anthracene	ug/kg	LDW04 - LPAH	*960*	960		190		Y	67	J	Y	100	J	Y	63	J	Y	99	U	N	94	U	N
Fluorene	ug/kg	LDW04 - LPAH	*540*	540		66	J	Y	76	J	Y	52	J	Y	110	U	N	99	U	N	94	U	N
LPAH	ug/kg	LDW04 - LPAH	*5200*	5200		1192	J	Y	743	J	Y	872	J	Y	787	J	Y	94	J	Y	132	J	Y
Naphthalene	ug/kg	LDW04 - LPAH	2100	2100		110	U	N	190		Y	100	J	Y	110	J	Y	99	U	N	33	J	Y
Phenanthrene	ug/kg	LDW04 - LPAH	*1500*	1500		880		Y	410		Y	620		Y	580		Y	94	J	Y	99		Y
Benzo(A)anthracene	ug/kg	LDW05 - HPAH	*1300*	1600		900		Y	200		Y	390		Y	210		Y	75	J	Y	66	J	Y
Benzo(A)pyrene	ug/kg	LDW05 - HPAH	*1600*	1600		610		Y	240		Y	500		Y	270		Y	110		Y	80	J	Y
Benzo(G,H,I)perylene	ug/kg	LDW05 - HPAH	*670*	720		290		Y	340		Y	500		Y	410		Y	130		Y	140		Y
Benzofluoranthenes, Total	ug/kg	LDW05 - HPAH	*3200*	3600		1400		Y	570		Y	1300		Y	570		Y	250		Y	200		Y
Chrysene	ug/kg	LDW05 - HPAH	*1400*	2800		*1400*		*Y*	450		Y	1100		Y	580		Y	200		Y	140		Y
Dibenzo(A,H)anthracene	ug/kg	LDW05 - HPAH	*230*	230		120		Y	170	U	N	200		Y	91	J	Y	99	U	N	94	U	N
Fluoranthene	ug/kg	LDW05 - HPAH	*1700*	2500		*2000*		*Y*	560		Y	1100		Y	790		Y	190		Y	170		Y
HPAH	ug/kg	LDW05 - HPAH	*12000*	17000		8980		Y	3310		Y	6730		Y	4021	J	Y	1275	J	Y	1052	J	Y
Indeno(1,2,3-Cd)pyrene	ug/kg	LDW05 - HPAH	*600*	690		260		Y	200		Y	340		Y	170		Y	70	J	Y	66	J	Y
Pyrene	ug/kg	LDW05 - HPAH	*2600*	3300		2000		Y	750		Y	1300		Y	930		Y	250		Y	190		Y
cPAH	ug/kg	LDW06 - cPAH (analyte only)		100		928		Y	375.5		Y	794		Y	407.2	J	Y	171.3	J	Y	133.4	J	Y
Bis(2-ethylhexyl)phthalate	ug/kg	LDW07 - Phthalates	*1300*	1900		720		Y	*20000*		*Y*	*40000*		*Y*	*22000*		*Y*	670		Y	*1900*		*Y*
Butylbenzylphthalate	ug/kg	LDW07 - Phthalates	*63*	900		*110*	*U*	*N*	*170*	*U*	*N*	*280*		*Y*	*330*		*Y*	*220*		*Y*	*240*		*Y*
Diethylphthalate	ug/kg	LDW07 - Phthalates	*200*	1200		110	U	N	170	U	N	150	U	N	110	U	N	99	U	N	94	U	N
Dimethylphthalate	ug/kg	LDW07 - Phthalates	*71*	160		*110*	*U*	*N*	*170*	*U*	*N*	68	J	Y	63	J	Y	*99*	*U*	*N*	*94*	*U*	*N*
Di-N-Butylphthalate	ug/kg	LDW07 - Phthalates	*1400*	1400		39	J	Y	220		Y	1100		Y	120		Y	99	U	N	1100		Y
Di-N-Octylphthalate	ug/kg	LDW07 - Phthalates	*6200*	6200		110	U	N	650		Y	2000		Y	460		Y	99	U	N	47	J	Y
Aroclor 1016	ug/kg	LDW08 - PCBs				19	U	N	18	U	N	19	U	N	18	U	N	20	U	N	18	U	N
Aroclor 1221	ug/kg	LDW08 - PCBs				19	U	N	18	U	N	19	U	N	18	U	N	20	U	N	18	U	N
Aroclor 1232	ug/kg	LDW08 - PCBs				19	U	N	18	U	N	19	U	N	18	U	N	20	U	N	18	U	N
Aroclor 1242	ug/kg	LDW08 - PCBs				19	U	N	18	U	N	19	U	N	18	U	N	20	U	N	18	U	N
Aroclor 1248	ug/kg	LDW08 - PCBs				47	U	N	27	U	N	19	U	N	18	U	N	30	U	N	44	U	N
Aroclor 1254	ug/kg	LDW08 - PCBs				92		Y	78		Y	47	J	Y	57	J	Y	79		Y	150		Y
Aroclor 1260	ug/kg	LDW08 - PCBs				94	U	N	250		Y	15	J	Y	30		Y	42		Y	37		Y
Polychlorinated Biphenyls	ug/kg	LDW08 - PCBs	*130*	1000		92		Y	*328*		*Y*	62	J	Y	87	J	Y	121		Y	*187*		*Y*
1,2,4-Trichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*31*	51		*110*	*U*	*N*	*170*	*U*	*N*	*150*	*U*	*N*	*110*	*U*	*N*	*99*	*U*	*N*	*94*	*U*	*N*
1,2-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*35*	50		*110*	*U*	*N*	*170*	*U*	*N*	*150*	*U*	*N*	*110*	*U*	*N*	*99*	*U*	*N*	*94*	*U*	*N*
1,3-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds				110	U	N	170	U	N	150	U	N	110	U	N	99	U	N	94	U	N
1,4-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*110*	110		*110*	*U*	*N*	*170*	*U*	*N*	*150*	*U*	*N*	*110*	*U*	*N*	99	U	N	94	U	N
1-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds				110	U	N	180		Y	150	U	N	34	J	Y	99	U	N	94	U	N
2,2'-Oxybis(1-chloropropane)	ug/kg	LDW09 - Other Organic Compounds				110	U	N	170	U	N	150	U	N	110	U	N	99	U	N	94	U	N
2,4,5-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds				560	U	N	840	U	N	750	U	N	570	U	N	500	U	N	470	U	N
2,4,6-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds				560	U	N	840	U	N	750	U	N	570	U	N	500	U	N	470	U	N
2,4-Dichlorophenol	ug/kg	LDW09 - Other Organic Compounds				560	U	N	840	U	N	750	U	N	570	U	N	500	U	N	470	U	N
2,4-Dimethylphenol	ug/kg	LDW09 - Other Organic Compounds	*29*	29		*560*	*U*	*N*	*840*	*U*	*N*	*750*	*U*	*N*	*570*	*U*	*N*	*500*	*U*	*N*	*470*	*U*	*N*
2,4-Dinitrophenol	ug/kg	LDW09 - Other Organic Compounds				1100	U	N	1700	U	N	1500	U	N	1100	U	N	990	U	N	940	U	N
2,4-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds				560	U	N	840	U	N	750	U	N	570	U	N	500	U	N	470	U	N
2,6-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds				560	U	N	840	U	N	750	U	N	570	U	N	500	U	N	470	U	N
2-Chloronaphthalene	ug/kg	LDW09 - Other Organic Compounds				110	U	N	170	U	N	150	U	N	46	J	Y	99	U	N	94	U	N
2-Chlorophenol	ug/kg	LDW09 - Other Organic Compounds				110	U	N	170	U	N	150	U	N	110	U	N	99	U	N	94	U	N
2-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds	670	670		110	U	N	170	U	N	75	J	Y	57	J	Y	99	U	N	94	U	N
2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*63*	63		*110*	*U*	*N*	*170*	*U*	*N*	*150*	*U*	*N*	*350*		*Y*	*99*	*U*	*N*	*94*	*U*	*N*

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - S Norfolk St CSOPS17 EOFSD
Attachment A, 90b - Actions Taken Pursuant to S4F

					Location	CB198			CB199			CB210			CB214			CB215			CB216		
					Sample Date	15 Jul 2015			15 Jul 2015			29 Jul 2015			29 Jul 2015			29 Jul 2015			29 Jul 2015		
					Sample Name	CB198-071515			CB199-071515			CB210-072915			CB214-072915			CB215-072915			CB216-072915		
					Drainage Type	SD			SD			SD			SD			SD			SD		
					Sample Method	Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual		
					Location Type	CB			CB			CB			CB			CB			CB		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
2-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			560	U	N	840	U	N	750	U	N	570	U	N	500	U	N	470	U	N
2-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			110	U	N	170	U	N	150	U	N	110	U	N	99	U	N	94	U	N
3,3`-Dichlorobenzidine	ug/kg	LDW09 - Other Organic Compounds			560	U	N	840	U	N												
3-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			560	U	N	840	U	N	750	U	N	570	U	N	500	U	N	470	U	N
4,6-Dinitro-2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			1100	U	N	1700	U	N	1500	U	N	1100	U	N	990	U	N	940	U	N
4-Bromophenyl phenyl ether	ug/kg	LDW09 - Other Organic Compounds			110	U	N	170	U	N	150	U	N	110	U	N	99	U	N	94	U	N
4-Chloro-3-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			560	U	N	840	U	N	750	U	N	570	U	N	500	U	N	470	U	N
4-Chloroaniline	ug/kg	LDW09 - Other Organic Compounds			560	U	N	840	U	N	750	U	N	570	U	N	500	U	N	470	U	N
4-Chlorophenyl Phenylether	ug/kg	LDW09 - Other Organic Compounds			110	U	N	170	U	N	150	U	N	110	U	N	99	U	N	94	U	N
4-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*670*	670	140		Y	300		Y	440		Y	580		Y	99	U	N	160		Y
4-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			560	U	N	840	U	N	750	U	N	570	U	N	500	U	N	470	U	N
4-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			560	U	N	840	U	N	750	U	N	570	U	N	500	U	N	470	U	N
Benzoic acid	ug/kg	LDW09 - Other Organic Compounds	*650*	650	*1100*	*U*	*N*	*1700*	*U*	*N*	*820*	*J*	*Y*	*850*	*J*	*Y*	*990*	*U*	*N*	360	J	Y
Benzyl alcohol	ug/kg	LDW09 - Other Organic Compounds	*57*	73																		
bis(2-Chloroethoxy) methane	ug/kg	LDW09 - Other Organic Compounds			110	U	N	170	U	N	150	U	N	110	U	N	99	U	N	94	U	N
Bis-(2-chloroethyl) ether	ug/kg	LDW09 - Other Organic Compounds			110	U	N	170	U	N	150	U	N	110	U	N	99	U	N	94	U	N
Carbazole	ug/kg	LDW09 - Other Organic Compounds			130		Y	170	U	N	75	J	Y	51	J	Y	99	U	N	94	U	N
Dibenzofuran	ug/kg	LDW09 - Other Organic Compounds	*540*	540	33	J	Y	170	U	N	38	J	Y	51	J	Y	99	U	N	94	U	N
Hexachlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*22*	70	*110*	*U*	*N*	*170*	*U*	*N*	*150*	*U*	*N*	*110*	*U*	*N*	*99*	*U*	*N*	*94*	*U*	*N*
Hexachlorobutadiene	ug/kg	LDW09 - Other Organic Compounds	*11*	120	*110*	*U*	*N*	*170*	*U*	*N*	*150*	*U*	*N*	*110*	*U*	*N*	*99*	*U*	*N*	*94*	*U*	*N*
Hexachlorocyclopentadiene	ug/kg	LDW09 - Other Organic Compounds			560	U	N	840	U	N	750	U	N	570	U	N	500	U	N	470	U	N
Hexachloroethane	ug/kg	LDW09 - Other Organic Compounds			110	U	N	170	U	N	150	U	N	110	U	N	99	U	N	94	U	N
Isophorone	ug/kg	LDW09 - Other Organic Compounds			110	U	N	170	U	N	150	U	N	110	U	N	99	U	N	94	U	N
Nitrobenzene	ug/kg	LDW09 - Other Organic Compounds			110	U	N	170	U	N	150	U	N	110	U	N	99	U	N	94	U	N
N-Nitroso-Di-N-Propylamine	ug/kg	LDW09 - Other Organic Compounds			110	U	N	170	U	N	150	U	N	110	U	N	99	U	N	94	U	N
N-Nitrosodiphenylamine	ug/kg	LDW09 - Other Organic Compounds	*28*	40	*110*	*U*	*N*	*170*	*U*	*N*	*150*	*U*	*N*	*110*	*U*	*N*	*99*	*U*	*N*	*94*	*U*	*N*
Pentachlorophenol	ug/kg	LDW09 - Other Organic Compounds	*360*	690	*2700*		*Y*	*840*	*U*	*N*	*750*	*U*	*N*	200	J	Y	*500*	*U*	*N*	*470*	*U*	*N*
Phenol	ug/kg	LDW09 - Other Organic Compounds	*420*	1200	89	J	Y	*470*		*Y*	160		Y	320		Y	140		Y	200		Y
>10 Phi Clay	%	LDW10 - Grain Size																				
8-9 Phi Clay	%	LDW10 - Grain Size																				
9-10 Phi Clay	%	LDW10 - Grain Size																				
Coarse Sand	%	LDW10 - Grain Size			17.5		Y	12.2		Y	19.2		Y	12.1		Y	4.6		Y	20.2		Y
Coarse Silt	%	LDW10 - Grain Size																				
Fine Gravel	%	LDW10 - Grain Size			12.6		Y	2.4		Y	7.5		Y	2.4		Y	1.6		Y	15.4		Y
Fine Sand	%	LDW10 - Grain Size			6.3		Y	14.4		Y	7.9		Y	28.7		Y	13.6		Y	5.1		Y
Fine Silt	%	LDW10 - Grain Size																				
Gravel	%	LDW10 - Grain Size			20.9		Y	5.9		Y	3.1		Y	9.3		Y	3.4		Y	10.3		Y
Medium Sand	%	LDW10 - Grain Size			12.9		Y	30.1		Y	31.7		Y	16.2		Y	9.2		Y	22.3		Y
Medium Silt	%	LDW10 - Grain Size																				
Total Fines	%	LDW10 - Grain Size																				
Very Coarse Sand	%	LDW10 - Grain Size			17.8		Y	9.9		Y	5.6		Y	12.7		Y	3.8		Y	10.3		Y
Very Fine Sand	%	LDW10 - Grain Size			1.9		Y	8.2		Y	4.2		Y	7.7		Y	3.4		Y	3.4		Y
Very Fine Silt	%	LDW10 - Grain Size																				

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - S Norfolk St CSOPS17 EOFSD
Attachment A, 90b - Actions Taken Pursuant to S4F

					Location	CB217			CB218			CB219			CB228			CB233			CB234		
					Sample Date	05 Aug 2015			07 Aug 2015			07 Aug 2015			17 Jul 2015			27 May 2015			25 Jun 2015		
					Sample Name	CB217-080515			CB218-080715			CB219-080715			CB228-071715			CB233-052715			CB234-062515		
					Drainage Type	SD			SD			SD			SD			SD			SD		
					Sample Method	Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual		
					Location Type	CB			CB			CB			CB			CB			CB		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET		Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
Solids, Total	%	LDW01 - Solids_TOC				57.68		Y	49.7		Y	35.57		Y	61.01		Y	49.74		Y	43.78		Y
Total Organic Carbon	%	LDW01 - Solids_TOC				7.52		Y	1.51	J	Y	5.17		Y	4.33		Y	4.61		Y	11.4		Y
Arsenic	mg/kg	LDW02 - Metals	57	93		11		Y	6.4		Y	20		Y	11		Y	10	U	N	20		Y
Copper	mg/kg	LDW02 - Metals	*390*	390		163		Y	106		Y	387		Y	190		Y	120		Y	97.4		Y
Lead	mg/kg	LDW02 - Metals	450	530		58		Y	138		Y	158		Y	15		Y	56		Y	63		Y
Mercury	mg/kg	LDW02 - Metals	0.41	0.59		0.13	J	Y	0.1		Y	0.09		Y	0.03		Y	0.06		Y	0.17		Y
Zinc	mg/kg	LDW02 - Metals	*410*	960		386		Y	*2220*		*Y*	*1200*		*Y*	247	J	Y	*441*		*Y*	*516*		*Y*
Diesel Range (Silica and Acid Cleaned)	mg/kg	LDW03 - TPH	2000	2000																			
Diesel Range Hydrocarbons	mg/kg	LDW03 - TPH	*2000*	2000		600		Y	250		Y	1100		Y	770		Y	1000		Y	940		Y
Motor Oil (Silica and Acid Cleaned)	mg/kg	LDW03 - TPH	*2000*	2000																			
Motor Oil Range	mg/kg	LDW03 - TPH	*2000*	2000		*2100*		*Y*	1000		Y	*3200*		*Y*	*2500*		*Y*	*3800*		*Y*	*4700*		*Y*
Acenaphthene	ug/kg	LDW04 - LPAH	*500*	500		77	U	N	19	U	N	490	U	N	35	J	Y	39	J	Y	200	U	N
Acenaphthylene	ug/kg	LDW04 - LPAH	1300	1300		77	U	N	19	U	N	490	U	N	47	J	Y	110	U	N	200	U	N
Anthracene	ug/kg	LDW04 - LPAH	*960*	960		84		Y	19	U	N	490	U	N	53	J	Y	66	J	Y	200	U	N
Fluorene	ug/kg	LDW04 - LPAH	*540*	540		77	U	N	19	U	N	490	U	N	120	U	N	44	J	Y	200	U	N
LPAH	ug/kg	LDW04 - LPAH	*5200*	5200		700	J	Y	51	J	Y	460	J	Y	507	J	Y	699	J	Y	399	J	Y
Naphthalene	ug/kg	LDW04 - LPAH	2100	2100		46	J	Y	17	J	Y	490	U	N	82	J	Y	100	J	Y	69	J	Y
Phenanthrene	ug/kg	LDW04 - LPAH	*1500*	1500		570		Y	34		Y	460	J	Y	290		Y	450		Y	330		Y
Benzo(A)anthracene	ug/kg	LDW05 - HPAH	*1300*	1600		370		Y	13	J	Y	490	U	N	150		Y	160		Y	170	J	Y
Benzo(A)pyrene	ug/kg	LDW05 - HPAH	*1600*	1600		460		Y	24		Y	490	U	N	240		Y	140		Y	190	J	Y
Benzo(G,H,I)perylene	ug/kg	LDW05 - HPAH	*670*	720		470		Y	60		Y	490		Y	250		Y	150		Y	170	J	Y
Benzofluoranthenes, Total	ug/kg	LDW05 - HPAH	*3200*	3600		1100		Y	74		Y	530	J	Y	410		Y	440		Y	520		Y
Chrysene	ug/kg	LDW05 - HPAH	*1400*	2800		830		Y	59		Y	580		Y	340		Y	540		Y	360		Y
Dibenzo(A,H)anthracene	ug/kg	LDW05 - HPAH	*230*	230		100		Y	10	J	Y	*490*	*U*	*N*	59	J	Y	110	U	N	200	U	N
Fluoranthene	ug/kg	LDW05 - HPAH	*1700*	2500		1200		Y	45		Y	510		Y	420		Y	530		Y	500		Y
HPAH	ug/kg	LDW05 - HPAH	*12000*	17000		6100		Y	376	J	Y	2770	J	Y	2639	J	Y	2660	J	Y	2520	J	Y
Indeno(1,2,3-Cd)pyrene	ug/kg	LDW05 - HPAH	*600*	690		370		Y	33		Y	490	U	N	160		Y	100	J	Y	150	J	Y
Pyrene	ug/kg	LDW05 - HPAH	*2600*	3300		1200		Y	58		Y	660		Y	610		Y	600		Y	460		Y
cPAH	ug/kg	LDW06 - cPAH (analyte only)		100		692.3		Y	40.59	J	Y	450.8	J	Y	339	J	Y	237.4	J	Y	317.6	J	Y
Bis(2-ethylhexyl)phthalate	ug/kg	LDW07 - Phthalates	*1300*	1900		*8600*		*Y*	380		Y	*9000*		*Y*	*5500*		*Y*	*11000*		*Y*	*5000*		*Y*
Butylbenzylphthalate	ug/kg	LDW07 - Phthalates	*63*	900		*1300*		*Y*	*67*		*Y*	*1200*		*Y*	*100*	*J*	*Y*	*1600*		*Y*	*370*		*Y*
Diethylphthalate	ug/kg	LDW07 - Phthalates	*200*	1200		110		Y	31	J	Y	*490*	*U*	*N*	120	U	N	110	U	N	*200*	*U*	*N*
Dimethylphthalate	ug/kg	LDW07 - Phthalates	*71*	160		*96*		*Y*	19	U	N	*490*	*U*	*N*	*120*	*U*	*N*	*110*	*U*	*N*	*99*	*J*	*Y*
Di-N-Butylphthalate	ug/kg	LDW07 - Phthalates	*1400*	1400		110		Y	10	J	Y	490	U	N	120	U	N	290		Y	200	U	N
Di-N-Octylphthalate	ug/kg	LDW07 - Phthalates	*6200*	6200		430		Y	19	U	N	3500		Y	310		Y	*8100*		*Y*	200	U	N
Aroclor 1016	ug/kg	LDW08 - PCBs				18	U	N	19	U	N	19	U	N	18	U	N	19	UJ	N	18	U	N
Aroclor 1221	ug/kg	LDW08 - PCBs				18	U	N	19	U	N	19	U	N	18	U	N	19	UJ	N	18	U	N
Aroclor 1232	ug/kg	LDW08 - PCBs				18	U	N	19	U	N	19	U	N	18	U	N	19	UJ	N	18	U	N
Aroclor 1242	ug/kg	LDW08 - PCBs				18	U	N	19	U	N	19	U	N	18	U	N	19	UJ	N	18	U	N
Aroclor 1248	ug/kg	LDW08 - PCBs				36	U	N	19	U	N	240	U	N	18	U	N	19	U	N	46	J	Y
Aroclor 1254	ug/kg	LDW08 - PCBs				230		Y	19	U	N	300		Y	33		Y	11	J	Y	53	J	Y
Aroclor 1260	ug/kg	LDW08 - PCBs				69		Y	15	J	Y	190	J	Y	18	U	N	19	U	N	12	J	Y
Polychlorinated Biphenyls	ug/kg	LDW08 - PCBs	*130*	1000		*299*		*Y*	15	J	Y	*490*	*J*	*Y*	33		Y	11	J	Y	111	J	Y
1,2,4-Trichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*31*	51		*77*	*U*	*N*	19	U	N	*490*	*U*	*N*	*120*	*U*	*N*	*110*	*U*	*N*	*200*	*U*	*N*
1,2-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*35*	50		*77*	*U*	*N*	19	U	N	*490*	*U*	*N*	*120*	*U*	*N*	*110*	*U*	*N*	*200*	*U*	*N*
1,3-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds				77	U	N	19	U	N	490	U	N	120	U	N	110	U	N	200	U	N
1,4-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*110*	110		77	U	N	26		Y	*490*	*U*	*N*	*120*	*U*	*N*	*110*	*U*	*N*	*200*	*U*	*N*
1-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds				77	U	N	19	U	N	490	U	N	120	U	N	44	J	Y	200	U	N
2,2'-Oxybis(1-chloropropane)	ug/kg	LDW09 - Other Organic Compounds				77	U	N	19	U	N	490	U	N	120	U	N	110	U	N	200	UJ	N
2,4,5-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds				380	U	N	96	U	N	2400	U	N	590	U	N	560	U	N	990	U	N
2,4,6-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds				380	U	N	96	U	N	2400	U	N	590	U	N	560	U	N	990	U	N
2,4-Dichlorophenol	ug/kg	LDW09 - Other Organic Compounds				380	U	N	96	U	N	2400	U	N	590	U	N	560	U	N	990	U	N
2,4-Dimethylphenol	ug/kg	LDW09 - Other Organic Compounds	*29*	29		*380*	*U*	*N*	*96*	*U*	*N*	*2400*	*U*	*N*	*590*	*U*	*N*	*560*	*U*	*N*	*990*	*U*	*N*
2,4-Dinitrophenol	ug/kg	LDW09 - Other Organic Compounds				770	U	N	190	U	N	4900	U	N	1200	U	N	1100	U	N	2000	U	N
2,4-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds				380	U	N	96	U	N	2400	U	N	590	U	N	560	U	N	990	U	N
2,6-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds				380	U	N	96	U	N	2400	U	N	590	U	N	560	U	N	990	U	N
2-Chloronaphthalene	ug/kg	LDW09 - Other Organic Compounds				77	U	N	19	U	N	490	U	N	120	U	N	110	U	N	200	U	N
2-Chlorophenol	ug/kg	LDW09 - Other Organic Compounds				77	U	N	19	U	N	490	U	N	120	U	N	110	U	N	200	U	N
2-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds	670	670		77	U	N	16	J	Y	490	U	N	59	J	Y	78	J	Y	60	J	Y
2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*63*	63		*77*	*U*	*N*	13	J	Y	*830*		*Y*	*120*	*U*	*N*	*110*	*U*	*N*	*200*	*U*	*N*

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - S Norfolk St CSOPS17 EOFSD
Attachment A, 90b - Actions Taken Pursuant to S4F

					Location	CB217			CB218			CB219			CB228			CB233			CB234		
					Sample Date	05 Aug 2015			07 Aug 2015			07 Aug 2015			17 Jul 2015			27 May 2015			25 Jun 2015		
					Sample Name	CB217-080515			CB218-080715			CB219-080715			CB228-071715			CB233-052715			CB234-062515		
					Drainage Type	SD			SD			SD			SD			SD			SD		
					Sample Method	Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual		
					Location Type	CB			CB			CB			CB			CB			CB		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
2-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			380	U	N	96	U	N	2400	U	N	590	U	N	560	U	N	990	U	N
2-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			77	U	N	19	U	N	490	U	N	120	U	N	110	U	N	200	U	N
3,3`-Dichlorobenzidine	ug/kg	LDW09 - Other Organic Compounds			380	U	N	96	U	N	2400	U	N	590	U	N	560	U	N	990	U	N
3-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			380	U	N	96	U	N	2400	U	N	590	U	N	560	U	N	990	U	N
4,6-Dinitro-2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			770	U	N	190	U	N	4900	U	N	1200	U	N	1100	U	N	2000	U	N
4-Bromophenyl phenyl ether	ug/kg	LDW09 - Other Organic Compounds			77	U	N	19	U	N	490	U	N	120	U	N	110	U	N	200	U	N
4-Chloro-3-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			380	U	N	96	U	N	2400	U	N	590	U	N	560	U	N	990	U	N
4-Chloroaniline	ug/kg	LDW09 - Other Organic Compounds			380	U	N	96	U	N	2400	U	N	590	U	N	560	U	N	990	U	N
4-Chlorophenyl Phenylether	ug/kg	LDW09 - Other Organic Compounds			77	U	N	19	U	N	490	U	N	120	U	N	110	U	N	200	U	N
4-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*670*	670	270		Y	26		Y	*1200*		*Y*	140		Y	180		Y	200	U	N
4-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			380	U	N	96	U	N	2400	U	N	590	U	N	560	U	N	990	U	N
4-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			380	U	N	96	U	N	2400	U	N	590	U	N	560	U	N	990	U	N
Benzoic acid	ug/kg	LDW09 - Other Organic Compounds	*650*	650	*880*		*Y*	*690*		*Y*	*4900*	*U*	*N*	370	J	Y	*1500*		*Y*	*2000*	*U*	*N*
Benzyl alcohol	ug/kg	LDW09 - Other Organic Compounds	*57*	73	*120*		*Y*	*190*		*Y*	*1600*		*Y*	*1300*	*J*	*Y*				*200*	*UJ*	*N*
bis(2-Chloroethoxy) methane	ug/kg	LDW09 - Other Organic Compounds			77	U	N	19	U	N	490	U	N	120	U	N	110	U	N	200	U	N
Bis-(2-chloroethyl) ether	ug/kg	LDW09 - Other Organic Compounds			77	U	N	19	U	N	490	U	N	120	U	N	110	U	N	200	U	N
Carbazole	ug/kg	LDW09 - Other Organic Compounds			96		Y	19	U	N	490	U	N	120	U	N	110	U	N	200	U	N
Dibenzofuran	ug/kg	LDW09 - Other Organic Compounds	*540*	540	77	U	N	19	U	N	490	U	N	120	U	N	110	U	N	200	U	N
Hexachlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*22*	70	*77*	*U*	*N*	19	U	N	*490*	*U*	*N*	*120*	*U*	*N*	*110*	*U*	*N*	*200*	*U*	*N*
Hexachlorobutadiene	ug/kg	LDW09 - Other Organic Compounds	*11*	120	*77*	*U*	*N*	*19*	*U*	*N*	*490*	*U*	*N*	*120*	*U*	*N*	*110*	*U*	*N*	*200*	*U*	*N*
Hexachlorocyclopentadiene	ug/kg	LDW09 - Other Organic Compounds			380	U	N	96	U	N	2400	U	N	590	U	N	560	U	N	990	U	N
Hexachloroethane	ug/kg	LDW09 - Other Organic Compounds			77	U	N	19	U	N	490	U	N	120	U	N	110	U	N	200	U	N
Isophorone	ug/kg	LDW09 - Other Organic Compounds			77	U	N	19	U	N	490	U	N	120	U	N	110	U	N	200	U	N
Nitrobenzene	ug/kg	LDW09 - Other Organic Compounds			77	U	N	19	U	N	490	U	N	120	U	N	110	U	N	200	U	N
N-Nitroso-Di-N-Propylamine	ug/kg	LDW09 - Other Organic Compounds			77	U	N	19	U	N	490	U	N	120	U	N	110	U	N	200	U	N
N-Nitrosodiphenylamine	ug/kg	LDW09 - Other Organic Compounds	*28*	40	*77*	*U*	*N*	19	U	N	*490*	*U*	*N*	*120*	*U*	*N*	*110*	*U*	*N*	*200*	*U*	*N*
Pentachlorophenol	ug/kg	LDW09 - Other Organic Compounds	*360*	690	*380*	*U*	*N*	83	J	Y	*2400*	*U*	*N*	*590*	*U*	*N*	*560*	*U*	*N*	*990*	*U*	*N*
Phenol	ug/kg	LDW09 - Other Organic Compounds	*420*	1200	220	J	Y	67	J	Y	*750*	*J*	*Y*	240		Y	220		Y	200	U	N
>10 Phi Clay	%	LDW10 - Grain Size															11.2		Y			
8-9 Phi Clay	%	LDW10 - Grain Size															0.4		Y			
9-10 Phi Clay	%	LDW10 - Grain Size															0.1	U	N			
Coarse Sand	%	LDW10 - Grain Size			6.8		Y	4.4		Y	16.1		Y	7.4		Y	10.6		Y	16.1		Y
Coarse Silt	%	LDW10 - Grain Size															7.3		Y			
Fine Gravel	%	LDW10 - Grain Size			2		Y	0.2		Y	4.3		Y	4.5		Y				7.3		Y
Fine Sand	%	LDW10 - Grain Size			26.8		Y	5.6	J	Y	14.5		Y	9.7		Y	26.3		Y	4.6		Y
Fine Silt	%	LDW10 - Grain Size															3.1		Y			
Gravel	%	LDW10 - Grain Size			3.5		Y	0.5	J	Y	4.6		Y	6.1		Y	0.1	U	N	10.8		Y
Medium Sand	%	LDW10 - Grain Size			17.5		Y	4.9		Y	37.1		Y	11.1		Y	12.3		Y	19.2		Y
Medium Silt	%	LDW10 - Grain Size															4		Y			
Total Fines	%	LDW10 - Grain Size																				
Very Coarse Sand	%	LDW10 - Grain Size			4		Y	2.5		Y	8.1		Y	5.9		Y	2.6		Y	16.3		Y
Very Fine Sand	%	LDW10 - Grain Size			7.3		Y	4.4	J	Y	7.8		Y	6.9		Y	11		Y	3.5		Y
Very Fine Silt	%	LDW10 - Grain Size															1.5		Y			

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - S Norfolk St CSOPS17 EOFSD
Attachment A, 90b - Actions Taken Pursuant to S4F

					Location	CB235			CB236			CB264			CB296			CB78			MH54		
					Sample Date	25 Jun 2015			05 Aug 2015			17 Jul 2015			27 Apr 2016			25 Jun 2015			04 May 2016		
					Sample Name	CB235-062515			CB236-080515			CB264-071715			CB296-042716			CB78-062515			MH54-050416		
					Drainage Type	SD			SD			SD			SD			SD			SD		
					Sample Method	Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual		
					Location Type	CB			CB			CB			CB			CB			Inline		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
Solids, Total	%	LDW01 - Solids_TOC			21.55		Y	42.43		Y	47.12		Y	50.69		Y	50.15		Y	77.23		Y
Total Organic Carbon	%	LDW01 - Solids_TOC			11.9		Y	8.96		Y	4.95		Y	4.62		Y	2.53		Y	0.624		Y
Arsenic	mg/kg	LDW02 - Metals	57	93	13.3	J	Y	20		Y	20		Y	30		Y	4.3	J	Y	10	U	N
Copper	mg/kg	LDW02 - Metals	*390*	390	83.1		Y	121		Y	105		Y	133		Y	*3590*		*Y*	26.6		Y
Lead	mg/kg	LDW02 - Metals	450	530	29		Y	78		Y	70		Y	44		Y	40		Y	10		Y
Mercury	mg/kg	LDW02 - Metals	0.41	0.59	0.09	U	N	0.08		Y	0.06		Y	0.03	U	N	0.04		Y	0.04		Y
Zinc	mg/kg	LDW02 - Metals	*410*	960	*881*		*Y*	*964*		*Y*	*748*		*Y*	*602*		*Y*	*1330*		*Y*	168		Y
Diesel Range (Silica and Acid Cleaned)	mg/kg	LDW03 - TPH	2000	2000																		
Diesel Range Hydrocarbons	mg/kg	LDW03 - TPH	*2000*	2000	*2700*		*Y*	1600		Y	*2500*		*Y*	250		Y	940		Y	60	U	N
Motor Oil (Silica and Acid Cleaned)	mg/kg	LDW03 - TPH	*2000*	2000																		
Motor Oil Range	mg/kg	LDW03 - TPH	*2000*	2000	*13000*		*Y*	*4500*		*Y*	*7200*		*Y*	1200		Y	*3200*		*Y*	120	U	N
Acenaphthene	ug/kg	LDW04 - LPAH	*500*	500	340	U	N	120	U	N	300	U	N	210		Y	110	U	N	18	U	N
Acenaphthylene	ug/kg	LDW04 - LPAH	1300	1300	340	U	N	120	U	N	300	U	N	120	U	N	110	U	N	18	U	N
Anthracene	ug/kg	LDW04 - LPAH	*960*	960	340	U	N	120	U	N	300	U	N	740		Y	200		Y	18	U	N
Fluorene	ug/kg	LDW04 - LPAH	*540*	540	340	U	N	120	U	N	130	J	Y	200		Y	96	J	Y	18	U	N
LPAH	ug/kg	LDW04 - LPAH	*5200*	5200	490	J	Y	410		Y	1530	J	Y	4550		Y	1447	J	Y	18	U	N
Naphthalene	ug/kg	LDW04 - LPAH	2100	2100	100	J	Y	120	U	N	100	J	Y	120	U	N	51	J	Y	18	U	N
Phenanthrene	ug/kg	LDW04 - LPAH	*1500*	1500	390		Y	410		Y	1300		Y	*3400*		*Y*	1100		Y	18	U	N
Benzo(A)anthracene	ug/kg	LDW05 - HPAH	*1300*	1600	140	J	Y	210		Y	220	J	Y	*1700*		*Y*	950		Y	18	U	N
Benzo(A)pyrene	ug/kg	LDW05 - HPAH	*1600*	1600	170	J	Y	280		Y	220	J	Y	1200		Y	770		Y	18	U	N
Benzo(G,H,I)perylene	ug/kg	LDW05 - HPAH	*670*	720	420		Y	510		Y	310		Y	*740*		*Y*	430		Y	18	U	N
Benzofluoranthenes, Total	ug/kg	LDW05 - HPAH	*3200*	3600	610	J	Y	660		Y	620		Y	2500		Y	1900		Y	10	J	Y
Chrysene	ug/kg	LDW05 - HPAH	*1400*	2800	470		Y	650		Y	620		Y	*2500*		*Y*	*1500*		*Y*	18	U	N
Dibenzo(A,H)anthracene	ug/kg	LDW05 - HPAH	*230*	230	*340*	*U*	*N*	75	J	Y	*300*	*U*	*N*	*280*		*Y*	160		Y	18	U	N
Fluoranthene	ug/kg	LDW05 - HPAH	*1700*	2500	560		Y	660		Y	990		Y	*5000*		*Y*	*2100*		*Y*	18	U	N
HPAH	ug/kg	LDW05 - HPAH	*12000*	17000	3470	J	Y	4105	J	Y	4020	J	Y	*19150*		*Y*	10270		Y	19.2	J	Y
Indeno(1,2,3-Cd)pyrene	ug/kg	LDW05 - HPAH	*600*	690	190	J	Y	220		Y	160	J	Y	*730*		*Y*	460		Y	18	U	N
Pyrene	ug/kg	LDW05 - HPAH	*2600*	3300	910		Y	840		Y	880		Y	*4500*		*Y*	2000		Y	9.2	J	Y
cPAH	ug/kg	LDW06 - cPAH (analyte only)		100	336.7	J	Y	425.5	J	Y	386.2	J	Y	1830		Y	1180		Y	15.49	J	Y
Bis(2-ethylhexyl)phthalate	ug/kg	LDW07 - Phthalates	*1300*	1900	*28000*		*Y*	*7400*		*Y*	*6700*		*Y*	*1700*		*Y*	*7600*		*Y*	40	J	Y
Butylbenzylphthalate	ug/kg	LDW07 - Phthalates	*63*	900	*580*		*Y*	*370*		*Y*	*380*		*Y*	*76*	*J*	*Y*	*430*		*Y*	18	U	N
Diethylphthalate	ug/kg	LDW07 - Phthalates	*200*	1200	*340*	*U*	*N*	120	U	N	*300*	*U*	*N*	120	U	N	110	U	N	18	U	N
Dimethylphthalate	ug/kg	LDW07 - Phthalates	*71*	160	*340*	*U*	*N*	*120*	*U*	*N*	*300*	*U*	*N*	*120*	*U*	*N*	*280*		*Y*	18	U	N
Di-N-Butylphthalate	ug/kg	LDW07 - Phthalates	*1400*	1400	340	U	N	120	U	N	300	U	N	140		Y	62	J	Y	18	U	N
Di-N-Octylphthalate	ug/kg	LDW07 - Phthalates	*6200*	6200	340	U	N	320		Y	240	J	Y	120	U	N	470		Y	18	U	N
Aroclor 1016	ug/kg	LDW08 - PCBs			18	U	N	20	U	N	20	U	N	18	U	N	18	U	N	20	U	N
Aroclor 1221	ug/kg	LDW08 - PCBs			18	U	N	20	U	N	20	U	N	18	U	N	18	U	N	20	U	N
Aroclor 1232	ug/kg	LDW08 - PCBs			18	U	N	20	U	N	20	U	N	18	U	N	18	U	N	20	U	N
Aroclor 1242	ug/kg	LDW08 - PCBs			18	U	N	20	U	N	20	U	N	18	U	N	18	U	N	20	U	N
Aroclor 1248	ug/kg	LDW08 - PCBs			28	U	N	29	U	N	30	U	N	93		Y	18	U	N	20	U	N
Aroclor 1254	ug/kg	LDW08 - PCBs			42	J	Y	45		Y	43	J	Y	140		Y	35		Y	20	U	N
Aroclor 1260	ug/kg	LDW08 - PCBs			18	J	Y	49		Y	18	J	Y	18	U	N	23		Y	20	U	N
Polychlorinated Biphenyls	ug/kg	LDW08 - PCBs	*130*	1000	60	J	Y	94		Y	61	J	Y	*233*		*Y*	58		Y	20	U	N
1,2,4-Trichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*31*	51	*340*	*U*	*N*	*120*	*U*	*N*	*300*	*U*	*N*	*120*	*U*	*N*	*110*	*U*	*N*	18	U	N
1,2-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*35*	50	*340*	*U*	*N*	*120*	*U*	*N*	*300*	*U*	*N*	*120*	*U*	*N*	*110*	*U*	*N*	18	U	N
1,3-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds			340	U	N	120	U	N	300	U	N	120	U	N	110	U	N	18	U	N
1,4-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*110*	110	*340*	*U*	*N*	*120*	*U*	*N*	*300*	*U*	*N*	*120*	*U*	*N*	*110*	*U*	*N*	18	U	N
1-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds			340	U	N	120	U	N	300	U	N	120	U	N	40	J	Y	18	U	N
2,2'-Oxybis(1-chloropropane)	ug/kg	LDW09 - Other Organic Compounds			340	UJ	N	120	U	N	300	U	N	120	U	N	110	UJ	N	18	U	N
2,4,5-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds			1700	U	N	620	U	N	1500	U	N	580	U	N	570	U	N	92	U	N
2,4,6-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds			1700	U	N	620	U	N	1500	U	N	580	U	N	570	U	N	92	U	N
2,4-Dichlorophenol	ug/kg	LDW09 - Other Organic Compounds			1700	U	N	620	U	N	1500	U	N	580	U	N	570	U	N	92	U	N
2,4-Dimethylphenol	ug/kg	LDW09 - Other Organic Compounds	*29*	29	*1700*	*U*	*N*	*620*	*U*	*N*	*1500*	*U*	*N*	*580*	*U*	*N*	*570*	*U*	*N*	*92*	*U*	*N*
2,4-Dinitrophenol	ug/kg	LDW09 - Other Organic Compounds			3400	U	N	1200	U	N	3000	U	N	1200	U	N	1100	U	N	180	U	N
2,4-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds			1700	U	N	620	U	N	1500	U	N	580	U	N	570	U	N	92	U	N
2,6-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds			1700	U	N	620	U	N	1500	U	N	580	U	N	570	U	N	92	U	N
2-Chloronaphthalene	ug/kg	LDW09 - Other Organic Compounds			340	U	N	120	U	N	300	U	N	120	U	N	110	U	N	18	U	N
2-Chlorophenol	ug/kg	LDW09 - Other Organic Compounds			340	U	N	120	U	N	300	U	N	120	U	N	110	U	N	18	U	N
2-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds	670	670	340	U	N	120	U	N	88	J	Y	120	U	N	62	J	Y	18	U	N
2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*63*	63	*340*	*U*	*N*	*120*	*U*	*N*	*300*	*U*	*N*	*120*	*U*	*N*	*110*	*U*	*N*	18	U	N

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					Location	CB235			CB236			CB264			CB296			CB78			MH54		
					Sample Date	25 Jun 2015			05 Aug 2015			17 Jul 2015			27 Apr 2016			25 Jun 2015			04 May 2016		
					Sample Name	CB235-062515			CB236-080515			CB264-071715			CB296-042716			CB78-062515			MH54-050416		
					Drainage Type	SD			SD			SD			SD			SD			SD		
					Sample Method	Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual		
					Location Type	CB			CB			CB			CB			CB			Inline		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
2-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			1700	U	N	620	U	N	1500	U	N	580	U	N	570	U	N	92	U	N
2-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			340	U	N	120	U	N	300	U	N	120	U	N	110	U	N	18	U	N
3,3`-Dichlorobenzidine	ug/kg	LDW09 - Other Organic Compounds			1700	U	N	620	U	N	1500	U	N	580	UJ	N	570	U	N	92	UJ	N
3-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			1700	U	N	620	U	N	1500	U	N	580	UJ	N	570	U	N	92	UJ	N
4,6-Dinitro-2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			3400	U	N	1200	U	N	3000	U	N	1200	U	N	1100	U	N	180	U	N
4-Bromophenyl phenyl ether	ug/kg	LDW09 - Other Organic Compounds			340	U	N	120	U	N	300	U	N	120	U	N	110	U	N	18	U	N
4-Chloro-3-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			1700	U	N	620	U	N	1500	U	N	580	U	N	570	U	N	92	U	N
4-Chloroaniline	ug/kg	LDW09 - Other Organic Compounds			1700	U	N	620	U	N	1500	U	N	580	UJ	N	570	U	N	92	U	N
4-Chlorophenyl Phenylether	ug/kg	LDW09 - Other Organic Compounds			340	U	N	120	U	N	300	U	N	120	U	N	110	U	N	18	U	N
4-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*670*	670	*2000*		*Y*	100	J	Y	300	U	N	*3500*		*Y*	150		Y	18	U	N
4-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			1700	U	N	620	U	N	1500	U	N	580	UJ	N	570	U	N	92	U	N
4-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			1700	U	N	620	U	N	1500	U	N	580	U	N	570	U	N	92	U	N
Benzoic acid	ug/kg	LDW09 - Other Organic Compounds	*650*	650	*3400*	*U*	*N*	*1500*		*Y*	*1300*	*J*	*Y*	570	J	Y	450	J	Y	120	J	Y
Benzyl alcohol	ug/kg	LDW09 - Other Organic Compounds	*57*	73	*340*	*UJ*	*N*	*120*	*U*	*N*				*120*	*U*	*N*	*110*	*UJ*	*N*	18	J	Y
bis(2-Chloroethoxy) methane	ug/kg	LDW09 - Other Organic Compounds			340	U	N	120	U	N	300	U	N	120	U	N	110	U	N	18	U	N
Bis-(2-chloroethyl) ether	ug/kg	LDW09 - Other Organic Compounds			340	U	N	120	U	N	300	U	N	120	U	N	110	U	N	18	U	N
Carbazole	ug/kg	LDW09 - Other Organic Compounds			340	U	N	62	J	Y	300	U	N	770	J	Y	240		Y	18	UJ	N
Dibenzofuran	ug/kg	LDW09 - Other Organic Compounds	*540*	540	340	U	N	120	U	N	88	J	Y	100	J	Y	62	J	Y	18	U	N
Hexachlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*22*	70	*340*	*U*	*N*	*120*	*U*	*N*	*300*	*U*	*N*	*120*	*U*	*N*	*110*	*U*	*N*	18	U	N
Hexachlorobutadiene	ug/kg	LDW09 - Other Organic Compounds	*11*	120	*340*	*U*	*N*	*120*	*U*	*N*	*300*	*U*	*N*	*120*	*U*	*N*	*110*	*U*	*N*	*18*	*U*	*N*
Hexachlorocyclopentadiene	ug/kg	LDW09 - Other Organic Compounds			1700	U	N	620	U	N	1500	U	N	580	U	N	570	U	N	92	U	N
Hexachloroethane	ug/kg	LDW09 - Other Organic Compounds			340	U	N	120	U	N	300	U	N	120	U	N	110	U	N	18	U	N
Isophorone	ug/kg	LDW09 - Other Organic Compounds			340	U	N	120	U	N	300	U	N	120	U	N	110	U	N	18	U	N
Nitrobenzene	ug/kg	LDW09 - Other Organic Compounds			340	U	N	120	U	N	300	U	N	120	U	N	110	U	N	18	U	N
N-Nitroso-Di-N-Propylamine	ug/kg	LDW09 - Other Organic Compounds			340	U	N	120	U	N	300	U	N	120	U	N	110	U	N	18	U	N
N-Nitrosodiphenylamine	ug/kg	LDW09 - Other Organic Compounds	*28*	40	*340*	*U*	*N*	*120*	*U*	*N*	*300*	*U*	*N*	*120*	*U*	*N*	*110*	*U*	*N*	18	U	N
Pentachlorophenol	ug/kg	LDW09 - Other Organic Compounds	*360*	690	*1700*	*U*	*N*	*620*	*U*	*N*	*1500*	*U*	*N*	*580*	*U*	*N*	*570*	*U*	*N*	92	U	N
Phenol	ug/kg	LDW09 - Other Organic Compounds	*420*	1200	*1000*		*Y*	270	J	Y	260	J	Y	130		Y	400		Y	15	J	Y
>10 Phi Clay	%	LDW10 - Grain Size																				
8-9 Phi Clay	%	LDW10 - Grain Size																				
9-10 Phi Clay	%	LDW10 - Grain Size																				
Coarse Sand	%	LDW10 - Grain Size			2.2		Y	7.8		Y	16.6		Y	21		Y	1.1		Y	12.5		Y
Coarse Silt	%	LDW10 - Grain Size																				
Fine Gravel	%	LDW10 - Grain Size			0.6		Y	15.9		Y	2.3		Y	0.7		Y	1.3		Y	38.9		Y
Fine Sand	%	LDW10 - Grain Size			1.4		Y	9.1		Y	20.6		Y	9.6		Y	1.1		Y	6.3		Y
Fine Silt	%	LDW10 - Grain Size																				
Gravel	%	LDW10 - Grain Size			0.6		Y	9.3		Y	5.9		Y	3.7		Y	0.2		Y	14.5		Y
Medium Sand	%	LDW10 - Grain Size			4.3		Y	14.6		Y	19.4		Y	18.5		Y	3.2		Y	10.2		Y
Medium Silt	%	LDW10 - Grain Size																				
Total Fines	%	LDW10 - Grain Size																				
Very Coarse Sand	%	LDW10 - Grain Size			1.2		Y	7.2		Y	13.1		Y	23.8		Y	0.2		Y	11		Y
Very Fine Sand	%	LDW10 - Grain Size			1.6		Y	5.9		Y	5.1		Y	9.5		Y	1.1		Y	1.8		Y
Very Fine Silt	%	LDW10 - Grain Size																				

Seattle Public Utilities, Source Control Implementation Plan
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					Location	MH7			NST1			NST1			NST1			NST1			NST2		
					Sample Date	06 Apr 2016			10 May 2016			10 May 2016			21 May 2015			21 May 2015			09 May 2016		
					Sample Name	MH7-040616			NST1-051016			NST1-051016G			NST1-052115			NST1-052115G			NST2-050916		
					Drainage Type	SD			SD			SD			SD			SD			SD		
					Sample Method	Grab-Manual			SedTrap			Grab-Manual			SedTrap			Grab-Manual			SedTrap		
					Location Type	Inline			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET		Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
Solids, Total	%	LDW01 - Solids_TOC				78.23		Y	49.11		Y	42.18		Y	42.2		Y	46.12		Y	26.29		Y
Total Organic Carbon	%	LDW01 - Solids_TOC				0.985		Y	9.1		Y	5.6		Y	12.3		Y	7.32		Y	10.3		Y
Arsenic	mg/kg	LDW02 - Metals	57	93		6	U	N	10		Y	20		Y	20		Y	20		Y	30		Y
Copper	mg/kg	LDW02 - Metals	*390*	390		27.5		Y	120		Y	137		Y	164		Y	105		Y	249		Y
Lead	mg/kg	LDW02 - Metals	450	530		43		Y	57		Y	72		Y	79		Y	62		Y	227		Y
Mercury	mg/kg	LDW02 - Metals	0.41	0.59		0.03		N	0.11		Y	0.11		Y	0.15		Y	0.11		Y	0.24		Y
Zinc	mg/kg	LDW02 - Metals	*410*	960		132		Y	*695*		*Y*	*879*		*Y*	*889*		*Y*	*598*		*Y*	*2850*		*Y*
Diesel Range (Silica and Acid Cleaned)	mg/kg	LDW03 - TPH	2000	2000																			
Diesel Range Hydrocarbons	mg/kg	LDW03 - TPH	*2000*	2000		76		Y	740		Y	840		Y	*2300*		*Y*	1200		Y			
Motor Oil (Silica and Acid Cleaned)	mg/kg	LDW03 - TPH	*2000*	2000																			
Motor Oil Range	mg/kg	LDW03 - TPH	*2000*	2000		370		Y	*3400*		*Y*	*3500*		*Y*	*6800*		*Y*	*4300*		*Y*			
Acenaphthene	ug/kg	LDW04 - LPAH	*500*	500		110	U	N	120	U	N	200	U	N	100	J	Y	58	J	Y	320	U	N
Acenaphthylene	ug/kg	LDW04 - LPAH	1300	1300		110	U	N	120	U	N	200	U	N	300	U	N	58	J	Y	320	U	N
Anthracene	ug/kg	LDW04 - LPAH	*960*	960		110	U	N	160		Y	140	J	Y	190	J	Y	160		Y	320	U	N
Fluorene	ug/kg	LDW04 - LPAH	*540*	540		110	U	N	58	J	Y	89	J	Y	120	J	Y	52	J	Y	320	U	N
LPAH	ug/kg	LDW04 - LPAH	*5200*	5200		110	U	N	927	J	Y	839	J	Y	1310	J	Y	1178	J	Y	870	J	Y
Naphthalene	ug/kg	LDW04 - LPAH	2100	2100		110	U	N	99	J	Y	110	J	Y	300	U	N	110	J	Y	230	J	Y
Phenanthrene	ug/kg	LDW04 - LPAH	*1500*	1500		110	U	N	610		Y	500		Y	900		Y	740		Y	640		Y
Benzo(A)anthracene	ug/kg	LDW05 - HPAH	*1300*	1600		110	U	N	440		Y	370		Y	660		Y	460		Y	240	J	Y
Benzo(A)pyrene	ug/kg	LDW05 - HPAH	*1600*	1600		110	U	N	520		Y	410		Y	720		Y	620		Y	450		Y
Benzo(G,H,I)perylene	ug/kg	LDW05 - HPAH	*670*	720		110	U	N	*710*	*J*	*Y*	520		Y	610		Y	550		Y	*980*		*Y*
Benzofluoranthenes, Total	ug/kg	LDW05 - HPAH	*3200*	3600		220	U	N	970		Y	920		Y	1700		Y	1400		Y	1000	J	Y
Chrysene	ug/kg	LDW05 - HPAH	*1400*	2800		110	U	N	760		Y	630		Y	1200		Y	920		Y	870		Y
Dibenzo(A,H)anthracene	ug/kg	LDW05 - HPAH	*230*	230		110	U	N	140	J	Y	110	J	Y	190	J	Y	160		Y	*320*	*U*	*N*
Fluoranthene	ug/kg	LDW05 - HPAH	*1700*	2500		130		Y	1200		Y	1000		Y	*1800*		*Y*	1200		Y	970		Y
HPAH	ug/kg	LDW05 - HPAH	*12000*	17000		260		Y	6420	J	Y	5260	J	Y	9300	J	Y	6960		Y	6270	J	Y
Indeno(1,2,3-Cd)pyrene	ug/kg	LDW05 - HPAH	*600*	690		110	U	N	380	J	Y	320		Y	*620*		*Y*	450		Y	360		Y
Pyrene	ug/kg	LDW05 - HPAH	*2600*	3300		130		Y	1300		Y	980		Y	1800		Y	1200		Y	1400		Y
cPAH	ug/kg	LDW06 - cPAH (analyte only)		100		99.55	U	N	762.6	J	Y	621.3	J	Y	1106	J	Y	924.2		Y	682.7	J	Y
Bis(2-ethylhexyl)phthalate	ug/kg	LDW07 - Phthalates	*1300*	1900		690		Y	*6300*		*Y*	*5600*		*Y*	*13000*		*Y*	*8000*		*Y*	*7500*		*Y*
Butylbenzylphthalate	ug/kg	LDW07 - Phthalates	*63*	900		*110*	*U*	*N*	*270*		*Y*	*200*	*U*	*N*	*340*		*Y*	*120*	*U*	*N*	*400*		*Y*
Diethylphthalate	ug/kg	LDW07 - Phthalates	*200*	1200		110	U	N	120	U	N	*200*	*U*	*N*	*300*	*U*	*N*	120	U	N	*320*	*U*	*N*
Dimethylphthalate	ug/kg	LDW07 - Phthalates	*71*	160		*110*	*U*	*N*	*120*	*U*	*N*	*200*	*U*	*N*	*300*	*U*	*N*	*120*	*U*	*N*	*320*	*U*	*N*
Di-N-Butylphthalate	ug/kg	LDW07 - Phthalates	*1400*	1400		*15000*		*Y*	130	U	Y	120	J	Y	280	J	Y	69	J	Y	320	U	N
Di-N-Octylphthalate	ug/kg	LDW07 - Phthalates	*6200*	6200		270		Y	3700		Y	2500		Y	*9900*		*Y*	3600		Y	370		Y
Aroclor 1016	ug/kg	LDW08 - PCBs				17	U	N	18	U	N	20	U	N	20	U	N	19	U	N	19	U	N
Aroclor 1221	ug/kg	LDW08 - PCBs				17	U	N	18	U	N	20	U	N	20	U	N	19	U	N	19	U	N
Aroclor 1232	ug/kg	LDW08 - PCBs				17	U	N	18	U	N	20	U	N	20	U	N	19	U	N	19	U	N
Aroclor 1242	ug/kg	LDW08 - PCBs				17	U	N	18	U	N	20	U	N	20	U	N	19	U	N	19	U	N
Aroclor 1248	ug/kg	LDW08 - PCBs				17	U	N	74	U	N	20	U	N	150	U	N	57	U	N	57	U	N
Aroclor 1254	ug/kg	LDW08 - PCBs				17	U	N	240		Y	580		Y	400		Y	180		Y	84		Y
Aroclor 1260	ug/kg	LDW08 - PCBs				17	U	N	61		Y	99	U	N	82	J	Y	62	J	Y	70	J	Y
Polychlorinated Biphenyls	ug/kg	LDW08 - PCBs	*130*	1000		17	U	N	*301*		*Y*	*580*		*Y*	*482*	*J*	*Y*	*242*	*J*	*Y*	*154*	*J*	*Y*
1,2,4-Trichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*31*	51		*110*	*U*	*N*	*120*	*U*	*N*	*200*	*U*	*N*	*300*	*U*	*N*	*120*	*U*	*N*	*320*	*U*	*N*
1,2-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*35*	50		*110*	*U*	*N*	*120*	*U*	*N*	*200*	*U*	*N*	*300*	*U*	*N*	*120*	*U*	*N*	*320*	*U*	*N*
1,3-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds				110	U	N	120	U	N	200	U	N	300	U	N	120	U	N	320	U	N
1,4-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*110*	110		*110*	*U*	*N*	*120*	*U*	*N*	*200*	*U*	*N*	*300*	*U*	*N*	*120*	*U*	*N*	*320*	*U*	*N*
1-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds				110	U	N	120	U	N	200	U	N	300	U	N	120	U	N	320	U	N
2,2'-Oxybis(1-chloropropane)	ug/kg	LDW09 - Other Organic Compounds				110	U	N	120	U	N	200	U	N	300	U	N	120	U	N	320	U	N
2,4,5-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds				560	U	N	580	U	N	990	U	N	1500	U	N	580	U	N	1600	U	N
2,4,6-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds				560	U	N	580	U	N	990	U	N	1500	U	N	580	U	N	1600	U	N
2,4-Dichlorophenol	ug/kg	LDW09 - Other Organic Compounds				560	U	N	580	U	N	990	U	N	1500	UJ	N	580	U	N	1600	U	N
2,4-Dimethylphenol	ug/kg	LDW09 - Other Organic Compounds	*29*	29		*560*	*U*	*N*	*580*	*U*	*N*	*990*	*U*	*N*	*1500*	*U*	*N*	*580*	*U*	*N*	*1600*	*U*	*N*
2,4-Dinitrophenol	ug/kg	LDW09 - Other Organic Compounds				1100	U	N	1200	U	N	2000	UJ	N	3000	U	N	1200	U	N	3200	U	N
2,4-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds				560	U	N	580	U	N	990	U	N	1500	U	N	580	U	N	1600	U	N
2,6-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds				560	U	N	580	U	N	990	U	N	1500	U	N	580	U	N	1600	U	N
2-Chloronaphthalene	ug/kg	LDW09 - Other Organic Compounds				110	U	N	120	U	N	200	U	N	300	U	N	120	U	N	320	U	N
2-Chlorophenol	ug/kg	LDW09 - Other Organic Compounds				110	U	N	120	U	N	200	U	N	300	U	N	120	U	N	320	U	N
2-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds	670	670		110	U	N	120	U	N	200	U	N	300	U	N	110	J	Y	320	U	N
2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*63*	63		*110*	*U*	*N*	*120*	*U*	*N*	*200*	*U*	*N*	*300*	*U*	*N*	*120*	*U*	*N*	*320*	*U*	*N*

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - S Norfolk St CSOPS17 EOFSD
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					Location	MH7			NST1			NST1			NST1			NST1			NST2		
					Sample Date	06 Apr 2016			10 May 2016			10 May 2016			21 May 2015			21 May 2015			09 May 2016		
					Sample Name	MH7-040616			NST1-051016			NST1-051016G			NST1-052115			NST1-052115G			NST2-050916		
					Drainage Type	SD			SD			SD			SD			SD			SD		
					Sample Method	Grab-Manual			SedTrap			Grab-Manual			SedTrap			Grab-Manual			SedTrap		
					Location Type	Inline			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
2-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			560	U	N	580	U	N	990	U	N	1500	U	N	580	U	N	1600	U	N
2-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			110	U	N	120	U	N	200	U	N	300	U	N	120	U	N	320	U	N
3,3`-Dichlorobenzidine	ug/kg	LDW09 - Other Organic Compounds			560	U	N	580	UJ	N	990	U	N				580	U	N	1600	U	N
3-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			560	U	N	580	U	N	990	U	N	1500	U	N	580	U	N	1600	U	N
4,6-Dinitro-2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			1100	U	N	1200	U	N	2000	UJ	N	3000	U	N	1200	U	N	3200	U	N
4-Bromophenyl phenyl ether	ug/kg	LDW09 - Other Organic Compounds			110	U	N	120	U	N	200	U	N	300	U	N	120	U	N	320	U	N
4-Chloro-3-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			560	U	N	580	U	N	990	U	N	1500	U	N	580	U	N	1600	U	N
4-Chloroaniline	ug/kg	LDW09 - Other Organic Compounds			560	U	N	580	U	N	990	U	N	1500	U	N	580	U	N	1600	U	N
4-Chlorophenyl Phenylether	ug/kg	LDW09 - Other Organic Compounds			110	U	N	120	U	N	200	UJ	N	300	U	N	120	U	N	320	U	N
4-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*670*	670	110	U	N	350		Y	200	U	N	300	U	N	120	U	N	*690*		*Y*
4-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			560	U	N	580	U	N	990	U	N	1500	U	N	580	U	N	1600	U	N
4-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			560	U	N	580	U	N	990	U	N	1500	U	N				1600	U	N
Benzoic acid	ug/kg	LDW09 - Other Organic Compounds	*650*	650	*1100*	*U*	*N*	*2500*		*Y*	*1000*	*J*	*Y*	*2900*	*J*	*Y*	*2200*		*Y*	*2200*	*J*	*Y*
Benzyl alcohol	ug/kg	LDW09 - Other Organic Compounds	*57*	73	*110*	*UJ*	*N*	*1100*		*Y*	*200*	*U*	*N*				*120*	*U*	*N*	*690*		*Y*
bis(2-Chloroethoxy) methane	ug/kg	LDW09 - Other Organic Compounds			110	U	N	120	U	N	200	U	N	300	U	N	120	U	N	320	U	N
Bis-(2-chloroethyl) ether	ug/kg	LDW09 - Other Organic Compounds			110	U	N	120	U	N	200	U	N	300	U	N	120	UJ	N	320	U	N
Carbazole	ug/kg	LDW09 - Other Organic Compounds			110	UJ	N	120		Y	200	U	N	120	J	Y	150	J	Y	140	J	Y
Dibenzofuran	ug/kg	LDW09 - Other Organic Compounds	*540*	540	110	U	N	120	U	N	200	U	N	300	U	N	120	U	N	320	U	N
Hexachlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*22*	70	*110*	*U*	*N*	*120*	*U*	*N*	*200*	*U*	*N*	*300*	*U*	*N*	*120*	*U*	*N*	*320*	*U*	*N*
Hexachlorobutadiene	ug/kg	LDW09 - Other Organic Compounds	*11*	120	*110*	*U*	*N*	*120*	*U*	*N*	*200*	*U*	*N*	*300*	*U*	*N*	*120*	*U*	*N*	*320*	*U*	*N*
Hexachlorocyclopentadiene	ug/kg	LDW09 - Other Organic Compounds			560	U	N	580	U	N	990	U	N	1500	U	N	580	U	N	1600	U	N
Hexachloroethane	ug/kg	LDW09 - Other Organic Compounds			110	U	N	120	U	N	200	U	N	300	U	N	120	U	N	320	U	N
Isophorone	ug/kg	LDW09 - Other Organic Compounds			110	U	N	120	U	N	200	U	N	300	U	N	120	U	N	320	U	N
Nitrobenzene	ug/kg	LDW09 - Other Organic Compounds			110	U	N	120	U	N	200	U	N	300	U	N	120	U	N	320	U	N
N-Nitroso-Di-N-Propylamine	ug/kg	LDW09 - Other Organic Compounds			110	U	N	120	U	N	200	U	N	300	U	N	120	UJ	N	320	U	N
N-Nitrosodiphenylamine	ug/kg	LDW09 - Other Organic Compounds	*28*	40	*110*	*U*	*N*	*120*	*U*	*N*	*200*	*U*	*N*	*300*	*U*	*N*	*120*	*U*	*N*	*320*	*U*	*N*
Pentachlorophenol	ug/kg	LDW09 - Other Organic Compounds	*360*	690	*560*	*U*	*N*	*580*	*U*	*N*	*990*	*U*	*N*	*1500*	*U*	*N*	*580*	*U*	*N*	*1600*	*U*	*N*
Phenol	ug/kg	LDW09 - Other Organic Compounds	*420*	1200	110	U	N	310	J	Y	130	J	Y	*700*		*Y*	120	U	N	*420*		*Y*
>10 Phi Clay	%	LDW10 - Grain Size															12.8		Y			
8-9 Phi Clay	%	LDW10 - Grain Size															4.2		Y			
9-10 Phi Clay	%	LDW10 - Grain Size															2.7		Y			
Coarse Sand	%	LDW10 - Grain Size			23.3		Y				2.2		Y	2.9		Y	0.7		Y			
Coarse Silt	%	LDW10 - Grain Size															27.7		Y			
Fine Gravel	%	LDW10 - Grain Size			8.3		Y				1.6		Y	0.7		Y	0.3		Y			
Fine Sand	%	LDW10 - Grain Size			12.4		Y				22.5		Y	3.4		Y	7.2		Y			
Fine Silt	%	LDW10 - Grain Size															14.1		Y			
Gravel	%	LDW10 - Grain Size			6.6		Y				1.1		Y	2.2		Y	0.3		Y			
Medium Sand	%	LDW10 - Grain Size			35.5		Y				7.8		Y	3.9		Y	2.2		Y			
Medium Silt	%	LDW10 - Grain Size															10.9		Y			
Total Fines	%	LDW10 - Grain Size																				
Very Coarse Sand	%	LDW10 - Grain Size			9.3		Y				1.6		Y	3.2		Y	0.3		Y			
Very Fine Sand	%	LDW10 - Grain Size			1.3		Y				13.8		Y	13.8		Y	9.2		Y			
Very Fine Silt	%	LDW10 - Grain Size															7.1		Y			

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - S Norfolk St CSOPS17 EOFSD
Attachment A, 90b - Actions Taken Pursuant to S4F

					Location	NST2			NST2			NST2			NST3			NST3			NST3		
					Sample Date	09 May 2016			18 May 2015			18 May 2015			12 May 2016			22 May 2015			22 May 2015		
					Sample Name	NST2-050916G			NST2-051815			NST2-051815G			NST3-051216			NST3-052215			NST3-052215G		
					Drainage Type	SD			SD			SD			SD			SD			SD		
					Sample Method	Grab-Manual			SedTrap			Grab-Manual			SedTrap			SedTrap			Grab-Manual		
					Location Type	Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET		Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
Solids, Total	%	LDW01 - Solids_TOC				78.22		Y	23.8		Y	81.93		Y	75.58		Y	59.67		Y	79.28		Y
Total Organic Carbon	%	LDW01 - Solids_TOC				0.544		Y	20.4		Y	1.1		Y	2.49		Y	5.1		Y	1.15		Y
Arsenic	mg/kg	LDW02 - Metals	57	93		20		Y	30		Y	10	U	N	7		Y	8	U	N	7		Y
Copper	mg/kg	LDW02 - Metals	*390*	390		78		Y	196		Y	79.8	J	Y	48.4		Y	76.3		Y	36.5		Y
Lead	mg/kg	LDW02 - Metals	450	530		79		Y	207		Y	23	J	Y	26		Y	36		Y	15		Y
Mercury	mg/kg	LDW02 - Metals	0.41	0.59		0.17		Y	0.28		Y	0.02	U	N	0.03	U	N	0.06		Y	0.03		N
Zinc	mg/kg	LDW02 - Metals	*410*	960		*532*		*Y*	*1890*		*Y*	170	J	Y	228		Y	358		Y	191		Y
Diesel Range (Silica and Acid Cleaned)	mg/kg	LDW03 - TPH	2000	2000																			
Diesel Range Hydrocarbons	mg/kg	LDW03 - TPH	*2000*	2000		25		Y				88		Y	74		Y	540		Y	120		N
Motor Oil (Silica and Acid Cleaned)	mg/kg	LDW03 - TPH	*2000*	2000																			
Motor Oil Range	mg/kg	LDW03 - TPH	*2000*	2000		150		Y				330		Y	570		Y	*2500*		*Y*	780		Y
Acenaphthene	ug/kg	LDW04 - LPAH	*500*	500		19	U	N	*570*	*U*	*N*	20	U	N	*4600*		*Y*	120	U	N	77	U	N
Acenaphthylene	ug/kg	LDW04 - LPAH	1300	1300		19	U	N	570	U	N	20	U	N	80	J	Y	120	U	N	19	J	Y
Anthracene	ug/kg	LDW04 - LPAH	*960*	960		6.8	J	Y	570	U	N	31		Y	*7700*		*Y*	34	J	Y	77	UJ	N
Fluorene	ug/kg	LDW04 - LPAH	*540*	540		19	U	N	*570*	*U*	*N*	7.8	J	Y	*4400*		*Y*	120	U	N	19	J	Y
LPAH	ug/kg	LDW04 - LPAH	*5200*	5200		30.8	J	Y	600	J	Y	164.8	J	Y	*49780*	*J*	*Y*	274	J	Y	142	J	Y
Naphthalene	ug/kg	LDW04 - LPAH	2100	2100		19	U	N	570	U	N	16	J	Y	1000		Y	40	J	Y	27	J	Y
Phenanthrene	ug/kg	LDW04 - LPAH	*1500*	1500		24		Y	600	J	Y	110		Y	*32000*		*Y*	200		Y	77		Y
Benzo(A)anthracene	ug/kg	LDW05 - HPAH	*1300*	1600		13	J	Y	570	U	N	86		Y	*9500*		*Y*	150		Y	65	J	Y
Benzo(A)pyrene	ug/kg	LDW05 - HPAH	*1600*	1600		14	J	Y	570	U	N	72		Y	*9600*		*Y*	220		Y	88	J	Y
Benzo(G,H,I)perylene	ug/kg	LDW05 - HPAH	*670*	720		23		Y	*800*	*J*	*Y*	56		Y	*3200*		*Y*	180		Y	140		Y
Benzofluoranthenes, Total	ug/kg	LDW05 - HPAH	*3200*	3600		34	J	Y	1100	U	N	150		Y	*16000*		*Y*	680		Y	270		Y
Chrysene	ug/kg	LDW05 - HPAH	*1400*	2800		25		Y	820	J	Y	110		Y	*11000*		*Y*	120	U	N	150		Y
Dibenzo(A,H)anthracene	ug/kg	LDW05 - HPAH	*230*	230		19	U	N	*570*	*U*	*N*	16	J	Y	*1500*		*Y*	120	U	N	42	J	Y
Fluoranthene	ug/kg	LDW05 - HPAH	*1700*	2500		37		Y	1000	J	Y	180		Y	*32000*		*Y*	490		Y	160		Y
HPAH	ug/kg	LDW05 - HPAH	*12000*	17000		196	J	Y	3920	J	Y	893	J	Y	*113500*		*Y*	2350		Y	1175	J	Y
Indeno(1,2,3-Cd)pyrene	ug/kg	LDW05 - HPAH	*600*	690		12	J	Y	570	U	N	43		Y	*3700*		*Y*	180		Y	100		Y
Pyrene	ug/kg	LDW05 - HPAH	*2600*	3300		38		Y	1300	J	Y	180		Y	*27000*		*Y*	450		Y	160		Y
cPAH	ug/kg	LDW06 - cPAH (analyte only)		100		23.95	J	Y	519.2	J	Y	107.4	J	Y	13230		Y	345.6		Y	149.8	J	Y
Bis(2-ethylhexyl)phthalate	ug/kg	LDW07 - Phthalates	*1300*	1900		200		Y	*8800*		*Y*	*1700*		*Y*	780		Y	*3300*		*Y*	480		Y
Butylbenzylphthalate	ug/kg	LDW07 - Phthalates	*63*	900		19	U	N	*340*	*J*	*Y*	20		Y	*94*	*U*	*N*	*120*	*U*	*N*	38	J	Y
Diethylphthalate	ug/kg	LDW07 - Phthalates	*200*	1200		17	J	Y	*570*	*U*	*N*	20	U	N	94	U	N	120	U	N	77	U	N
Dimethylphthalate	ug/kg	LDW07 - Phthalates	*71*	160		19	U	N	*230*	*J*	*Y*	20	U	N	*94*	*U*	*N*	*120*	*U*	*N*	*77*	*U*	*N*
Di-N-Butylphthalate	ug/kg	LDW07 - Phthalates	*1400*	1400		19	U	N	570	U	N	6.8	J	Y	94	U	N	120	U	N	23	J	Y
Di-N-Octylphthalate	ug/kg	LDW07 - Phthalates	*6200*	6200		19	U	N	570	U	N	20	U	N	94	U	N	1900		Y	77	U	N
Aroclor 1016	ug/kg	LDW08 - PCBs				20	U	N	19	U	N	20	U	N	19	U	N	19	U	N	17	U	N
Aroclor 1221	ug/kg	LDW08 - PCBs				20	U	N	19	U	N	20	U	N	19	U	N	19	U	N	17	U	N
Aroclor 1232	ug/kg	LDW08 - PCBs				20	U	N	19	U	N	20	U	N	19	U	N	19	U	N	17	U	N
Aroclor 1242	ug/kg	LDW08 - PCBs				20	U	N	19	U	N	20	U	N	19	U	N	19	U	N	17	U	N
Aroclor 1248	ug/kg	LDW08 - PCBs				20	U	N	47	U	N	20	U	N	19	U	N	19	U	N	17	U	N
Aroclor 1254	ug/kg	LDW08 - PCBs				20	U	N	110		Y	20	U	N	19	U	N	19	U	N	17	U	N
Aroclor 1260	ug/kg	LDW08 - PCBs				20	U	N	120	J	Y	20	U	N	19	U	N	19	U	N	17	U	N
Polychlorinated Biphenyls	ug/kg	LDW08 - PCBs	*130*	1000		20	U	N	*230*	*J*	*Y*	20	U	N	19	U	N	19	U	N	17	U	N
1,2,4-Trichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*31*	51		19	U	N	*570*	*U*	*N*	20	U	N	*94*	*U*	*N*	*120*	*U*	*N*	*77*	*U*	*N*
1,2-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*35*	50		19	U	N	*570*	*U*	*N*	20	U	N	*94*	*U*	*N*	*120*	*U*	*N*	*77*	*U*	*N*
1,3-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds				19	U	N	570	U	N	20	U	N	94	U	N	120	U	N	77	U	N
1,4-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*110*	110		19	U	N	*570*	*U*	*N*	20	U	N	94	U	N	*120*	*U*	*N*	77	U	N
1-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds				19	U	N	570	U	N	20	U	N	500		Y	120	U	N	77	U	N
2,2'-Oxybis(1-chloropropane)	ug/kg	LDW09 - Other Organic Compounds				19	U	N	570	U	N	20	U	N	94	U	N	120	U	N	77	U	N
2,4,5-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds				97	U	N	2800	U	N	98	U	N	470	U	N	580	U	N	380	U	N
2,4,6-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds				97	U	N	2800	U	N	98	U	N	470	U	N	580	U	N	380	U	N
2,4-Dichlorophenol	ug/kg	LDW09 - Other Organic Compounds				97	U	N	2800	U	N	98	U	N	470	U	N	580	U	N	380	U	N
2,4-Dimethylphenol	ug/kg	LDW09 - Other Organic Compounds	*29*	29		*97*	*U*	*N*	*2800*	*U*	*N*	*98*	*U*	*N*	*470*	*U*	*N*	*580*	*U*	*N*	*380*	*U*	*N*
2,4-Dinitrophenol	ug/kg	LDW09 - Other Organic Compounds				190	UJ	N	5700	U	N	200	U	N	940	U	N	1200	U	N	770	U	N
2,4-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds				97	U	N	2800	U	N	98	U	N	470	U	N	580	U	N	380	U	N
2,6-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds				97	U	N	2800	U	N	98	U	N	470	U	N	580	U	N	380	U	N
2-Chloronaphthalene	ug/kg	LDW09 - Other Organic Compounds				19	U	N	570	U	N	20	U	N	94	U	N	120	U	N	77	U	N
2-Chlorophenol	ug/kg	LDW09 - Other Organic Compounds				19	U	N	570	U	N	20	U	N	94	U	N	120	U	N	77	U	N
2-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds	670	670		19	U	N	570	U	N	20	U	N	600		Y	120	U	N	34	J	Y
2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*63*	63		19	U	N	*570*	*U*	*N*	20	U	N	*94*	*U*	*N*	46	J	Y	*77*	*U*	*N*

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					Location	NST2			NST2			NST2			NST3			NST3			NST3		
					Sample Date	09 May 2016			18 May 2015			18 May 2015			12 May 2016			22 May 2015			22 May 2015		
					Sample Name	NST2-050916G			NST2-051815			NST2-051815G			NST3-051216			NST3-052215			NST3-052215G		
					Drainage Type	SD			SD			SD			SD			SD			SD		
					Sample Method	Grab-Manual			SedTrap			Grab-Manual			SedTrap			SedTrap			Grab-Manual		
					Location Type	Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
2-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			97	U	N	2800	U	N	98	U	N	470	U	N	580	U	N	380	U	N
2-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			19	U	N	570	U	N	20	U	N	94	U	N	120	U	N	77	U	N
3,3`-Dichlorobenzidine	ug/kg	LDW09 - Other Organic Compounds			97	U	N				98	U	N	470	U	N						
3-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			97	U	N	2800	U	N	98	U	N	470	U	N	580	U	N	380	UJ	N
4,6-Dinitro-2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			190	UJ	N	5700	U	N	200	U	N	940	U	N	1200	U	N	770	U	N
4-Bromophenyl phenyl ether	ug/kg	LDW09 - Other Organic Compounds			19	U	N	570	U	N	20	U	N	94	U	N	120	U	N	77	U	N
4-Chloro-3-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			97	U	N	2800	U	N	98	U	N	470	U	N	580	U	N	380	U	N
4-Chloroaniline	ug/kg	LDW09 - Other Organic Compounds			97	U	N	2800	UJ	N	98	U	N	470	U	N	580	U	N			
4-Chlorophenyl Phenylether	ug/kg	LDW09 - Other Organic Compounds			19	UJ	N	570	U	N	20	U	N	94	U	N	120	U	N	77	U	N
4-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*670*	670	20		Y	570	U	N	34		Y	270		Y	560		Y	77	U	N
4-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			97	U	N	2800	U	N	98	U	N	470	U	N	580	U	N	380	UJ	N
4-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			97	U	N	2800	UJ	N	98	U	N	470	U	N	580	U	N	380	U	N
Benzoic acid	ug/kg	LDW09 - Other Organic Compounds	*650*	650	*1800*	*J*	*Y*	*2400*	*J*	*Y*	330		Y	*940*	*U*	*N*	*950*	*J*	*Y*	380	J	Y
Benzyl alcohol	ug/kg	LDW09 - Other Organic Compounds	*57*	73	*380*		*Y*							*94*	*U*	*N*	*300*	*J*	*Y*			
bis(2-Chloroethoxy) methane	ug/kg	LDW09 - Other Organic Compounds			19	U	N	570	U	N	20	U	N	94	U	N	120	U	N	77	U	N
Bis-(2-chloroethyl) ether	ug/kg	LDW09 - Other Organic Compounds			19	U	N	570	U	N	20	U	N	94	U	N	120	U	N	77	U	N
Carbazole	ug/kg	LDW09 - Other Organic Compounds			19	U	N	570	U	N	19	J	Y	4000		Y	46	J	Y	77	U	N
Dibenzofuran	ug/kg	LDW09 - Other Organic Compounds	*540*	540	19	U	N	*570*	*U*	*N*	8.8	J	Y	*2700*		*Y*	120	U	N	77	U	N
Hexachlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*22*	70	19	U	N	*570*	*U*	*N*	20	U	N	*94*	*U*	*N*	*120*	*U*	*N*	*77*	*U*	*N*
Hexachlorobutadiene	ug/kg	LDW09 - Other Organic Compounds	*11*	120	*19*	*U*	*N*	*570*	*U*	*N*	*20*	*U*	*N*	*94*	*U*	*N*	*120*	*U*	*N*	*77*	*U*	*N*
Hexachlorocyclopentadiene	ug/kg	LDW09 - Other Organic Compounds			97	U	N	2800	U	N	98	U	N	470	U	N	580	U	N	380	U	N
Hexachloroethane	ug/kg	LDW09 - Other Organic Compounds			19	U	N	570	U	N	20	U	N	94	U	N	120	U	N	77	U	N
Isophorone	ug/kg	LDW09 - Other Organic Compounds			19	U	N	570	U	N	20	U	N	94	U	N	120	U	N	77	U	N
Nitrobenzene	ug/kg	LDW09 - Other Organic Compounds			19	U	N	570	U	N	20	U	N	94	U	N	120	U	N	77	U	N
N-Nitroso-Di-N-Propylamine	ug/kg	LDW09 - Other Organic Compounds			19	U	N	570	U	N	20	U	N	94	U	N	120	U	N	77	U	N
N-Nitrosodiphenylamine	ug/kg	LDW09 - Other Organic Compounds	*28*	40	19	U	N	*570*	*U*	*N*	20	U	N	*94*	*U*	*N*	*120*	*U*	*N*	*77*	*U*	*N*
Pentachlorophenol	ug/kg	LDW09 - Other Organic Compounds	*360*	690	49	J	Y	*2800*	*U*	*N*	98	U	N	*470*	*UJ*	*N*	*580*	*U*	*N*	*380*	*U*	*N*
Phenol	ug/kg	LDW09 - Other Organic Compounds	*420*	1200	19	U	N	310	J	Y	53	J	Y	94	U	N	160	J	Y	77	U	Y
>10 Phi Clay	%	LDW10 - Grain Size									6.5		Y							6.1		Y
8-9 Phi Clay	%	LDW10 - Grain Size									0.1		Y							0.3		Y
9-10 Phi Clay	%	LDW10 - Grain Size									0.1	U	N							0.1	U	N
Coarse Sand	%	LDW10 - Grain Size			9.2		Y				14.9		Y	20.6		Y	22.3		Y	29.5		Y
Coarse Silt	%	LDW10 - Grain Size									2.1		Y							6.8		Y
Fine Gravel	%	LDW10 - Grain Size			47.1		Y				26		Y	3.4		Y	6.9		Y	4.4		Y
Fine Sand	%	LDW10 - Grain Size			0.9		Y				0.6		Y	9.4		Y	4		Y	2.6		Y
Fine Silt	%	LDW10 - Grain Size									0.1	U	N							0.4		Y
Gravel	%	LDW10 - Grain Size			11.7		Y				14.5		Y	8.1		Y	6.3		Y	12.3		Y
Medium Sand	%	LDW10 - Grain Size			3.3		Y				6.7		Y	22.7		Y	17.6		Y	16.9		Y
Medium Silt	%	LDW10 - Grain Size									0.1	U	N							1.3		Y
Total Fines	%	LDW10 - Grain Size																				
Very Coarse Sand	%	LDW10 - Grain Size			13.8		Y				25		Y	14.5		Y	14.4		Y	16.1		Y
Very Fine Sand	%	LDW10 - Grain Size			0.3		Y				0.5		Y	6.1		Y	5.2		Y	1.2		Y
Very Fine Silt	%	LDW10 - Grain Size									0.5		Y							1		Y

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					Location	NST4			NST4			NST4			NST4			NST5			NST5		
					Sample Date	12 May 2016			12 May 2016			21 May 2015			21 May 2015			09 May 2016			18 May 2015		
					Sample Name	NST4-051216			NST4-051216G			NST4-052115			NST4-052115G			NST5-050916			NST5-051815		
					Drainage Type	SD			SD			SD			SD			SD			SD		
					Sample Method	SedTrap			Grab-Manual			SedTrap			Grab-Manual			SedTrap			SedTrap		
					Location Type	Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET		Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
Solids, Total	%	LDW01 - Solids_TOC				24.12		Y	55.18		Y	12.39		Y	58.87		Y	33.4		Y	28.52		Y
Total Organic Carbon	%	LDW01 - Solids_TOC				6.52		Y	1.05		Y	5.34		Y	1.63		Y	6.69		Y			
Arsenic	mg/kg	LDW02 - Metals	57	93		20	U	N	9	U	N	40	U	N	9		Y						
Copper	mg/kg	LDW02 - Metals	*390*	390		73.1		Y	29.6		Y	59		Y	28.2		Y						
Lead	mg/kg	LDW02 - Metals	450	530		163		Y	56		Y	100		Y	48		Y						
Mercury	mg/kg	LDW02 - Metals	0.41	0.59		0.13		Y	0.05		Y	0.2	U	N	0.06		Y						
Zinc	mg/kg	LDW02 - Metals	*410*	960		226		Y	130		Y	195		Y	116		Y						
Diesel Range (Silica and Acid Cleaned)	mg/kg	LDW03 - TPH	2000	2000																			
Diesel Range Hydrocarbons	mg/kg	LDW03 - TPH	*2000*	2000					23		Y				86		Y						
Motor Oil (Silica and Acid Cleaned)	mg/kg	LDW03 - TPH	*2000*	2000																			
Motor Oil Range	mg/kg	LDW03 - TPH	*2000*	2000					140		Y				340		Y						
Acenaphthene	ug/kg	LDW04 - LPAH	*500*	500		100	U	N	56	U	N	120	U	N	11	J	Y						
Acenaphthylene	ug/kg	LDW04 - LPAH	1300	1300		100	U	N	56	U	N	120	U	N	10	J	Y						
Anthracene	ug/kg	LDW04 - LPAH	*960*	960		78	J	Y	40	J	Y	130		Y	31		Y						
Fluorene	ug/kg	LDW04 - LPAH	*540*	540		100	U	N	56	U	N	120	U	N	11	J	Y						
LPAH	ug/kg	LDW04 - LPAH	*5200*	5200		340	J	Y	351	J	Y	432	J	Y	249	J	Y						
Naphthalene	ug/kg	LDW04 - LPAH	2100	2100		42	J	Y	71		Y	92	J	Y	26		Y						
Phenanthrene	ug/kg	LDW04 - LPAH	*1500*	1500		220		Y	240		Y	210		Y	160		Y						
Benzo(A)anthracene	ug/kg	LDW05 - HPAH	*1300*	1600		200	J	Y	160		Y	180		Y	110		Y						
Benzo(A)pyrene	ug/kg	LDW05 - HPAH	*1600*	1600		300		Y	260		Y	240		Y	160		Y						
Benzo(G,H,I)perylene	ug/kg	LDW05 - HPAH	*670*	720		250		Y	410		Y	270		Y	170		Y						
Benzofluoranthenes, Total	ug/kg	LDW05 - HPAH	*3200*	3600		680		Y	610		Y	750		Y	470		Y						
Chrysene	ug/kg	LDW05 - HPAH	*1400*	2800		430	J	Y	350		Y	510		Y	260		Y						
Dibenzo(A,H)anthracene	ug/kg	LDW05 - HPAH	*230*	230		100	U	N	85		Y	98	J	Y	71		Y						
Fluoranthene	ug/kg	LDW05 - HPAH	*1700*	2500		530	J	Y	510		Y	490		Y	320		Y						
HPAH	ug/kg	LDW05 - HPAH	*12000*	17000		3070	J	Y	3145		Y	3228	J	Y	2041		Y						
Indeno(1,2,3-Cd)pyrene	ug/kg	LDW05 - HPAH	*600*	690		200		Y	320		Y	280		Y	190		Y						
Pyrene	ug/kg	LDW05 - HPAH	*2600*	3300		480		Y	440		Y	410		Y	290		Y						
cPAH	ug/kg	LDW06 - cPAH (analyte only)		100		432.3	J	Y	406.5		Y	405.3	J	Y	268		Y						
Bis(2-ethylhexyl)phthalate	ug/kg	LDW07 - Phthalates	*1300*	1900		850		Y	180		Y	*1300*		*Y*	120		Y						
Butylbenzylphthalate	ug/kg	LDW07 - Phthalates	*63*	900		*100*	*U*	*N*	56	U	N	*120*		*Y*	16	J	Y						
Diethylphthalate	ug/kg	LDW07 - Phthalates	*200*	1200		100	U	N	56	U	N	120	U	N	19	U	N						
Dimethylphthalate	ug/kg	LDW07 - Phthalates	*71*	160		*100*	*U*	*N*	56	U	N	*120*	*U*	*N*	18	J	Y						
Di-N-Butylphthalate	ug/kg	LDW07 - Phthalates	*1400*	1400		100	U	N	56	U	N	120	U	N	11	J	Y						
Di-N-Octylphthalate	ug/kg	LDW07 - Phthalates	*6200*	6200		100	U	N	56	U	N	100	J	Y	19	U	N						
Aroclor 1016	ug/kg	LDW08 - PCBs				20	U	N	18	U	N	20	U	N	19	U	N	27	U	N	73	U	N
Aroclor 1221	ug/kg	LDW08 - PCBs				20	U	N	18	U	N	20	U	N	19	U	N	27	U	N	73	U	N
Aroclor 1232	ug/kg	LDW08 - PCBs				20	U	N	18	U	N	20	U	N	19	U	N	27	U	N	73	U	N
Aroclor 1242	ug/kg	LDW08 - PCBs				20	U	N	18	U	N	20	U	N	19	U	N	27	U	N	73	U	N
Aroclor 1248	ug/kg	LDW08 - PCBs				20	U	N	18	U	N	20	U	N	19	U	N	41	U	N	73	U	N
Aroclor 1254	ug/kg	LDW08 - PCBs				120		Y	15	J	Y	59	J	Y	18	J	Y	120		Y	130	J	Y
Aroclor 1260	ug/kg	LDW08 - PCBs				60		Y	12	J	Y	36		Y	19	J	Y	89		Y	180		Y
Polychlorinated Biphenyls	ug/kg	LDW08 - PCBs	*130*	1000		*180*		*Y*	27	J	Y	95	J	Y	37	J	Y	*209*		*Y*	*310*	*J*	*Y*
1,2,4-Trichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*31*	51		*100*	*U*	*N*	*56*	*U*	*N*	*120*	*U*	*N*	19	U	N						
1,2-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*35*	50		*100*	*U*	*N*	*56*	*U*	*N*	*120*	*U*	*N*	19	U	N						
1,3-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds				100	U	N	56	U	N	120	U	N	19	U	N						
1,4-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*110*	110		100	U	N	56	U	N	*120*	*U*	*N*	19	U	N						
1-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds				100	U	N	56	U	N	120	U	N	9.4	J	Y						
2,2'-Oxybis(1-chloropropane)	ug/kg	LDW09 - Other Organic Compounds				100	U	N	56	U	N	120	U	N	19	U	N						
2,4,5-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds				520	U	N	280	U	N	580	U	N	94	U	N						
2,4,6-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds				520	U	N	280	U	N	580	U	N	94	U	N						
2,4-Dichlorophenol	ug/kg	LDW09 - Other Organic Compounds				520	U	N	280	U	N	580	UJ	N	94	U	N						
2,4-Dimethylphenol	ug/kg	LDW09 - Other Organic Compounds	*29*	29		*520*	*U*	*N*	*280*	*U*	*N*	*580*	*U*	*N*	*94*	*U*	*N*						
2,4-Dinitrophenol	ug/kg	LDW09 - Other Organic Compounds				1000	U	N	560	U	N	1200	U	N	190	U	N						
2,4-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds				520	U	N	280	U	N	580	U	N	94	U	N						
2,6-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds				520	U	N	280	U	N	580	U	N	94	U	N						
2-Chloronaphthalene	ug/kg	LDW09 - Other Organic Compounds				100	U	N	56	U	N	120	U	N	19	U	N						
2-Chlorophenol	ug/kg	LDW09 - Other Organic Compounds				100	U	N	56	U	N	120	U	N	19	U	N						
2-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds	670	670		100	U	N	34	J	Y	46	J	Y	18	J	Y						
2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*63*	63		*100*	*U*	*N*	56	U	N	*120*	*U*	*N*	19	U	N						

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - S Norfolk St CSOPS17 EOFSD
Attachment A, 90b - Actions Taken Pursuant to S4F

					Location	NST4			NST4			NST4			NST4			NST5			NST5		
					Sample Date	12 May 2016			12 May 2016			21 May 2015			21 May 2015			09 May 2016			18 May 2015		
					Sample Name	NST4-051216			NST4-051216G			NST4-052115			NST4-052115G			NST5-050916			NST5-051815		
					Drainage Type	SD			SD			SD			SD			SD			SD		
					Sample Method	SedTrap			Grab-Manual			SedTrap			Grab-Manual			SedTrap			SedTrap		
					Location Type	Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
2-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			520	U	N	280	U	N	580	U	N	94	U	N						
2-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			100	U	N	56	U	N	120	U	N	19	U	N						
3,3`-Dichlorobenzidine	ug/kg	LDW09 - Other Organic Compounds			520	U	N	280	UJ	N				94	U	N						
3-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			520	U	N	280	UJ	N	580	U	N	94	U	N						
4,6-Dinitro-2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			1000	U	N	560	U	N	1200	U	N	190	U	N						
4-Bromophenyl phenyl ether	ug/kg	LDW09 - Other Organic Compounds			100	U	N	56	U	N	120	U	N	19	U	N						
4-Chloro-3-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			520	U	N	280	U	N	580	U	N	94	U	N						
4-Chloroaniline	ug/kg	LDW09 - Other Organic Compounds			520	U	N	280	U	N	580	U	N	94	U	N						
4-Chlorophenyl Phenylether	ug/kg	LDW09 - Other Organic Compounds			100	U	N	56	U	N	120	U	N	19	U	N						
4-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*670*	670	150		Y	56	U	N	120	U	N	19	U	N						
4-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			520	U	N	280	U	N	580	U	N	94	U	N						
4-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			520	U	N	280	U	N	580	U	N									
Benzoic acid	ug/kg	LDW09 - Other Organic Compounds	*650*	650	*690*	*J*	*Y*	240	J	Y	*4600*		*Y*	280		Y						
Benzyl alcohol	ug/kg	LDW09 - Other Organic Compounds	*57*	73	*560*		*Y*	*59*		*Y*				19	U	N						
bis(2-Chloroethoxy) methane	ug/kg	LDW09 - Other Organic Compounds			100	U	N	56	U	N	120	U	N	19	U	N						
Bis-(2-chloroethyl) ether	ug/kg	LDW09 - Other Organic Compounds			100	U	N	56	U	N	120	U	N	19	UJ	N						
Carbazole	ug/kg	LDW09 - Other Organic Compounds			68	J	Y	71	J	Y	69	J	Y	51	J	Y						
Dibenzofuran	ug/kg	LDW09 - Other Organic Compounds	*540*	540	100	U	N	56	U	N	120	U	N	17	J	Y						
Hexachlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*22*	70	*100*	*U*	*N*	*56*	*U*	*N*	*120*	*U*	*N*	19	U	N						
Hexachlorobutadiene	ug/kg	LDW09 - Other Organic Compounds	*11*	120	*100*	*U*	*N*	*56*	*U*	*N*	*120*	*U*	*N*	*19*	*U*	*N*						
Hexachlorocyclopentadiene	ug/kg	LDW09 - Other Organic Compounds			520	U	N	280	U	N	580	U	N	94	U	N						
Hexachloroethane	ug/kg	LDW09 - Other Organic Compounds			100	U	N	56	U	N	120	U	N	19	U	N						
Isophorone	ug/kg	LDW09 - Other Organic Compounds			100	U	N	56	U	N	120	U	N	19	U	N						
Nitrobenzene	ug/kg	LDW09 - Other Organic Compounds			100	U	N	56	U	N	120	U	N	19	U	N						
N-Nitroso-Di-N-Propylamine	ug/kg	LDW09 - Other Organic Compounds			100	U	N	56	U	N	120	U	N	19	UJ	N						
N-Nitrosodiphenylamine	ug/kg	LDW09 - Other Organic Compounds	*28*	40	*100*	*U*	*N*	*56*	*U*	*N*	*120*	*U*	*N*	19	U	N						
Pentachlorophenol	ug/kg	LDW09 - Other Organic Compounds	*360*	690	*520*	*UJ*	*N*	280	U	N	*580*	*U*	*N*	94	U	N						
Phenol	ug/kg	LDW09 - Other Organic Compounds	*420*	1200	110		Y	56	U	N	390		Y	40	J	Y						
>10 Phi Clay	%	LDW10 - Grain Size												5.8		Y						
8-9 Phi Clay	%	LDW10 - Grain Size												0.1		Y						
9-10 Phi Clay	%	LDW10 - Grain Size												0.1	U	N						
Coarse Sand	%	LDW10 - Grain Size						34		Y				17.1		Y						
Coarse Silt	%	LDW10 - Grain Size												9		Y						
Fine Gravel	%	LDW10 - Grain Size						1.6		Y				3.8		Y						
Fine Sand	%	LDW10 - Grain Size						4		Y				8.3		Y						
Fine Silt	%	LDW10 - Grain Size												1.8		Y						
Gravel	%	LDW10 - Grain Size						0.9		Y				1.6		Y						
Medium Sand	%	LDW10 - Grain Size						8.1		Y				46.3		Y						
Medium Silt	%	LDW10 - Grain Size												0.1	U	N						
Total Fines	%	LDW10 - Grain Size																				
Very Coarse Sand	%	LDW10 - Grain Size						1.9		Y				3.4		Y						
Very Fine Sand	%	LDW10 - Grain Size						2.2		Y				1.5		Y						
Very Fine Silt	%	LDW10 - Grain Size												0.9		Y						

Seattle Public Utilities, Source Control Implementation Plan
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					Location	RCB299			RCB300			RCB302			RCB303			RCB304		
					Sample Date	27 Apr 2016			04 May 2016			04 May 2016			04 May 2016			04 May 2016		
					Sample Name	RCB299-042716			RCB300-050416			RCB302-050416			RCB303-050416			RCB304-050416		
					Drainage Type	SD			SD			SD			SD			SD		
					Sample Method	Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual		
					Location Type	RCB			RCB			RCB			RCB			RCB		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET		Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
Solids, Total	%	LDW01 - Solids_TOC				36.81		Y	41.78		Y	67.82		Y	65.17		Y	54.35		Y
Total Organic Carbon	%	LDW01 - Solids_TOC				7.57		Y	5.99		Y	2.66		Y	3.74		Y	6.87		Y
Arsenic	mg/kg	LDW02 - Metals	57	93		10	U	N	10	U	N	9		Y	11		Y	10		Y
Copper	mg/kg	LDW02 - Metals	*390*	390		92.4		Y	193		Y	44.3		Y	52.8		Y	91.5		Y
Lead	mg/kg	LDW02 - Metals	450	530		81		Y	54		Y	14		Y	16		Y	35		Y
Mercury	mg/kg	LDW02 - Metals	0.41	0.59		0.04	U	N	0.05		Y	0.02	U	N	0.03	U	N	0.04	U	N
Zinc	mg/kg	LDW02 - Metals	*410*	960		*1500*		*Y*	*612*		*Y*	305		Y	*596*		*Y*	*537*		*Y*
Diesel Range (Silica and Acid Cleaned)	mg/kg	LDW03 - TPH	2000	2000					1400		Y	180		Y	180		Y	440		Y
Diesel Range Hydrocarbons	mg/kg	LDW03 - TPH	*2000*	2000		260		Y	*2100*		*Y*	250		Y	280		Y	590		Y
Motor Oil (Silica and Acid Cleaned)	mg/kg	LDW03 - TPH	*2000*	2000					*5900*		*Y*	900		Y	930		Y	*2500*		*Y*
Motor Oil Range	mg/kg	LDW03 - TPH	*2000*	2000		1800		Y	*7500*		*Y*	1000		Y	1100		Y	*2700*		*Y*
Acenaphthene	ug/kg	LDW04 - LPAH	*500*	500		300	U	N	490	U	N	120	U	N	110	U	N	120	U	N
Acenaphthylene	ug/kg	LDW04 - LPAH	1300	1300		300	U	N	490	U	N	120	U	N	110	U	N	120	U	N
Anthracene	ug/kg	LDW04 - LPAH	*960*	960		300	U	N	490	U	N	120	U	N	110	U	N	120	U	N
Fluorene	ug/kg	LDW04 - LPAH	*540*	540		300	U	N	490	U	N	120	U	N	110	U	N	120	U	N
LPAH	ug/kg	LDW04 - LPAH	*5200*	5200		210	J	Y	630		Y	120		Y	120		Y	270		Y
Naphthalene	ug/kg	LDW04 - LPAH	2100	2100		300	U	N	490	U	N	120	U	N	110	U	N	120	U	N
Phenanthrene	ug/kg	LDW04 - LPAH	*1500*	1500		210	J	Y	630		Y	120		Y	120		Y	270		Y
Benzo(A)anthracene	ug/kg	LDW05 - HPAH	*1300*	1600		150	J	Y	490	U	N	80	J	Y	56	J	Y	130		Y
Benzo(A)pyrene	ug/kg	LDW05 - HPAH	*1600*	1600		160	J	Y	490	U	N	86	J	Y	73	J	Y	140		Y
Benzo(G,H,I)perylene	ug/kg	LDW05 - HPAH	*670*	720		310		Y	490		Y	130		Y	160		Y	240		Y
Benzofluoranthenes, Total	ug/kg	LDW05 - HPAH	*3200*	3600		360	J	Y	510	J	Y	170	J	Y	130	J	Y	330		Y
Chrysene	ug/kg	LDW05 - HPAH	*1400*	2800		340		Y	560		Y	140		Y	130		Y	320		Y
Dibenzo(A,H)anthracene	ug/kg	LDW05 - HPAH	*230*	230		*300*	*U*	*N*	*490*	*U*	*N*	120	U	N	110	U	N	120	U	N
Fluoranthene	ug/kg	LDW05 - HPAH	*1700*	2500		360		Y	1000		Y	200		Y	170		Y	510		Y
HPAH	ug/kg	LDW05 - HPAH	*12000*	17000		2080	J	Y	3510	J	Y	1089	J	Y	1030	J	Y	2280	J	Y
Indeno(1,2,3-Cd)pyrene	ug/kg	LDW05 - HPAH	*600*	690		300	U	N	490	U	N	63	J	Y	61	J	Y	110	J	Y
Pyrene	ug/kg	LDW05 - HPAH	*2600*	3300		400		Y	950		Y	220		Y	250		Y	500		Y
cPAH	ug/kg	LDW06 - cPAH (analyte only)		100		289.4	J	Y	448.6	J	Y	142.7	J	Y	121	J	Y	224.2	J	Y
Bis(2-ethylhexyl)phthalate	ug/kg	LDW07 - Phthalates	*1300*	1900		*1700*		*Y*	*16000*		*Y*	1100		Y	*1400*		*Y*	*4500*		*Y*
Butylbenzylphthalate	ug/kg	LDW07 - Phthalates	*63*	900		*270*	*J*	*Y*	*440*	*J*	*Y*	*280*		*Y*	*73*	*J*	*Y*	*120*	*U*	*N*
Diethylphthalate	ug/kg	LDW07 - Phthalates	*200*	1200		*300*	*U*	*N*	*490*	*U*	*N*	120	U	N	110	U	N	120	U	N
Dimethylphthalate	ug/kg	LDW07 - Phthalates	*71*	160		*300*	*U*	*N*	*490*	*U*	*N*	*120*	*U*	*N*	*110*	*U*	*N*	*120*	*U*	*N*
Di-N-Butylphthalate	ug/kg	LDW07 - Phthalates	*1400*	1400		300	U	N	490	U	N	120	U	N	110	U	N	120	U	N
Di-N-Octylphthalate	ug/kg	LDW07 - Phthalates	*6200*	6200		300	U	N	490	U	N	120	U	N	110	U	N	120	U	N
Aroclor 1016	ug/kg	LDW08 - PCBs				20	U	N	19	U	N	19	U	N	18	U	N	19	U	N
Aroclor 1221	ug/kg	LDW08 - PCBs				20	U	N	19	U	N	19	U	N	18	U	N	19	U	N
Aroclor 1232	ug/kg	LDW08 - PCBs				20	U	N	19	U	N	19	U	N	18	U	N	19	U	N
Aroclor 1242	ug/kg	LDW08 - PCBs				20	U	N	19	U	N	19	U	N	18	U	N	19	U	N
Aroclor 1248	ug/kg	LDW08 - PCBs				36		Y	46		Y	19	U	N	18	U	N	20		Y
Aroclor 1254	ug/kg	LDW08 - PCBs				60		Y	38		Y	32		Y	21		Y	32		Y
Aroclor 1260	ug/kg	LDW08 - PCBs				20	U	N	26		Y	19	U	N	18	U	N	12	J	Y
Polychlorinated Biphenyls	ug/kg	LDW08 - PCBs	*130*	1000		96		Y	110		Y	32		Y	21		Y	64	J	Y
1,2,4-Trichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*31*	51		*300*	*U*	*N*	*490*	*U*	*N*	*120*	*U*	*N*	*110*	*U*	*N*	*120*	*U*	*N*
1,2-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*35*	50		*300*	*U*	*N*	*490*	*U*	*N*	*120*	*U*	*N*	*110*	*U*	*N*	*120*	*U*	*N*
1,3-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds				300	U	N	490	U	N	120	U	N	110	U	N	120	U	N
1,4-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*110*	110		*300*	*U*	*N*	*490*	*U*	*N*	*120*	*U*	*N*	*110*	*U*	*N*	*120*	*U*	*N*
1-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds				300	U	N	490	U	N	120	U	N	110	U	N	120	U	N
2,2'-Oxybis(1-chloropropane)	ug/kg	LDW09 - Other Organic Compounds				300	U	N	490	U	N	120	U	N	110	U	N	120	U	N
2,4,5-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds				1500	U	N	2400	U	N	570	U	N	560	U	N	600	U	N
2,4,6-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds				1500	U	N	2400	U	N	570	U	N	560	U	N	600	U	N
2,4-Dichlorophenol	ug/kg	LDW09 - Other Organic Compounds				1500	U	N	2400	U	N	570	U	N	560	U	N	600	U	N
2,4-Dimethylphenol	ug/kg	LDW09 - Other Organic Compounds	*29*	29		*1500*	*U*	*N*	*2400*	*U*	*N*	*570*	*U*	*N*	*560*	*U*	*N*	*600*	*U*	*N*
2,4-Dinitrophenol	ug/kg	LDW09 - Other Organic Compounds				3000	U	N	4900	U	N	1200	U	N	1100	U	N	1200	U	N
2,4-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds				1500	U	N	2400	U	N	570	U	N	560	U	N	600	U	N
2,6-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds				1500	U	N	2400	U	N	570	U	N	560	U	N	600	U	N
2-Chloronaphthalene	ug/kg	LDW09 - Other Organic Compounds				300	U	N	490	U	N	120	U	N	110	U	N	120	U	N
2-Chlorophenol	ug/kg	LDW09 - Other Organic Compounds				300	U	N	490	U	N	120	U	N	110	U	N	120	U	N
2-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds	670	670		300	U	N	490	U	N	120	U	N	110	U	N	120	U	N
2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*63*	63		*300*	*U*	*N*	*490*	*U*	*N*	*120*	*U*	*N*	*110*	*U*	*N*	*120*	*U*	*N*

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					Location	RCB299			RCB300			RCB302			RCB303			RCB304		
					Sample Date	27 Apr 2016			04 May 2016			04 May 2016			04 May 2016			04 May 2016		
					Sample Name	RCB299-042716			RCB300-050416			RCB302-050416			RCB303-050416			RCB304-050416		
					Drainage Type	SD			SD			SD			SD			SD		
					Sample Method	Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual		
					Location Type	RCB			RCB			RCB			RCB			RCB		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD			S Norfolk St CSO/PS17 EOF/SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
2-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			1500	U	N	2400	U	N	570	U	N	560	U	N	600	U	N
2-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			300	U	N	490	U	N	120	U	N	110	U	N	120	U	N
3,3`-Dichlorobenzidine	ug/kg	LDW09 - Other Organic Compounds			1500	UJ	N	2400	UJ	N	570	UJ	N	560	UJ	N	600	UJ	N
3-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			1500	UJ	N	2400	U	N	570	U	N	560	U	N	600	U	N
4,6-Dinitro-2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			3000	U	N	4900	U	N	1200	U	N	1100	U	N	1200	U	N
4-Bromophenyl phenyl ether	ug/kg	LDW09 - Other Organic Compounds			300	U	N	490	U	N	120	U	N	110	U	N	120	U	N
4-Chloro-3-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			1500	U	N	2400	U	N	570	U	N	560	U	N	600	U	N
4-Chloroaniline	ug/kg	LDW09 - Other Organic Compounds			1500	UJ	N	2400	U	N	570	U	N	560	U	N	600	U	N
4-Chlorophenyl Phenylether	ug/kg	LDW09 - Other Organic Compounds			300	U	N	490	U	N	120	U	N	110	U	N	120	U	N
4-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*670*	670	300	U	N	*1900*		*Y*	460		Y	370		Y	260		Y
4-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			1500	UJ	N	2400	U	N	570	U	N	560	U	N	600	U	N
4-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			1500	U	N	2400	U	N	570	U	N	560	U	N	600	U	N
Benzoic acid	ug/kg	LDW09 - Other Organic Compounds	*650*	650	*3000*	*U*	*N*	*4900*	*UJ*	*N*	*1200*	*UJ*	*N*	*1100*	*UJ*	*N*	*1200*	*UJ*	*N*
Benzyl alcohol	ug/kg	LDW09 - Other Organic Compounds	*57*	73	*300*	*U*	*N*	*490*	*U*	*N*	*120*	*U*	*N*	*110*	*U*	*N*	*120*	*U*	*N*
bis(2-Chloroethoxy) methane	ug/kg	LDW09 - Other Organic Compounds			300	U	N	490	U	N	120	U	N	110	U	N	120	U	N
Bis-(2-chloroethyl) ether	ug/kg	LDW09 - Other Organic Compounds			300	U	N	490	U	N	120	U	N	110	U	N	120	U	N
Carbazole	ug/kg	LDW09 - Other Organic Compounds			300	UJ	N	490	UJ	N	120	UJ	N	110	UJ	N	120	UJ	N
Dibenzofuran	ug/kg	LDW09 - Other Organic Compounds	*540*	540	300	U	N	490	U	N	120	U	N	110	U	N	120	U	N
Hexachlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*22*	70	*300*	*U*	*N*	*490*	*U*	*N*	*120*	*U*	*N*	*110*	*U*	*N*	*120*	*U*	*N*
Hexachlorobutadiene	ug/kg	LDW09 - Other Organic Compounds	*11*	120	*300*	*U*	*N*	*490*	*U*	*N*	*120*	*U*	*N*	*110*	*U*	*N*	*120*	*U*	*N*
Hexachlorocyclopentadiene	ug/kg	LDW09 - Other Organic Compounds			1500	U	N	2400	U	N	570	U	N	560	U	N	600	U	N
Hexachloroethane	ug/kg	LDW09 - Other Organic Compounds			300	U	N	490	U	N	120	U	N	110	U	N	120	U	N
Isophorone	ug/kg	LDW09 - Other Organic Compounds			300	U	N	490	U	N	120	U	N	110	U	N	120	U	N
Nitrobenzene	ug/kg	LDW09 - Other Organic Compounds			300	U	N	490	U	N	120	U	N	110	U	N	120	U	N
N-Nitroso-Di-N-Propylamine	ug/kg	LDW09 - Other Organic Compounds			300	U	N	490	U	N	120	U	N	110	U	N	120	U	N
N-Nitrosodiphenylamine	ug/kg	LDW09 - Other Organic Compounds	*28*	40	*300*	*U*	*N*	*490*	*U*	*N*	*120*	*U*	*N*	*110*	*U*	*N*	*120*	*U*	*N*
Pentachlorophenol	ug/kg	LDW09 - Other Organic Compounds	*360*	690	*1500*	*U*	*N*	*2400*	*U*	*N*	*570*	*U*	*N*	*560*	*U*	*N*	*600*	*U*	*N*
Phenol	ug/kg	LDW09 - Other Organic Compounds	*420*	1200	300	U	N	*490*	*U*	*N*	120	U	N	110	U	N	83	J	Y
>10 Phi Clay	%	LDW10 - Grain Size																	
8-9 Phi Clay	%	LDW10 - Grain Size																	
9-10 Phi Clay	%	LDW10 - Grain Size																	
Coarse Sand	%	LDW10 - Grain Size			19.4		Y	10.7		Y	13		Y	16.1		Y	12.4		Y
Coarse Silt	%	LDW10 - Grain Size																	
Fine Gravel	%	LDW10 - Grain Size			7.2		Y	13.7		Y	13.4		Y	9.4		Y	8.6		Y
Fine Sand	%	LDW10 - Grain Size			13.2		Y	5.7		Y	3.4		Y	4.8		Y	3.2		Y
Fine Silt	%	LDW10 - Grain Size																	
Gravel	%	LDW10 - Grain Size			9.1		Y	6.5		Y	6.5		Y	21.4		Y	12.4		Y
Medium Sand	%	LDW10 - Grain Size			21.8		Y	21.7		Y	15.7		Y	8.2		Y	14.4		Y
Medium Silt	%	LDW10 - Grain Size																	
Total Fines	%	LDW10 - Grain Size																	
Very Coarse Sand	%	LDW10 - Grain Size			14.9		Y	9.5		Y	10.1		Y	24.8		Y	8		Y
Very Fine Sand	%	LDW10 - Grain Size			7.2		Y	6.8		Y	2.8		Y	1.8		Y	3.9		Y
Very Fine Silt	%	LDW10 - Grain Size																	

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - S River St SD
Attachment A, 90b - Actions Taken Pursuant to S4F

					Location	CB202			CB270			CB288			CB289			MH211			MH220		
					Sample Date	23 Feb 2016			23 Feb 2016			23 Feb 2016			23 Feb 2016			01 Apr 2016			24 Mar 2016		
					Sample Name	CB202-022316			CB270-022316			CB288-022316			CB289-022316			MH211-040116			MH220-032416		
					Drainage Type	SD			SD			SD			SD			SD			SD		
					Sample Method	Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual		
					Location Type	RCB			CB			CB			CB			Inline			Inline		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	S River St SD			S River St SD			S River St SD			S River St SD			S River St SD			S River St SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET		Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
Solids, Total	%	LDW01 - Solids_TOC				58.08		Y	52.32		Y	39.58		Y	42.98		Y	74.49		Y	61.16		Y
Total Organic Carbon	%	LDW01 - Solids_TOC				3.18	J	Y	4.44	J	Y	6.65	J	Y	5.91	J	Y	3.13		Y	6.93		Y
Arsenic	mg/kg	LDW02 - Metals	57	93		23		Y	14		Y	50		Y	20		Y	8		Y	10		Y
Copper	mg/kg	LDW02 - Metals	390	390		96.4		Y	156		Y	271		Y	193		Y	92.3		Y	103		Y
Lead	mg/kg	LDW02 - Metals	450	530		45	J	Y	93	J	Y	142	J	Y	124	J	Y	20		Y	87		Y
Mercury	mg/kg	LDW02 - Metals	*0.41*	0.59		0.05		Y	0.09		Y	*4.4*		*Y*	0.11		Y	0.03		Y	0.07		Y
Zinc	mg/kg	LDW02 - Metals	*410*	960		399		Y	*1140*		*Y*	*2020*		*Y*	*1270*		*Y*	386		Y	*433*		*Y*
Diesel Range (Silica and Acid Cleaned)	mg/kg	LDW03 - TPH	2000	2000		700		Y	1600		Y	1100		Y	570		Y				480	J	Y
Diesel Range Hydrocarbons	mg/kg	LDW03 - TPH	*2000*	2000		890		Y	*2000*		*Y*	1600		Y	970		Y	340		Y	650		Y
Motor Oil (Silica and Acid Cleaned)	mg/kg	LDW03 - TPH	*2000*	2000		*3800*		*Y*	*3300*		*Y*	*5200*		*Y*	*2900*		*Y*				*2600*	*J*	*Y*
Motor Oil Range	mg/kg	LDW03 - TPH	*2000*	2000		*4500*		*Y*	*4400*		*Y*	*6800*		*Y*	*3800*		*Y*	1400		Y	*3000*		*Y*
Acenaphthene	ug/kg	LDW04 - LPAH	500	500		280	U	N	100	J	Y	220	U	N	320	U	N	230	U	N	240	U	N
Acenaphthylene	ug/kg	LDW04 - LPAH	1300	1300		280	U	N	290	U	N	64	J	Y	320	U	N	230	U	N	240	U	N
Anthracene	ug/kg	LDW04 - LPAH	*960*	960		140	J	Y	380		Y	220		Y	110	J	Y	230	U	N	130	J	Y
Fluorene	ug/kg	LDW04 - LPAH	540	540		280	U	N	160	J	Y	86	J	Y	140	J	Y	230	U	N	240	U	N
LPAH	ug/kg	LDW04 - LPAH	5200	5200		540	J	Y	2470	J	Y	950	J	Y	1250	J	Y	230	U	N	410	J	Y
Naphthalene	ug/kg	LDW04 - LPAH	2100	2100		280	U	N	130	J	Y	170	J	Y	230	J	Y	230	U	N	240	U	N
Phenanthrene	ug/kg	LDW04 - LPAH	*1500*	1500		400		Y	*1700*		*Y*	410		Y	770		Y	230	U	N	280		Y
Benzo(A)anthracene	ug/kg	LDW05 - HPAH	*1300*	1600		370		Y	*1500*		*Y*	360		Y	340		Y	230	U	N	240		Y
Benzo(A)pyrene	ug/kg	LDW05 - HPAH	1600	1600		370		Y	1400		Y	420		Y	450		Y	230	U	N	300		Y
Benzo(G,H,I)perylene	ug/kg	LDW05 - HPAH	*670*	720		450		Y	*1200*		*Y*	460		Y	*790*		*Y*	230	U	N	500		Y
Benzofluoranthenes, Total	ug/kg	LDW05 - HPAH	*3200*	3600		1200		Y	*3300*		*Y*	1500		Y	1100		Y	160	J	Y	750		Y
Chrysene	ug/kg	LDW05 - HPAH	*1400*	2800		880		Y	*2800*		*Y*	1200		Y	900		Y	120	J	Y	530		Y
Dibenzo(A,H)anthracene	ug/kg	LDW05 - HPAH	*230*	230		*280*	*U*	*N*	*310*		*Y*	130	J	Y	*320*	*U*	*N*	*230*	*U*	*N*	*240*	*U*	*N*
Fluoranthene	ug/kg	LDW05 - HPAH	*1700*	2500		860		Y	*3800*		*Y*	1300		Y	1000		Y	120	J	Y	660		Y
HPAH	ug/kg	LDW05 - HPAH	*12000*	17000		5370	J	Y	*18900*		*Y*	7020	J	Y	5950		Y	530	J	Y	4010	J	Y
Indeno(1,2,3-Cd)pyrene	ug/kg	LDW05 - HPAH	*600*	690		260	J	Y	*990*		*Y*	350		Y	370		Y	230	U	N	240		Y
Pyrene	ug/kg	LDW05 - HPAH	*2600*	3300		980		Y	*3600*		*Y*	1300		Y	1000		Y	130	J	Y	790	J	Y
cPAH	ug/kg	LDW06 - cPAH (analyte only)		100		617.8	J	Y	2131		Y	705	J	Y	704		Y	201.2	J	Y	476.3		Y
Bis(2-ethylhexyl)phthalate	ug/kg	LDW07 - Phthalates	*1300*	1900		*3600*		*Y*	*7600*		*Y*	*5800*		*Y*	*5800*		*Y*	*5900*		*Y*	*2700*		*Y*
Butylbenzylphthalate	ug/kg	LDW07 - Phthalates	*63*	900		*280*	*U*	*N*	*320*		*Y*	*280*		*Y*	*970*		*Y*	*290*		*Y*	*300*		*Y*
Diethylphthalate	ug/kg	LDW07 - Phthalates	*200*	1200		*280*	*U*	*N*	*290*	*U*	*N*	*220*	*U*	*N*	*320*	*U*	*N*	*230*	*U*	*N*	*240*	*U*	*N*
Dimethylphthalate	ug/kg	LDW07 - Phthalates	*71*	160		*280*	*U*	*N*	*590*		*Y*	*220*		*Y*	*210*	*J*	*Y*	*230*	*U*	*N*	*240*	*U*	*N*
Di-N-Butylphthalate	ug/kg	LDW07 - Phthalates	1400	1400		170	J	Y	120	J	Y	240		Y	180	J	Y	230	U	N	240	U	N
Di-N-Octylphthalate	ug/kg	LDW07 - Phthalates	6200	6200		280	U	N	750		Y	530		Y	530		Y	230	U	N	240	U	N
Aroclor 1016	ug/kg	LDW08 - PCBs				19	U	N	19	U	N	20	U	N	20	U	N	19	U	N	20	U	N
Aroclor 1221	ug/kg	LDW08 - PCBs				19	U	N	19	U	N	20	U	N	20	U	N	19	U	N	20	U	N
Aroclor 1232	ug/kg	LDW08 - PCBs				19	U	N	19	U	N	20	U	N	20	U	N	19	U	N	20	U	N
Aroclor 1242	ug/kg	LDW08 - PCBs				19	U	N	19	U	N	20	U	N	20	U	N	19	U	N	20	U	N
Aroclor 1248	ug/kg	LDW08 - PCBs				47	U	N	56	U	N	49	U	N	98		Y	19	U	N	30	U	N
Aroclor 1254	ug/kg	LDW08 - PCBs				56	J	Y	100		Y	260	J	Y	130		Y	28		Y	90	J	Y
Aroclor 1260	ug/kg	LDW08 - PCBs				31		Y	54		Y	72		Y	77		Y	25		Y	110		Y
Polychlorinated Biphenyls	ug/kg	LDW08 - PCBs	*130*	1000		87	J	Y	*154*		*Y*	*332*	*J*	*Y*	*305*		*Y*	53		Y	*200*	*J*	*Y*
1,2,4-Trichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*31*	51		*280*	*U*	*N*	*290*	*U*	*N*	*220*	*U*	*N*	*320*	*U*	*N*	*230*	*U*	*N*	*240*	*U*	*N*
1,2-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*35*	50		*280*	*U*	*N*	*290*	*U*	*N*	*220*	*U*	*N*	*320*	*U*	*N*	*230*	*U*	*N*	*240*	*U*	*N*
1,3-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds				280	U	N	290	U	N	220	U	N	320	U	N	230	U	N	240	U	N
1,4-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*110*	110		*280*	*U*	*N*	*290*	*U*	*N*	*220*	*U*	*N*	*320*	*U*	*N*	*230*	*U*	*N*	*240*	*U*	*N*
1-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds				280	U	N	290	U	N	220	U	N	320	U	N	230	U	N	240	U	N
2,2'-Oxybis(1-chloropropane)	ug/kg	LDW09 - Other Organic Compounds				280	U	N	290	U	N	220	U	N	320	U	N	230	U	N	240	U	N
2,4,5-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds				1400	U	N	1500	U	N	1100	U	N	1600	U	N	1200	U	N	1200	U	N
2,4,6-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds				1400	U	N	1500	U	N	1100	U	N	1600	U	N	1200	U	N	1200	U	N
2,4-Dichlorophenol	ug/kg	LDW09 - Other Organic Compounds				1400	U	N	1500	U	N	1100	U	N	1600	U	N	1200	U	N	1200	U	N
2,4-Dimethylphenol	ug/kg	LDW09 - Other Organic Compounds	*29*	29		*1400*	*U*	*N*	*1500*	*U*	*N*	*1100*	*U*	*N*	*1600*	*U*	*N*	*1200*	*U*	*N*	*1200*	*U*	*N*
2,4-Dinitrophenol	ug/kg	LDW09 - Other Organic Compounds				2800	U	N	2900	U	N	2200	U	N	3200	U	N	2300	U	N	2400	U	N
2,4-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds				1400	U	N	1500	U	N	1100	U	N	1600	U	N	1200	U	N	1200	U	N
2,6-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds				1400	U	N	1500	U	N	1100	U	N	1600	U	N	1200	U	N	1200	U	N
2-Chloronaphthalene	ug/kg	LDW09 - Other Organic Compounds				280	U	N	290	U	N	220	U	N	320	U	N	230	U	N	240	U	N
2-Chlorophenol	ug/kg	LDW09 - Other Organic Compounds				280	U	N	290	U	N	220	U	N	320	U	N	230	U	N	240	U	N
2-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds	670	670		280	U	N	88	J	Y	220	U	N	130	J	Y	230	U	N	240	U	N
2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*63*	63		*280*	*U*	*N*	*290*	*U*	*N*	*220*	*U*	*N*	*320*	*U*	*N*	*230*	*U*	*N*	*240*	*U*	*N*

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - S River St SD
Attachment A, 90b - Actions Taken Pursuant to S4F

					Location	CB202			CB270			CB288			CB289			MH211			MH220		
					Sample Date	23 Feb 2016			23 Feb 2016			23 Feb 2016			23 Feb 2016			01 Apr 2016			24 Mar 2016		
					Sample Name	CB202-022316			CB270-022316			CB288-022316			CB289-022316			MH211-040116			MH220-032416		
					Drainage Type	SD			SD			SD			SD			SD			SD		
					Sample Method	Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual		
					Location Type	RCB			CB			CB			CB			Inline			Inline		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	S River St SD			S River St SD			S River St SD			S River St SD			S River St SD			S River St SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
2-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			1400	U	N	1500	U	N	1100	U	N	1600	U	N	1200	U	N	1200	U	N
2-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			280	U	N	290	U	N	220	U	N	320	U	N	230	U	N	240	U	N
3,3`-Dichlorobenzidine	ug/kg	LDW09 - Other Organic Compounds			1400	U	N	1500	U	N	1100	U	N	1600	U	N	1200	U	N	1200	UJ	N
3-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			1400	U	N	1500	U	N	1100	U	N	1600	U	N	1200	U	N	1200	U	N
4,6-Dinitro-2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			2800	U	N	2900	U	N	2200	U	N	3200	U	N	2300	U	N	2400	U	N
4-Bromophenyl phenyl ether	ug/kg	LDW09 - Other Organic Compounds			280	U	N	290	U	N	220	U	N	320	U	N	230	U	N	240	U	N
4-Chloro-3-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			1400	U	N	1500	U	N	1100	U	N	1600	U	N	1200	U	N	1200	U	N
4-Chloroaniline	ug/kg	LDW09 - Other Organic Compounds			1400	U	N	1500	U	N	1100	U	N	1600	U	N	1200	U	N	1200	U	N
4-Chlorophenyl Phenylether	ug/kg	LDW09 - Other Organic Compounds			280	U	N	290	U	N	220	U	N	320	U	N	230	U	N	240	U	N
4-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*670*	670	280	U	N	*870*		*Y*	220	U	N	340		Y	*970*		*Y*	240	UJ	N
4-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			1400	U	N	1500	U	N	1100	U	N	1600	U	N	1200	U	N	1200	U	N
4-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			1400	U	N	1500	U	N	1100	U	N	1600	U	N	1200	U	N	1200	U	N
Benzoic acid	ug/kg	LDW09 - Other Organic Compounds	*650*	650	*2800*	*U*	*N*	*2900*	*U*	*N*	*2200*	*U*	*N*	*3200*	*U*	*N*	*2300*	*U*	*N*	*2400*	*UJ*	*N*
Benzyl alcohol	ug/kg	LDW09 - Other Organic Compounds	*57*	73	*280*	*U*	*N*	*290*	*U*	*N*	*220*	*U*	*N*	*320*	*U*	*N*	*2500*		*Y*	*240*	*U*	*N*
bis(2-Chloroethoxy) methane	ug/kg	LDW09 - Other Organic Compounds			280	U	N	290	U	N	220	U	N	320	U	N	230	U	N	240	UJ	N
Bis-(2-chloroethyl) ether	ug/kg	LDW09 - Other Organic Compounds			280	U	N	290	U	N	220	U	N	320	U	N	230	U	N	240	UJ	N
Carbazole	ug/kg	LDW09 - Other Organic Compounds			280	U	N	350		Y	140	J	Y	130	J	Y	230	U	N	240	U	N
Dibenzofuran	ug/kg	LDW09 - Other Organic Compounds	540	540	280	U	N	290	U	N	220	U	N	81	J	Y	230	U	N	240	U	N
Hexachlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*22*	70	*280*	*U*	*N*	*290*	*U*	*N*	*220*	*U*	*N*	*320*	*U*	*N*	*230*	*U*	*N*	*240*	*U*	*N*
Hexachlorobutadiene	ug/kg	LDW09 - Other Organic Compounds	*11*	120	*280*	*U*	*N*	*290*	*U*	*N*	*220*	*U*	*N*	*320*	*U*	*N*	*230*	*U*	*N*	*240*	*U*	*N*
Hexachlorocyclopentadiene	ug/kg	LDW09 - Other Organic Compounds			1400	U	N	1500	U	N	1100	U	N	1600	U	N	1200	U	N	1200	U	N
Hexachloroethane	ug/kg	LDW09 - Other Organic Compounds			280	U	N	290	U	N	220	U	N	320	U	N	230	U	N	240	U	N
Isophorone	ug/kg	LDW09 - Other Organic Compounds			280	U	N	290	U	N	220	U	N	320	U	N	230	U	N	240	U	N
Nitrobenzene	ug/kg	LDW09 - Other Organic Compounds			280	U	N	290	U	N	220	U	N	320	U	N	230	U	N	240	U	N
N-Nitroso-Di-N-Propylamine	ug/kg	LDW09 - Other Organic Compounds			280	U	N	290	U	N	220	U	N	320	U	N	230	U	N	240	U	N
N-Nitrosodiphenylamine	ug/kg	LDW09 - Other Organic Compounds	*28*	40	*280*	*U*	*N*	*290*	*U*	*N*	*220*	*U*	*N*	*320*	*U*	*N*	*230*	*U*	*N*	*240*	*U*	*N*
Pentachlorophenol	ug/kg	LDW09 - Other Organic Compounds	*360*	690	*1400*	*UJ*	*N*	*1500*	*UJ*	*N*	*1100*	*UJ*	*N*	*1600*	*UJ*	*N*	*1200*	*UJ*	*N*	*1200*	*UJ*	*N*
Phenol	ug/kg	LDW09 - Other Organic Compounds	*420*	1200	280	U	N	260	J	Y	290		Y	210	J	Y	*460*		*Y*	140	J	Y
Coarse Sand	%	LDW10 - Grain Size			8.1		Y	7		Y	13.1		Y	5.2		Y	11.2		Y	9.1		Y
Fine Gravel	%	LDW10 - Grain Size			11		Y	3		Y	5		Y	0.4		Y	1.6		Y	15		Y
Fine Sand	%	LDW10 - Grain Size			7		Y	8.9		Y	8.5		Y	5.6		Y	9.6		Y	6.9		Y
Gravel	%	LDW10 - Grain Size			3.4		Y	2.8		Y	6.9		Y	2.5		Y	2.6		Y	11.7		Y
Medium Sand	%	LDW10 - Grain Size			11.6		Y	7.9		Y	13.7		Y	6		Y	16.4		Y	8.3		Y
Very Coarse Sand	%	LDW10 - Grain Size			4.3		Y	4.6		Y	11.3		Y	4.8		Y	4.5		Y	8.6		Y
Very Fine Sand	%	LDW10 - Grain Size			7.2		Y	17.7		Y	10.1		Y	18.2		Y	7.9		Y	7.6		Y

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - S River St SD
Attachment A, 90b - Actions Taken Pursuant to S4F

					Location	RCB192			RCB77			RCB78			RCB79			RCB81		
					Sample Date	01 Apr 2016			24 Mar 2016			24 Mar 2016			24 Mar 2016			01 Apr 2016		
					Sample Name	RCB192-040116			RCB77-032416			RCB78-032416			RCB79-032416			RCB81-040116		
					Drainage Type	SD			SD			SD			SD			SD		
					Sample Method	Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual		
					Location Type	RCB			RCB			RCB			RCB			RCB		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	S River St SD			S River St SD			S River St SD			S River St SD			S River St SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
Solids, Total	%	LDW01 - Solids_TOC			55.4		Y	37.9		Y	62.07		Y	71.78		Y	60.61		Y
Total Organic Carbon	%	LDW01 - Solids_TOC			10.6		Y	11.8		Y	5.8		Y	3.48		Y	3.33		Y
Arsenic	mg/kg	LDW02 - Metals	57	93	8	U	N	10	U	N	22		Y	7	U	N	19		Y
Copper	mg/kg	LDW02 - Metals	390	390	68.4		Y	120		Y	151		Y	64.9		Y	93.6		Y
Lead	mg/kg	LDW02 - Metals	450	530	35		Y	68		Y	88		Y	24		Y	61		Y
Mercury	mg/kg	LDW02 - Metals	*0.41*	0.59	0.04		N	0.1		Y	0.03	U	N	0.02	U	N	0.04		Y
Zinc	mg/kg	LDW02 - Metals	*410*	960	273		Y	*727*		*Y*	*705*		*Y*	296		Y	296		Y
Diesel Range (Silica and Acid Cleaned)	mg/kg	LDW03 - TPH	2000	2000	440		Y	1400	J	Y	410	J	Y	460	J	Y			
Diesel Range Hydrocarbons	mg/kg	LDW03 - TPH	*2000*	2000	930		Y	1900		Y	600		Y	1100		Y	690		Y
Motor Oil (Silica and Acid Cleaned)	mg/kg	LDW03 - TPH	*2000*	2000	1500		Y	*6300*	*J*	*Y*	*2500*	*J*	*Y*	*2400*	*J*	*Y*			
Motor Oil Range	mg/kg	LDW03 - TPH	*2000*	2000	*2800*		*Y*	*6600*		*Y*	*2900*		*Y*	*3700*		*Y*	*3200*		*Y*
Acenaphthene	ug/kg	LDW04 - LPAH	500	500	300	U	N	290	U	N	81	J	Y	220	U	N	280	U	N
Acenaphthylene	ug/kg	LDW04 - LPAH	1300	1300	300	U	N	130	J	Y	69	J	Y	220	U	N	280	U	N
Anthracene	ug/kg	LDW04 - LPAH	*960*	960	*1300*		*Y*	600		Y	160	J	Y	78	J	Y	110	J	Y
Fluorene	ug/kg	LDW04 - LPAH	540	540	180	J	Y	290	U	N	120	J	Y	220	U	N	280	U	N
LPAH	ug/kg	LDW04 - LPAH	5200	5200	2330	J	Y	2190	J	Y	1611	J	Y	398	J	Y	550	J	Y
Naphthalene	ug/kg	LDW04 - LPAH	2100	2100	300	U	N	160	J	Y	81	J	Y	220	U	N	280	U	N
Phenanthrene	ug/kg	LDW04 - LPAH	*1500*	1500	850		Y	1300		Y	1100		Y	320		Y	440		Y
Benzo(A)anthracene	ug/kg	LDW05 - HPAH	*1300*	1600	430		Y	1100		Y	690		Y	260		Y	240	J	Y
Benzo(A)pyrene	ug/kg	LDW05 - HPAH	1600	1600	330		Y	1100		Y	470		Y	190	J	Y	240	J	Y
Benzo(G,H,I)perylene	ug/kg	LDW05 - HPAH	*670*	720	310		Y	*940*		*Y*	500		Y	340		Y	300		Y
Benzofluoranthenes, Total	ug/kg	LDW05 - HPAH	*3200*	3600	880		Y	2500		Y	1800		Y	760		Y	590		Y
Chrysene	ug/kg	LDW05 - HPAH	*1400*	2800	860		Y	*2800*		*Y*	*1600*		*Y*	650		Y	590		Y
Dibenzo(A,H)anthracene	ug/kg	LDW05 - HPAH	*230*	230	*300*	*U*	*N*	*290*	*U*	*N*	130	J	Y	220	U	N	*280*	*U*	*N*
Fluoranthene	ug/kg	LDW05 - HPAH	*1700*	2500	1400		Y	*2500*		*Y*	*2700*		*Y*	960		Y	630		Y
HPAH	ug/kg	LDW05 - HPAH	*12000*	17000	5820	J	Y	*14300*	*J*	*Y*	10210	J	Y	4030	J	Y	3540	J	Y
Indeno(1,2,3-Cd)pyrene	ug/kg	LDW05 - HPAH	*600*	690	210	J	Y	560		Y	320		Y	170	J	Y	160	J	Y
Pyrene	ug/kg	LDW05 - HPAH	*2600*	3300	1400		Y	*2800*	*J*	*Y*	2000	J	Y	700	J	Y	790		Y
cPAH	ug/kg	LDW06 - cPAH (analyte only)		100	550.6	J	Y	1602		Y	819	J	Y	359.5	J	Y	400.9	J	Y
Bis(2-ethylhexyl)phthalate	ug/kg	LDW07 - Phthalates	*1300*	1900	*2100*		*Y*	*6400*		*Y*	*3800*		*Y*	*3700*		*Y*	*3200*		*Y*
Butylbenzylphthalate	ug/kg	LDW07 - Phthalates	*63*	900	*340*		*Y*	*790*		*Y*	*560*		*Y*	*220*	*U*	*N*	*380*		*Y*
Diethylphthalate	ug/kg	LDW07 - Phthalates	*200*	1200	*300*	*U*	*N*	*290*	*U*	*N*	*230*	*U*	*N*	*220*	*U*	*N*	*280*	*U*	*N*
Dimethylphthalate	ug/kg	LDW07 - Phthalates	*71*	160	*240*	*J*	*Y*	*290*	*U*	*N*	*130*	*J*	*Y*	*190*	*J*	*Y*	*280*	*U*	*N*
Di-N-Butylphthalate	ug/kg	LDW07 - Phthalates	1400	1400	300	U	N	100	J	Y	81	J	Y	220	U	N	84	J	Y
Di-N-Octylphthalate	ug/kg	LDW07 - Phthalates	6200	6200	250	J	Y	290	U	N	250		Y	220	U	N	180	J	Y
Aroclor 1016	ug/kg	LDW08 - PCBs			19	U	N	19	U	N	18	U	N	19	U	N	19	U	N
Aroclor 1221	ug/kg	LDW08 - PCBs			19	U	N	19	U	N	18	U	N	19	U	N	19	U	N
Aroclor 1232	ug/kg	LDW08 - PCBs			19	U	N	19	U	N	18	U	N	19	U	N	19	U	N
Aroclor 1242	ug/kg	LDW08 - PCBs			19	U	N	19	U	N	18	U	N	19	U	N	19	U	N
Aroclor 1248	ug/kg	LDW08 - PCBs			47	U	N	65	U	N	27	U	N	19	U	N	19	U	N
Aroclor 1254	ug/kg	LDW08 - PCBs			60		Y	94		Y	64		Y	84	J	Y	37		Y
Aroclor 1260	ug/kg	LDW08 - PCBs			54		Y	100		Y	41		Y	27		Y	43		Y
Polychlorinated Biphenyls	ug/kg	LDW08 - PCBs	*130*	1000	114		Y	*194*		*Y*	105		Y	111	J	Y	80		Y
1,2,4-Trichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*31*	51	*300*	*U*	*N*	*290*	*U*	*N*	*230*	*U*	*N*	*220*	*U*	*N*	*280*	*U*	*N*
1,2-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*35*	50	*300*	*U*	*N*	*290*	*U*	*N*	*230*	*U*	*N*	*220*	*U*	*N*	*280*	*U*	*N*
1,3-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds			300	U	N	290	U	N	230	U	N	220	U	N	280	U	N
1,4-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*110*	110	*300*	*U*	*N*	*290*	*U*	*N*	*230*	*U*	*N*	*220*	*U*	*N*	*280*	*U*	*N*
1-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds			300	U	N	290	U	N	230	U	N	220	U	N	280	U	N
2,2'-Oxybis(1-chloropropane)	ug/kg	LDW09 - Other Organic Compounds			300	U	N	290	U	N	230	U	N	220	U	N	280	U	N
2,4,5-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds			1500	U	N	1400	U	N	1200	U	N	1100	U	N	1400	U	N
2,4,6-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds			1500	U	N	1400	U	N	1200	U	N	1100	U	N	1400	U	N
2,4-Dichlorophenol	ug/kg	LDW09 - Other Organic Compounds			1500	U	N	1400	U	N	1200	U	N	1100	U	N	1400	U	N
2,4-Dimethylphenol	ug/kg	LDW09 - Other Organic Compounds	*29*	29	*1500*	*U*	*N*	*1400*	*U*	*N*	*1200*	*U*	*N*	*1100*	*U*	*N*	*1400*	*U*	*N*
2,4-Dinitrophenol	ug/kg	LDW09 - Other Organic Compounds			3000	U	N	2900	U	N	2300	U	N	2200	U	N	2800	U	N
2,4-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds			1500	U	N	1400	U	N	1200	U	N	1100	U	N	1400	U	N
2,6-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds			1500	U	N	1400	U	N	1200	U	N	1100	U	N	1400	U	N
2-Chloronaphthalene	ug/kg	LDW09 - Other Organic Compounds			300	U	N	290	U	N	230	U	N	220	U	N	280	U	N
2-Chlorophenol	ug/kg	LDW09 - Other Organic Compounds			300	U	N	290	U	N	230	U	N	220	U	N	280	U	N
2-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds	670	670	300	U	N	290	U	N	230	U	N	220	U	N	280	U	N
2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*63*	63	*300*	*U*	*N*	*290*	*U*	*N*	*230*	*U*	*N*	*220*	*U*	*N*	*280*	*U*	*N*

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - S River St SD
Attachment A, 90b - Actions Taken Pursuant to S4F

					Location	RCB192			RCB77			RCB78			RCB79			RCB81		
					Sample Date	01 Apr 2016			24 Mar 2016			24 Mar 2016			24 Mar 2016			01 Apr 2016		
					Sample Name	RCB192-040116			RCB77-032416			RCB78-032416			RCB79-032416			RCB81-040116		
					Drainage Type	SD			SD			SD			SD			SD		
					Sample Method	Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual			Grab-Manual		
					Location Type	RCB			RCB			RCB			RCB			RCB		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	S River St SD			S River St SD			S River St SD			S River St SD			S River St SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
2-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			1500	U	N	1400	U	N	1200	U	N	1100	U	N	1400	U	N
2-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			300	U	N	290	U	N	230	U	N	220	U	N	280	U	N
3,3`-Dichlorobenzidine	ug/kg	LDW09 - Other Organic Compounds			1500	U	N	1400	UJ	N	1200	UJ	N	1100	UJ	N	1400	U	N
3-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			1500	U	N	1400	U	N	1200	U	N	1100	U	N	1400	U	N
4,6-Dinitro-2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			3000	U	N	2900	U	N	2300	U	N	2200	U	N	2800	U	N
4-Bromophenyl phenyl ether	ug/kg	LDW09 - Other Organic Compounds			300	U	N	290	U	N	230	U	N	220	U	N	280	U	N
4-Chloro-3-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			1500	U	N	1400	U	N	1200	U	N	1100	U	N	1400	U	N
4-Chloroaniline	ug/kg	LDW09 - Other Organic Compounds			1500	U	N	1400	U	N	1200	U	N	1100	U	N	1400	U	N
4-Chlorophenyl Phenylether	ug/kg	LDW09 - Other Organic Compounds			300	U	N	290	U	N	230	U	N	220	U	N	280	U	N
4-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*670*	670	*4900*		*Y*	*1500*	*J*	*Y*	560	J	Y	220	UJ	N	*2300*		*Y*
4-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			1500	U	N	1400	U	N	1200	U	N	1100	U	N	1400	U	N
4-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			1500	U	N	1400	U	N	1200	U	N	1100	U	N	1400	U	N
Benzoic acid	ug/kg	LDW09 - Other Organic Compounds	*650*	650	*1100*	*J*	*Y*	*2900*	*UJ*	*N*	*2300*	*UJ*	*N*	*2200*	*UJ*	*N*	*2800*	*U*	*N*
Benzyl alcohol	ug/kg	LDW09 - Other Organic Compounds	*57*	73	*300*	*U*	*N*	*290*	*U*	*N*	*230*	*U*	*N*	*220*	*U*	*N*	*280*	*U*	*N*
bis(2-Chloroethoxy) methane	ug/kg	LDW09 - Other Organic Compounds			300	U	N	290	UJ	N	230	UJ	N	220	UJ	N	280	U	N
Bis-(2-chloroethyl) ether	ug/kg	LDW09 - Other Organic Compounds			300	U	N	290	UJ	N	230	UJ	N	220	UJ	N	280	U	N
Carbazole	ug/kg	LDW09 - Other Organic Compounds			490		Y	200		Y	210		Y	220	U	N	280	U	N
Dibenzofuran	ug/kg	LDW09 - Other Organic Compounds	540	540	300	U	N	290	U	N	58	J	Y	220	U	N	280	U	N
Hexachlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*22*	70	*300*	*U*	*N*	*290*	*U*	*N*	*230*	*U*	*N*	*220*	*U*	*N*	*280*	*U*	*N*
Hexachlorobutadiene	ug/kg	LDW09 - Other Organic Compounds	*11*	120	*300*	*U*	*N*	*290*	*U*	*N*	*230*	*U*	*N*	*220*	*U*	*N*	*280*	*U*	*N*
Hexachlorocyclopentadiene	ug/kg	LDW09 - Other Organic Compounds			1500	U	N	1400	U	N	1200	U	N	1100	U	N	1400	U	N
Hexachloroethane	ug/kg	LDW09 - Other Organic Compounds			300	U	N	290	U	N	230	U	N	220	U	N	280	U	N
Isophorone	ug/kg	LDW09 - Other Organic Compounds			300	U	N	290	U	N	230	U	N	220	U	N	280	U	N
Nitrobenzene	ug/kg	LDW09 - Other Organic Compounds			300	U	N	290	U	N	230	U	N	220	U	N	280	U	N
N-Nitroso-Di-N-Propylamine	ug/kg	LDW09 - Other Organic Compounds			300	U	N	290	U	N	230	U	N	220	U	N	280	U	N
N-Nitrosodiphenylamine	ug/kg	LDW09 - Other Organic Compounds	*28*	40	*300*	*U*	*N*	*290*	*U*	*N*	*230*	*U*	*N*	*220*	*U*	*N*	*280*	*U*	*N*
Pentachlorophenol	ug/kg	LDW09 - Other Organic Compounds	*360*	690	*1500*	*UJ*	*N*	*1400*	*UJ*	*N*	*1200*	*UJ*	*N*	*1100*	*UJ*	*N*	*1400*	*UJ*	*N*
Phenol	ug/kg	LDW09 - Other Organic Compounds	*420*	1200	*1100*		*Y*	300		Y	250		Y	220	U	N	170	J	Y
Coarse Sand	%	LDW10 - Grain Size			10.4		Y	9.7		Y	11.7		Y	14.2		Y	5.3		Y
Fine Gravel	%	LDW10 - Grain Size			0.9		Y	9.6		Y	7		Y	8.6		Y	4.3		Y
Fine Sand	%	LDW10 - Grain Size			13.6		Y	9.2		Y	18.8		Y	7.1		Y	9.5		Y
Gravel	%	LDW10 - Grain Size			1.8		Y	6.3		Y	7.2		Y	21.2		Y	2.8		Y
Medium Sand	%	LDW10 - Grain Size			11.4		Y	9.2		Y	18.5		Y	10.1		Y	8.9		Y
Very Coarse Sand	%	LDW10 - Grain Size			3.5		Y	7.5		Y	9.6		Y	18.9		Y	4.2		Y
Very Fine Sand	%	LDW10 - Grain Size			14.6		Y	8.2		Y	15.5		Y	4.5		Y	11.2		Y

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - S Webster St SD
Attachment A, 90b - Actions Taken Pursuant to S4F

				Location	RCB298		
				Sample Date	06 Apr 2016		
				Sample Name	RCB298-040616		
				Drainage Type	SD		
				Sample Method	Grab-Manual		
				Location Type	RCB		
				Project	Lower Duwamish Waterway		
				Outfall	S Webster St SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected
Solids, Total	%	LDW01 - Solids_TOC			72.01		Y
Total Organic Carbon	%	LDW01 - Solids_TOC			5.43		Y
Arsenic	mg/kg	LDW02 - Metals	57	93	8	U	N
Copper	mg/kg	LDW02 - Metals	390	390	66.3		Y
Lead	mg/kg	LDW02 - Metals	450	530	19		Y
Mercury	mg/kg	LDW02 - Metals	0.41	0.59	0.03		Y
Zinc	mg/kg	LDW02 - Metals	410	960	201		Y
Diesel Range Hydrocarbons	mg/kg	LDW03 - TPH	2000	2000	400		Y
Motor Oil Range	mg/kg	LDW03 - TPH	2000	2000	1700		Y
Acenaphthene	ug/kg	LDW04 - LPAH	500	500	280		Y
Acenaphthylene	ug/kg	LDW04 - LPAH	1300	1300	280	U	N
Anthracene	ug/kg	LDW04 - LPAH	*960*	960	*1200*		*Y*
Fluorene	ug/kg	LDW04 - LPAH	540	540	310		Y
LPAH	ug/kg	LDW04 - LPAH	*5200*	5200	*8390*		*Y*
Naphthalene	ug/kg	LDW04 - LPAH	2100	2100	280	U	N
Phenanthrene	ug/kg	LDW04 - LPAH	*1500*	1500	*6600*		*Y*
Benzo(A)anthracene	ug/kg	LDW05 - HPAH	*1300*	1600	*5600*		*Y*
Benzo(A)pyrene	ug/kg	LDW05 - HPAH	*1600*	1600	*5500*		*Y*
Benzo(G,H,I)perylene	ug/kg	LDW05 - HPAH	*670*	720	*3800*		*Y*
Benzofluoranthenes, Total	ug/kg	LDW05 - HPAH	*3200*	3600	*10000*		*Y*
Chrysene	ug/kg	LDW05 - HPAH	*1400*	2800	*7300*		*Y*
Dibenzo(A,H)anthracene	ug/kg	LDW05 - HPAH	*230*	230	*1200*		*Y*
Fluoranthene	ug/kg	LDW05 - HPAH	*1700*	2500	*14000*		*Y*
HPAH	ug/kg	LDW05 - HPAH	*12000*	17000	*62100*	*J*	*Y*
Indeno(1,2,3-Cd)pyrene	ug/kg	LDW05 - HPAH	*600*	690	*3700*	*J*	*Y*
Pyrene	ug/kg	LDW05 - HPAH	*2600*	3300	*11000*		*Y*
cPAH	ug/kg	LDW06 - cPAH (analyte only)		100	7983	J	Y
Bis(2-ethylhexyl)phthalate	ug/kg	LDW07 - Phthalates	*1300*	1900	*2400*		*Y*
Butylbenzylphthalate	ug/kg	LDW07 - Phthalates	*63*	900	*280*	*U*	*N*
Diethylphthalate	ug/kg	LDW07 - Phthalates	*200*	1200	*280*	*U*	*N*
Dimethylphthalate	ug/kg	LDW07 - Phthalates	*71*	160	*280*	*U*	*N*
Di-N-Butylphthalate	ug/kg	LDW07 - Phthalates	1400	1400	280	U	N
Di-N-Octylphthalate	ug/kg	LDW07 - Phthalates	6200	6200	280	U	N
Aroclor 1016	ug/kg	LDW08 - PCBs			19	U	N
Aroclor 1221	ug/kg	LDW08 - PCBs			19	U	N
Aroclor 1232	ug/kg	LDW08 - PCBs			19	U	N
Aroclor 1242	ug/kg	LDW08 - PCBs			19	U	N
Aroclor 1248	ug/kg	LDW08 - PCBs			19	U	N
Aroclor 1254	ug/kg	LDW08 - PCBs			35		Y
Aroclor 1260	ug/kg	LDW08 - PCBs			40		Y
Polychlorinated Biphenyls	ug/kg	LDW08 - PCBs	130	1000	75		Y
1,2,4-Trichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*31*	51	*280*	*U*	*N*
1,2-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*35*	50	*280*	*U*	*N*
1,3-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds			280	U	N
1,4-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*110*	110	*280*	*U*	*N*
1-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds			280	U	N
2,2'-Oxybis(1-chloropropane)	ug/kg	LDW09 - Other Organic Compounds			280	U	N
2,4,5-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds			1400	U	N
2,4,6-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds			1400	U	N
2,4-Dichlorophenol	ug/kg	LDW09 - Other Organic Compounds			1400	U	N
2,4-Dimethylphenol	ug/kg	LDW09 - Other Organic Compounds	*29*	29	*1400*	*U*	*N*
2,4-Dinitrophenol	ug/kg	LDW09 - Other Organic Compounds			2800	U	N
2,4-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds			1400	U	N
2,6-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds			1400	U	N
2-Chloronaphthalene	ug/kg	LDW09 - Other Organic Compounds			280	U	N
2-Chlorophenol	ug/kg	LDW09 - Other Organic Compounds			280	U	N
2-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds	670	670	280	U	N
2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*63*	63	*280*	*U*	*N*
2-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			1400	U	N
2-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			280	U	N

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - S Webster St SD
Attachment A, 90b - Actions Taken Pursuant to S4F

				Location	RCB298		
				Sample Date	06 Apr 2016		
				Sample Name	RCB298-040616		
				Drainage Type	SD		
				Sample Method	Grab-Manual		
				Location Type	RCB		
				Project	Lower Duwamish Waterway		
				Outfall	S Webster St SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected
3,3`-Dichlorobenzidine	ug/kg	LDW09 - Other Organic Compounds			1400	U	N
3-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			1400	U	N
4,6-Dinitro-2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			2800	U	N
4-Bromophenyl phenyl ether	ug/kg	LDW09 - Other Organic Compounds			280	U	N
4-Chloro-3-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			1400	U	N
4-Chloroaniline	ug/kg	LDW09 - Other Organic Compounds			1400	U	N
4-Chlorophenyl Phenylether	ug/kg	LDW09 - Other Organic Compounds			280	U	N
4-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*670*	670	*1300*		*Y*
4-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			1400	U	N
4-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			1400	U	N
Benzoic acid	ug/kg	LDW09 - Other Organic Compounds	*650*	650	*2800*	*U*	*N*
Benzyl alcohol	ug/kg	LDW09 - Other Organic Compounds	*57*	73	*280*	*UJ*	*N*
bis(2-Chloroethoxy) methane	ug/kg	LDW09 - Other Organic Compounds			280	U	N
Bis-(2-chloroethyl) ether	ug/kg	LDW09 - Other Organic Compounds			280	U	N
Carbazole	ug/kg	LDW09 - Other Organic Compounds			1700	J	Y
Dibenzofuran	ug/kg	LDW09 - Other Organic Compounds	540	540	280	U	N
Hexachlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*22*	70	*280*	*U*	*N*
Hexachlorobutadiene	ug/kg	LDW09 - Other Organic Compounds	*11*	120	*280*	*U*	*N*
Hexachlorocyclopentadiene	ug/kg	LDW09 - Other Organic Compounds			1400	U	N
Hexachloroethane	ug/kg	LDW09 - Other Organic Compounds			280	U	N
Isophorone	ug/kg	LDW09 - Other Organic Compounds			280	U	N
Nitrobenzene	ug/kg	LDW09 - Other Organic Compounds			280	U	N
N-Nitroso-Di-N-Propylamine	ug/kg	LDW09 - Other Organic Compounds			280	U	N
N-Nitrosodiphenylamine	ug/kg	LDW09 - Other Organic Compounds	*28*	40	*280*	*U*	*N*
Pentachlorophenol	ug/kg	LDW09 - Other Organic Compounds	*360*	690	*1400*	*U*	*N*
Phenol	ug/kg	LDW09 - Other Organic Compounds	420	1200	280	U	N
Coarse Sand	%	LDW10 - Grain Size			12.6		Y
Fine Gravel	%	LDW10 - Grain Size			30.4		Y
Fine Sand	%	LDW10 - Grain Size			6.1		Y
Gravel	%	LDW10 - Grain Size			13.7		Y
Medium Sand	%	LDW10 - Grain Size			10.6		Y
Very Coarse Sand	%	LDW10 - Grain Size			15		Y
Very Fine Sand	%	LDW10 - Grain Size			3.3		Y

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - SW Idaho St SD
Attachment A, 90b - Actions Taken Pursuant to S4F

					Location	ID-ST1			ID-ST1			ID-ST2			ID-ST2			ID-ST3			ID-ST3		
					Sample Date	11 May 2016			21 May 2015			10 May 2016			21 May 2015			11 May 2016			22 May 2015		
					Sample Name	ID-ST1-051116			IDST1-052115			ID-ST2-051016			IDST2-052115			ID-ST3-051116			IDST3-052215		
					Drainage Type	SD			SD			SD			SD			SD			SD		
					Sample Method	SedTrap			SedTrap			SedTrap			SedTrap			SedTrap			SedTrap		
					Location Type	Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	SW Idaho St SD			SW Idaho St SD			SW Idaho St SD			SW Idaho St SD			SW Idaho St SD			SW Idaho St SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
Solids, Total	%	LDW01 - Solids_TOC			28.57		Y	14.38		Y	74.39		Y	67.59		Y	45.66		Y	64.25		Y
Total Organic Carbon	%	LDW01 - Solids_TOC			8.09		Y	18		Y	0.754		Y	1.5		Y	2.3		Y	3.17		Y
Arsenic	mg/kg	LDW02 - Metals	57	93	20		Y				6	U	N	9		Y	10		Y	15		Y
Copper	mg/kg	LDW02 - Metals	390	390	125		Y				19.9		Y	29.4		Y	36.6		Y	25.6		Y
Lead	mg/kg	LDW02 - Metals	450	530	86		Y				11		Y	15		Y	46		Y	59		Y
Mercury	mg/kg	LDW02 - Metals	0.41	0.59	0.18		Y				0.03		Y	0.06		Y	0.19		Y	0.08		Y
Zinc	mg/kg	LDW02 - Metals	*410*	960	*923*		*Y*				74		Y	101		Y	230		Y	167		Y
Diesel Range Hydrocarbons	mg/kg	LDW03 - TPH	2000	2000	490		Y				10		Y	65		Y	180		Y	180		Y
Motor Oil Range	mg/kg	LDW03 - TPH	*2000*	2000	*2400*		*Y*				53		Y	250		Y	660		Y	960		Y
Acenaphthene	ug/kg	LDW04 - LPAH	500	500	140	U	N				19	U	N	19	U	N	99	U	N	57	U	N
Acenaphthylene	ug/kg	LDW04 - LPAH	1300	1300	140	U	N				19	U	N	19	U	N	99	U	N	57	U	N
Anthracene	ug/kg	LDW04 - LPAH	960	960	42	J	Y				19	U	N	5.8	J	Y	99	U	N	57	U	N
Fluorene	ug/kg	LDW04 - LPAH	540	540	140	U	N				19	U	N	19	U	N	99	U	N	57	U	N
LPAH	ug/kg	LDW04 - LPAH	5200	5200	452	J	Y				31		Y	53.8	J	Y	99	U	N	20	J	Y
Naphthalene	ug/kg	LDW04 - LPAH	2100	2100	70	J	Y				19	U	N	17	J	Y	99	U	N	57	U	N
Phenanthrene	ug/kg	LDW04 - LPAH	1500	1500	340		Y				31		Y	31		Y	99	U	N	20	J	Y
Benzo(A)anthracene	ug/kg	LDW05 - HPAH	1300	1600	240	J	Y				14	J	Y	21		Y	99	U	N	17	J	Y
Benzo(A)pyrene	ug/kg	LDW05 - HPAH	1600	1600	430		Y				18	J	Y	29		Y	99	U	N	20	J	Y
Benzo(G,H,I)perylene	ug/kg	LDW05 - HPAH	670	720	400		Y				22	J	Y	19	U	N	99	U	N	46	J	Y
Benzofluoranthenes, Total	ug/kg	LDW05 - HPAH	3200	3600	1200		Y				41		Y	86		Y	200	U	N	54	J	Y
Chrysene	ug/kg	LDW05 - HPAH	1400	2800	700	J	Y				30		Y	48		Y	54	J	Y	34	J	Y
Dibenzo(A,H)anthracene	ug/kg	LDW05 - HPAH	230	230	140	U	N				19	U	N	19	U	N	99	U	N	57	U	N
Fluoranthene	ug/kg	LDW05 - HPAH	1700	2500	660	J	Y				44		Y	57		Y	60	J	Y	28	J	Y
HPAH	ug/kg	LDW05 - HPAH	12000	17000	4600	J	Y				226	J	Y	290		Y	164	J	Y	250	J	Y
Indeno(1,2,3-Cd)pyrene	ug/kg	LDW05 - HPAH	600	690	330		Y				16	J	Y	19	U	N	99	U	N	23	J	Y
Pyrene	ug/kg	LDW05 - HPAH	2600	3300	640		Y				41	J	Y	49		Y	50	J	Y	28	J	Y
cPAH	ug/kg	LDW06 - cPAH (analyte only)		100	642	J	Y				29.2	J	Y	44.93		Y	89.74	J	Y	41.14	J	Y
Bis(2-ethylhexyl)phthalate	ug/kg	LDW07 - Phthalates	*1300*	1900	*5000*		*Y*				140		Y	230		Y	*9100*		*Y*	420		Y
Butylbenzylphthalate	ug/kg	LDW07 - Phthalates	*63*	900	*140*	*U*	*N*				19	U	N	17	J	Y	*99*	*U*	*N*	37	J	Y
Diethylphthalate	ug/kg	LDW07 - Phthalates	200	1200	140	U	N				19	U	N	19	U	N	99	U	N	57	U	N
Dimethylphthalate	ug/kg	LDW07 - Phthalates	*71*	160	*140*	*U*	*N*				19	U	N	19	U	N	*99*	*U*	*N*	57	U	N
Di-N-Butylphthalate	ug/kg	LDW07 - Phthalates	1400	1400	70	J	Y				110		Y	15	J	Y	150		Y	23	J	Y
Di-N-Octylphthalate	ug/kg	LDW07 - Phthalates	6200	6200	400		Y				19	U	N	19	U	N	99	U	N	57	U	N
Aroclor 1016	ug/kg	LDW08 - PCBs			19	U	N	20	U	N	19	U	N	18	U	N	20	U	N	19	U	N
Aroclor 1221	ug/kg	LDW08 - PCBs			19	U	N	20	U	N	19	U	N	18	U	N	20	U	N	19	U	N
Aroclor 1232	ug/kg	LDW08 - PCBs			19	U	N	20	U	N	19	U	N	18	U	N	20	U	N	19	U	N
Aroclor 1242	ug/kg	LDW08 - PCBs			19	U	N	20	U	N	19	U	N	18	U	N	20	U	N	19	U	N
Aroclor 1248	ug/kg	LDW08 - PCBs			29	U	N	99	U	N	28	U	N	46	U	N	20	U	N	19	U	N
Aroclor 1254	ug/kg	LDW08 - PCBs			200		Y	310		Y	17	J	Y	40		Y	22		Y	19	U	N
Aroclor 1260	ug/kg	LDW08 - PCBs			75	J	Y	74	J	Y	19	U	N	18	U	N	17	J	Y	19	U	N
Polychlorinated Biphenyls	ug/kg	LDW08 - PCBs	*130*	1000	*275*	*J*	*Y*	*384*	*J*	*Y*	17	J	Y	40		Y	39	J	Y	19	U	N
1,2,4-Trichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*31*	51	*140*	*U*	*N*				19	U	N	19	U	N	*99*	*U*	*N*	*57*	*U*	*N*
1,2-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*35*	50	*140*	*U*	*N*				19	U	N	19	U	N	*99*	*U*	*N*	*57*	*U*	*N*
1,3-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds			140	U	N				19	U	N	19	U	N	99	U	N	57	U	N
1,4-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*110*	110	*140*	*U*	*N*				19	U	N	19	U	N	99	U	N	57	U	N
1-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds			140	U	N				19	U	N	6.8	J	Y	99	U	N	57	U	N
2,2'-Oxybis(1-chloropropane)	ug/kg	LDW09 - Other Organic Compounds			140	U	N				19	U	N	19	U	N	99	U	N	57	U	N
2,4,5-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds			700	U	N				96	U	N	96	U	N	500	U	N	280	U	N
2,4,6-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds			700	U	N				96	U	N	96	U	N	500	U	N	280	U	N
2,4-Dichlorophenol	ug/kg	LDW09 - Other Organic Compounds			700	U	N				96	U	N	96	UJ	N	500	U	N	280	U	N
2,4-Dimethylphenol	ug/kg	LDW09 - Other Organic Compounds	*29*	29	*700*	*U*	*N*				*96*	*U*	*N*	*96*	*U*	*N*	*500*	*U*	*N*	*280*	*U*	*N*
2,4-Dinitrophenol	ug/kg	LDW09 - Other Organic Compounds			1400	U	N				190	U	N	190	U	N	990	U	N	570	U	N
2,4-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds			700	U	N				96	U	N	96	U	N	500	U	N	280	U	N
2,6-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds			700	U	N				96	U	N	96	U	N	500	U	N	280	U	N
2-Chloronaphthalene	ug/kg	LDW09 - Other Organic Compounds			140	U	N				19	U	N	19	U	N	99	U	N	57	U	N
2-Chlorophenol	ug/kg	LDW09 - Other Organic Compounds			140	U	N				19	U	N	19	U	N	99	U	N	57	U	N
2-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds	670	670	140	U	N				19	U	N	12	J	Y	99	U	N	57	U	N
2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*63*	63	*140*	*U*	*N*				19	U	N	19	U	N	*99*	*U*	*N*	*250*		*Y*
2-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			700	U	N				96	U	N	96	U	N	500	U	N	280	U	N
2-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			140	U	N				19	U	N	19	U	N	99	U	N	57	U	N

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - SW Idaho St SD
Attachment A, 90b - Actions Taken Pursuant to S4F

					Location	ID-ST1			ID-ST1			ID-ST2			ID-ST2			ID-ST3			ID-ST3		
					Sample Date	11 May 2016			21 May 2015			10 May 2016			21 May 2015			11 May 2016			22 May 2015		
					Sample Name	ID-ST1-051116			IDST1-052115			ID-ST2-051016			IDST2-052115			ID-ST3-051116			IDST3-052215		
					Drainage Type	SD			SD			SD			SD			SD			SD		
					Sample Method	SedTrap			SedTrap			SedTrap			SedTrap			SedTrap			SedTrap		
					Location Type	Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	SW Idaho St SD			SW Idaho St SD			SW Idaho St SD			SW Idaho St SD			SW Idaho St SD			SW Idaho St SD		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected	Result	Qualifier	Detected
3,3`-Dichlorobenzidine	ug/kg	LDW09 - Other Organic Compounds			700	U	N				96	UJ	N				500	U	N			
3-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			700	U	N				96	U	N	96	U	N	500	U	N	280	U	N
4,6-Dinitro-2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			1400	U	N				190	U	N	190	U	N	990	U	N	570	U	N
4-Bromophenyl phenyl ether	ug/kg	LDW09 - Other Organic Compounds			140	U	N				19	U	N	19	U	N	99	U	N	57	U	N
4-Chloro-3-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			700	U	N				96	U	N	96	U	N	500	U	N	280	U	N
4-Chloroaniline	ug/kg	LDW09 - Other Organic Compounds			700	U	N				96	U	N	96	U	N	500	U	N	280	U	N
4-Chlorophenyl Phenylether	ug/kg	LDW09 - Other Organic Compounds			140	U	N				19	U	N	19	U	N	99	U	N	57	U	N
4-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*670*	670	*1300*		*Y*				44		Y	15	J	Y	520		Y	220		Y
4-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			700	U	N				96	U	N	96	U	N	500	U	N	280	U	N
4-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			700	U	N				96	U	N	96	U	N	500	U	N	280	U	N
Benzoic acid	ug/kg	LDW09 - Other Organic Compounds	*650*	650	*750*	*J*	*Y*				95	J	Y	440		Y	520	J	Y	*1900*		*Y*
Benzyl alcohol	ug/kg	LDW09 - Other Organic Compounds	*57*	73	*590*		*Y*				34		Y				*690*		*Y*			
bis(2-Chloroethoxy) methane	ug/kg	LDW09 - Other Organic Compounds			140	U	N				19	U	N	19	U	N	99	U	N	57	U	N
Bis-(2-chloroethyl) ether	ug/kg	LDW09 - Other Organic Compounds			140	U	N				19	U	N	19	U	N	99	U	N	57	U	N
Carbazole	ug/kg	LDW09 - Other Organic Compounds			98	J	Y				19	U	N	19	U	N	99	U	N	57	U	N
Dibenzofuran	ug/kg	LDW09 - Other Organic Compounds	540	540	140	U	N				19	U	N	19	U	N	99	U	N	57	U	N
Hexachlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*22*	70	*140*	*U*	*N*				19	U	N	19	U	N	*99*	*U*	*N*	*57*	*U*	*N*
Hexachlorobutadiene	ug/kg	LDW09 - Other Organic Compounds	*11*	120	*140*	*U*	*N*				*19*	*U*	*N*	*19*	*U*	*N*	*99*	*U*	*N*	*57*	*U*	*N*
Hexachlorocyclopentadiene	ug/kg	LDW09 - Other Organic Compounds			700	U	N				96	U	N	96	U	N	500	U	N	280	U	N
Hexachloroethane	ug/kg	LDW09 - Other Organic Compounds			140	U	N				19	U	N	19	U	N	99	U	N	57	U	N
Isophorone	ug/kg	LDW09 - Other Organic Compounds			140	U	N				19	U	N	19	U	N	99	U	N	57	U	N
Nitrobenzene	ug/kg	LDW09 - Other Organic Compounds			140	U	N				19	U	N	19	U	N	99	U	N	57	U	N
N-Nitroso-Di-N-Propylamine	ug/kg	LDW09 - Other Organic Compounds			140	U	N				19	U	N	19	U	N	99	U	N	57	U	N
N-Nitrosodiphenylamine	ug/kg	LDW09 - Other Organic Compounds	*28*	40	*140*	*U*	*N*				19	U	N	19	U	N	*99*	*U*	*N*	*57*	*U*	*N*
Pentachlorophenol	ug/kg	LDW09 - Other Organic Compounds	*360*	690	*700*	*UJ*	*N*				96	U	N	96	U	N	*500*	*UJ*	*N*	180	J	Y
Phenol	ug/kg	LDW09 - Other Organic Compounds	420	1200	340		Y				16	J	Y	45		Y	190		Y	100	J	Y
Coarse Sand	%	LDW10 - Grain Size									5.9		Y	19.9		Y				21		Y
Fine Gravel	%	LDW10 - Grain Size									1.1		Y	0.4		Y				1.5		Y
Fine Sand	%	LDW10 - Grain Size									31.6		Y	15.4		Y				6		Y
Gravel	%	LDW10 - Grain Size									1.5		Y	1.8		Y				6.3		Y
Medium Sand	%	LDW10 - Grain Size									28.1		Y	37.3		Y				23.1		Y
Very Coarse Sand	%	LDW10 - Grain Size									2.7		Y	4.2		Y				12.3		Y
Very Fine Sand	%	LDW10 - Grain Size									11.5		Y	5		Y				7		Y

Seattle Public Utilities, Source Control Implementation Plan
Summary of Analytical Data - SW Kenny St SDT115 CSO
Attachment A, 90b - Actions Taken Pursuant to S4F

					Location	KN-ST1			KN-ST1		
					Sample Date	10 May 2016			18 May 2015		
					Sample Name	KN-ST1-051016			KN-ST1-051815		
					Drainage Type	SD			SD		
					Sample Method	SedTrap			SedTrap		
					Location Type	Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap		
					Project	Lower Duwamish Waterway			Lower Duwamish Waterway		
					Outfall	SW Kenny St SD/T115 CSO			SW Kenny St SD/T115 CSO		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected	Result	Qualifier	Detected
Solids, Total	%	LDW01 - Solids_TOC			49.76		Y	51.8		Y
Total Organic Carbon	%	LDW01 - Solids_TOC			2.74		Y	4.44		Y
Arsenic	mg/kg	LDW02 - Metals	57	93	13		Y	19		Y
Copper	mg/kg	LDW02 - Metals	390	390	63.9		Y	64		Y
Lead	mg/kg	LDW02 - Metals	450	530	39		Y	42		Y
Mercury	mg/kg	LDW02 - Metals	0.41	0.59	0.11		Y	0.14		Y
Zinc	mg/kg	LDW02 - Metals	410	960	299		Y	324		Y
Diesel Range Hydrocarbons	mg/kg	LDW03 - TPH	2000	2000	250		Y	520		Y
Motor Oil Range	mg/kg	LDW03 - TPH	*2000*	2000	1200		Y	*2000*		*Y*
Acenaphthene	ug/kg	LDW04 - LPAH	500	500	57	U	N	58	J	Y
Acenaphthylene	ug/kg	LDW04 - LPAH	1300	1300	57	U	N	120	U	N
Anthracene	ug/kg	LDW04 - LPAH	960	960	29	J	Y	64	J	Y
Fluorene	ug/kg	LDW04 - LPAH	540	540	57	U	N	120	U	N
LPAH	ug/kg	LDW04 - LPAH	5200	5200	213	J	Y	560	J	Y
Naphthalene	ug/kg	LDW04 - LPAH	2100	2100	34	J	Y	98	J	Y
Phenanthrene	ug/kg	LDW04 - LPAH	1500	1500	150		Y	340		Y
Benzo(A)anthracene	ug/kg	LDW05 - HPAH	1300	1600	94		Y	180		Y
Benzo(A)pyrene	ug/kg	LDW05 - HPAH	1600	1600	120		Y	210		Y
Benzo(G,H,I)perylene	ug/kg	LDW05 - HPAH	670	720	210	J	Y	250		Y
Benzofluoranthenes, Total	ug/kg	LDW05 - HPAH	3200	3600	340		Y	700		Y
Chrysene	ug/kg	LDW05 - HPAH	1400	2800	230		Y	500		Y
Dibenzo(A,H)anthracene	ug/kg	LDW05 - HPAH	230	230	34	J	Y	75	J	Y
Fluoranthene	ug/kg	LDW05 - HPAH	1700	2500	240		Y	530		Y
HPAH	ug/kg	LDW05 - HPAH	12000	17000	1648	J	Y	3145	J	Y
Indeno(1,2,3-Cd)pyrene	ug/kg	LDW05 - HPAH	600	690	120	J	Y	210		Y
Pyrene	ug/kg	LDW05 - HPAH	2600	3300	260		Y	490		Y
cPAH	ug/kg	LDW06 - cPAH (analyte only)		100	191.3	J	Y	354	J	Y
Bis(2-ethylhexyl)phthalate	ug/kg	LDW07 - Phthalates	*1300*	1900	*1400*		*Y*	*3900*		*Y*
Butylbenzylphthalate	ug/kg	LDW07 - Phthalates	*63*	900	*170*		*Y*	*220*		*Y*
Diethylphthalate	ug/kg	LDW07 - Phthalates	*200*	1200	57	U	N	*200*		*Y*
Dimethylphthalate	ug/kg	LDW07 - Phthalates	*71*	160	57	U	N	*81*	*J*	*Y*
Di-N-Butylphthalate	ug/kg	LDW07 - Phthalates	1400	1400	37	J	Y	58	J	Y
Di-N-Octylphthalate	ug/kg	LDW07 - Phthalates	6200	6200	110		Y	120	U	N
Aroclor 1016	ug/kg	LDW08 - PCBs			18	U	N	19	U	N
Aroclor 1221	ug/kg	LDW08 - PCBs			18	U	N	19	U	N
Aroclor 1232	ug/kg	LDW08 - PCBs			18	U	N	19	U	N
Aroclor 1242	ug/kg	LDW08 - PCBs			18	U	N	19	U	N
Aroclor 1248	ug/kg	LDW08 - PCBs			36	U	N	40		Y
Aroclor 1254	ug/kg	LDW08 - PCBs			60		Y	67		Y
Aroclor 1260	ug/kg	LDW08 - PCBs			23		Y	36	J	Y
Polychlorinated Biphenyls	ug/kg	LDW08 - PCBs	*130*	1000	83		Y	*143*	*J*	*Y*
1,2,4-Trichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*31*	51	*57*	*U*	*N*	*120*	*U*	*N*
1,2-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*35*	50	*57*	*U*	*N*	*120*	*U*	*N*
1,3-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds			57	U	N	120	U	N
1,4-Dichlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*110*	110	57	U	N	*120*	*U*	*N*
1-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds			57	U	N	120	U	N
2,2'-Oxybis(1-chloropropane)	ug/kg	LDW09 - Other Organic Compounds			57	U	N	120	U	N
2,4,5-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds			290	U	N	580	U	N
2,4,6-Trichlorophenol	ug/kg	LDW09 - Other Organic Compounds			290	U	N	580	U	N
2,4-Dichlorophenol	ug/kg	LDW09 - Other Organic Compounds			290	U	N	580	U	N
2,4-Dimethylphenol	ug/kg	LDW09 - Other Organic Compounds	*29*	29	*290*	*U*	*N*	*580*	*U*	*N*
2,4-Dinitrophenol	ug/kg	LDW09 - Other Organic Compounds			570	U	N	1200	U	N
2,4-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds			290	U	N	580	U	N
2,6-Dinitrotoluene	ug/kg	LDW09 - Other Organic Compounds			290	U	N	580	U	N
2-Chloronaphthalene	ug/kg	LDW09 - Other Organic Compounds			57	U	N	120	U	N
2-Chlorophenol	ug/kg	LDW09 - Other Organic Compounds			57	U	N	120	U	N
2-Methylnaphthalene	ug/kg	LDW09 - Other Organic Compounds	670	670	57	U	N	46	J	Y
2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	*63*	63	57	U	N	*120*	*U*	*N*
2-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			290	U	N	580	U	N
2-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			57	U	N	120	U	N

Seattle Public Utilities, Source Control Implementation Plan
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				Location	KN-ST1			KN-ST1		
				Sample Date	10 May 2016			18 May 2015		
				Sample Name	KN-ST1-051016			KN-ST1-051815		
				Drainage Type	SD			SD		
				Sample Method	SedTrap			SedTrap		
				Location Type	Inline w/Active SPU Sed Trap			Inline w/Active SPU Sed Trap		
				Project	Lower Duwamish Waterway			Lower Duwamish Waterway		
				Outfall	SW Kenny St SD/T115 CSO			SW Kenny St SD/T115 CSO		
Analyte	Unit	Group	SQS/LAET	CSL/2LAET	Result	Qualifier	Detected	Result	Qualifier	Detected
3,3`-Dichlorobenzidine	ug/kg	LDW09 - Other Organic Compounds			290	UJ	N			
3-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			290	U	N	580	U	N
4,6-Dinitro-2-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			570	U	N	1200	U	N
4-Bromophenyl phenyl ether	ug/kg	LDW09 - Other Organic Compounds			57	U	N	120	U	N
4-Chloro-3-Methylphenol	ug/kg	LDW09 - Other Organic Compounds			290	U	N	580	U	N
4-Chloroaniline	ug/kg	LDW09 - Other Organic Compounds			290	U	N	580	U	N
4-Chlorophenyl Phenylether	ug/kg	LDW09 - Other Organic Compounds			57	U	N	120	U	N
4-Methylphenol	ug/kg	LDW09 - Other Organic Compounds	670	670	390		Y	120	U	N
4-Nitroaniline	ug/kg	LDW09 - Other Organic Compounds			290	U	N	580	U	N
4-Nitrophenol	ug/kg	LDW09 - Other Organic Compounds			290	U	N	580	U	N
Benzoic acid	ug/kg	LDW09 - Other Organic Compounds	*650*	650	430	J	Y	*1800*		*Y*
Benzyl alcohol	ug/kg	LDW09 - Other Organic Compounds	*57*	73	*320*		*Y*			
bis(2-Chloroethoxy) methane	ug/kg	LDW09 - Other Organic Compounds			57	U	N	120	U	N
Bis-(2-chloroethyl) ether	ug/kg	LDW09 - Other Organic Compounds			57	U	N	120	U	N
Carbazole	ug/kg	LDW09 - Other Organic Compounds			34	J	Y	64	J	Y
Dibenzofuran	ug/kg	LDW09 - Other Organic Compounds	540	540	57	U	N	120	U	N
Hexachlorobenzene	ug/kg	LDW09 - Other Organic Compounds	*22*	70	*57*	*U*	*N*	*120*	*U*	*N*
Hexachlorobutadiene	ug/kg	LDW09 - Other Organic Compounds	*11*	120	*57*	*U*	*N*	*120*	*U*	*N*
Hexachlorocyclopentadiene	ug/kg	LDW09 - Other Organic Compounds			290	U	N	580	U	N
Hexachloroethane	ug/kg	LDW09 - Other Organic Compounds			57	U	N	120	U	N
Isophorone	ug/kg	LDW09 - Other Organic Compounds			57	U	N	120	U	N
Nitrobenzene	ug/kg	LDW09 - Other Organic Compounds			57	U	N	120	U	N
N-Nitroso-Di-N-Propylamine	ug/kg	LDW09 - Other Organic Compounds			57	U	N	120	U	N
N-Nitrosodiphenylamine	ug/kg	LDW09 - Other Organic Compounds	*28*	40	*57*	*U*	*N*	*120*	*U*	*N*
Pentachlorophenol	ug/kg	LDW09 - Other Organic Compounds	*360*	690	290	U	N	*580*	*U*	*N*
Phenol	ug/kg	LDW09 - Other Organic Compounds	420	1200	72	J	Y	300		Y